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REID'S ESSAYS ON THE  
INTELLECTUAL POWERS OF MAN



ESSAYS  
ON THE  
INTELLECTUAL  
POWERS OF MAN

BY  
THOMAS REID

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## EDITOR'S PREFACE

THOMAS REID'S philosophy has for many years been unduly neglected, partly because its author was considerably long-winded and not particularly adventurous, partly also because the most recent edition of his works, published by Sir William Hamilton as long ago as 1846, was presented in a form that by modern standards appears scarcely readable: double columns and minute type are an effective deterrent to all but the most determined reader. The present edition of his main work, the *Essays on the Intellectual Powers of Man*, attempts, by cutting out the more otiose of the many repetitions, to which Reid himself confessed, to bring back to him the attention which he certainly deserves, not merely for his place in the history of philosophy, but even more for his illuminating discussions of the problems which chiefly interest philosophers to-day. Philosophy too has its fashions, and the vogue which Hume and the various empiricist schools springing from him at present enjoy makes it even more essential to study the thought of the man who was Hume's principal contemporary critic, and who has his own contributions to make to the problems of perception, of memory, of reasoning and discursive thought, and of analysis. Reid's acute exposition of the philosophy of common sense, coupled with his lucid style, makes it unnecessary to offer an apology for producing a new edition of the *Intellectual Powers*. I have done my best to omit nothing of philosophical importance; to what extent I have succeeded is not for me to judge.

I owe especial thanks to Mr. H. P. Grice, who has assisted me greatly by compiling the index and by sharing the labours of proof correction, and who by his criticisms and suggestions has enabled me to eliminate some of the more glaring howlers from my own contribution to the work. My gratitude is also due to Messrs. Macmillan for continuing with publication despite the discouragement of

war-time conditions, and for the patience with which they have waited for the completion of the work. It has been finished slowly and with difficulty among the far from academic surroundings of barrack-room life, and I must apologise for any signs of carelessness which consequently appear.

A. D. W.

THE QUEEN'S COLLEGE

OXFORD

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## ABBREVIATIONS

|                      |                                                          |
|----------------------|----------------------------------------------------------|
| <i>Essay</i>         | = Locke's <i>Essay on Human Understanding</i>            |
| <i>Principles</i>    | = Berkeley's <i>Principles of Human Knowledge</i>        |
| <i>Treatise</i>      | = Hume's <i>Treatise on Human Nature</i>                 |
| <i>Inquiry</i>       | = Reid's <i>Inquiry into the Human Mind</i>              |
| <i>Int. Powers</i>   | = Reid's <i>Essays on the Intellectual Powers of Man</i> |
| <i>Active Powers</i> | = Reid's <i>Essays on the Active Powers of Man</i>       |
| <i>H.</i>            | = Hamilton's edition of Reid's <i>Works</i>              |

## INTRODUCTION

THOMAS REID'S career was as uneventfully academic as that of his younger contemporary Kant, and although he did travel slightly farther afield than the German philosopher, he spent virtually the whole of his life in the universities of Aberdeen and Glasgow; except for one expedition to England in 1736 he never left Scotland.<sup>1</sup> Born on April 26, 1710, at Strachan, Kincardineshire, he was the son of the Rev. Lewis Reid, minister of the parish, and came of a line of ministers of the Church of Scotland which included an earlier, and in his way distinguished, Thomas Reid, secretary in Latin and Greek to James I. On the side of his mother, Margaret Gregory, Reid was connected with one of the most remarkable intellectual families of the day, chiefly notable for its hereditary brilliance in mathematics. Three of her brothers were professors, one of them, David, being at the instance of Newton appointed Savilian Professor of Astronomy at Oxford; his son, also David, became the first Professor of Modern History at Oxford and later Dean of Christ Church. Margaret's uncle, James Gregory, who was Professor of Mathematics first at St. Andrews and then at Edinburgh, invented the reflecting telescope, and was among the most illustrious mathematicians of the age; his son, grandson, and great-grandson were all professors, the last being friend and correspondent of Reid.<sup>2</sup>

At the age of twelve Reid entered Marischal College, Aberdeen, where for three years he had as his tutor in philosophy George Turnbull, a philosopher whose doctrines had such a powerful influence in moulding Reid's outlook

<sup>1</sup> For a full account of Reid's life *v.* Dugald Stewart, *Account of the Life and Writings of Thomas Reid, D.D.* (1803), and A. C. Fraser, *Thomas Reid* (Famous Scots Series, 1898).

<sup>2</sup> For further details of this distinguished family *v.* H. p. 68, and the *D.N.B.*, where nine of them have entries.

that it is remarkable that the latter nowhere acknowledges his debt. In Turnbull's *Principles of Moral Philosophy* are to be found the insistence on the inductive, empirical method in philosophy, the emphasis on the common structure of all languages as a sign of the metaphysical principles which it reflects, and the distinction between the two senses of cause — as a natural law, and as an efficient power (*i.e.* as an agent) — which are among the most striking features of Reid's philosophy. The main difference between them concerned perception: whereas Turnbull accepted the then conventional theory that the only objects of perception are sensible ideas produced in us by some unknown external cause, Reid rejected ideas entirely and insisted that we perceive external objects immediately (although in a special sense of the word "perceive").

After finishing his course Reid stayed on at Marischal, first to study theology, which led to his being licensed as a probationer for the ministry in 1731, and then as Librarian of the college from 1733 to 1736. In the latter year he and John Stewart, a mathematical colleague, made an excursion to England, where they visited London, stayed in Oxford with Reid's cousin the Dean of Christ Church, and then went to Cambridge where Reid was able to see "Dr. Bentley, who delighted him with his learning, and amused him with his vanity; and enjoyed repeatedly the conversation of the blind mathematician Saunderson — a phenomenon in the history of the human mind to which he has referred more than once in his philosophical speculations".<sup>1</sup>

During the next fourteen years Reid was minister of New Machar in the county of Aberdeen, where he had the leisure to study Hume's *Treatise of Human Nature*, the conclusions of which shook him so violently that they left him no more opportunity for dogmatic slumber than Kant found after reading the milder version in Hume's *Enquiry concerning Human Understanding*. In 1751 he was appointed Professor of Philosophy at King's College,

<sup>1</sup> Stewart's *Memoir*, H. p. 5.

Aberdeen,<sup>1</sup> a post which he held until 1764, when he succeeded Adam Smith in the chair of Moral Philosophy at Glasgow. The papers which he read to the Aberdeen Philosophical Society<sup>2</sup> during his professorship show that he was almost wholly preoccupied with the problems of epistemology in general and of perception in particular which the study of Hume had forced on him; and they resulted in the publication at the beginning of 1764 of his first work, the *Inquiry into the Human Mind on the Principles of Common Sense*, which was intended as a first step in the refutation of Hume's scepticism. It was followed some years later by the fruits of his labours at Glasgow,<sup>3</sup> the *Essays on the Intellectual Powers of Man* (1785), which covered a much wider scope than the special questions of perception of the earlier work, and by the *Essays on the Active Powers of Man* (1788), in which he defended a rationalist theory of ethics against the prevailing subjectivist doctrines of Hutcheson and Hume. In 1780, in order to devote himself to working on the *Essays*, he gave up lecturing, but continued for the next ten years to live in the university precincts<sup>4</sup> and to take a lively part in discussions on philosophy and mathematics. In particular the problem of cause, which Hume had brought to his attention, continued to absorb him,<sup>5</sup> and the last philosophical paper which he wrote, when over eighty years old, was on the subject of "Power".

<sup>1</sup> Education at King's College still followed the "regenting" system, by which one professor took on a batch of undergraduates at the beginning of their second year and continued with them until he presented them for graduation at the end of their fourth year. Thus in addition to the branches of philosophy proper Reid had to give instruction in mathematics and natural science. His four graduation addresses have recently been published: *Philosophical Orations of Thomas Reid*, ed. W. R. Humphries.

<sup>2</sup> V. Fraser, *op. cit.* pp. 52-4; J. McCosh, *Scottish Philosophy*, pp. 227-9.

<sup>3</sup> While at Glasgow Reid published his *Brief Account of Aristotle's Logic* (1774), which together with his *Essay on Quantity* (*Transactions of the Royal Society*, 1748) and his posthumous *Statistical Account of the University of Glasgow* (1799), were his only other published works, besides the *Inquiry* and the *Essays*.

<sup>4</sup> Reid had married in 1740 a cousin, Elizabeth Gregory. When she died in 1792, Reid was looked after by their one surviving daughter.

<sup>5</sup> V. esp. the correspondence with James Gregory, printed by Hamilton, pp. 62-88.

In 1796, the last year of his life, he was prompted by his own experience of the infirmities of old age to write a paper on "Muscular Motion". He fell ill in the early autumn and died on October 7.

Reid was thus an exact contemporary of Hume, who was born in the year after him and predeceased him by twenty years, and to Hume he owed virtually his whole philosophical development. It was the publication of Hume's *Treatise* in 1739 that first seriously stirred Reid from his acceptance of the Berkeleian system.<sup>1</sup> The total scepticism to which he thought the doctrines of the *Treatise* committed their holders seemed to him not merely subversive of theology and morals, which he was concerned to protect, but also so plainly absurd and inconsistent with the beliefs which Hume himself must admit to be implicit in his daily conduct, that from that time on, pretty well continuously down to his death, he devoted himself to a refutation of Hume's theories. As he saw it, Hume's arguments were virtually unassailable, and therefore if his conclusions were absurd, it could only be because his premises were false.

I have learned more from your writings in this kind than from all others put together. Your system appears to me not only coherent in all its parts, but likewise justly deduced from principles commonly received among philosophers; principles which I never thought of calling in question, until the conclusions you draw from them in the *Treatise of Human Nature* made me suspect them.<sup>2</sup>

Those premises he took to be contained in the principle which Hume had accepted from his predecessors, that the immediate objects of the mind's cognition are always ideas (in Hume's terminology either impressions or ideas<sup>3</sup>). If this initial principle were once uprooted, the whole sceptical system which sprang from it would crash in the ruin which it deserved. Reid therefore gave his attention very largely to a criticism of the idea-theory of

<sup>1</sup> *Inquiry*, Dedication; cf. pp. 114-15.

<sup>2</sup> Letter to Hume, March 18, 1763 (H. p. 91).

<sup>3</sup> *Treatise*, I. 1. 1.

cognition, and it was in his refutation of that that he himself considered his main philosophical claim to rest.

The merit of what you are pleased to call *my philosophy* lies, I think, chiefly in having called in question the common theory of ideas, or images of things in the mind, being the only objects of thought; a theory founded on natural prejudices, and so universally received as to be interwoven with the structure of language. . . . The discovery was the birth of time not of genius; and Berkeley and Hume did more to bring it to light than the man that hit upon it. I think there is hardly anything that can be called *mine* in the philosophy of the mind that does not follow with ease from the detection of this prejudice.<sup>1</sup>

At this stage two points are worth making. First, the objection has to be faced that the idea-theory of cognition is so obviously false that it did not need all the energy to knock it over which Reid in fact expended, and that if he really rests his claim on that achievement it does not establish him far, if at all, above the pedestrian level of routine philosophers. To this the answer is that, although the idea-theory of knowledge and the dualism to which, at any rate in the case of Locke, it leads, may now seem so clearly untrue that we can wonder how anyone could bring himself to hold it, this was not the case when Reid was lecturing and writing. During the eighteenth century when Locke's *Essay* was the standard text-book the terminology of ideas was almost universal, and in questioning the existence of ideas as the objects of thought Reid was undoubtedly putting forward a heretical view; and despite the attempts of Thomas Brown, pupil and friend of Dugald Stewart, to question his originality on the ground that the philosophers whom he most attacks (*i.e.* Descartes, Locke, Berkeley, and Hume) never maintained ideas as *entities* at all but only thought of them as the *manner* in which objects are presented to consciousness,<sup>2</sup> Reid's contribution is not seriously challenged. Only the most partial and wilfully one-eyed interpretation

<sup>1</sup> Letter to Dr. James Gregory (H. p. 88).

<sup>2</sup> *V. esp. Lectures on the Philosophy of the Human Mind*, xxvi and xxvii.

of those four philosophers can deny that they thought of ideas as objects ; and if a defence of Reid is needed against the disingenuous assaults of Brown and Priestley, it is adequately provided by Sir William Hamilton in his essay on " The Philosophy of Perception ".<sup>1</sup> If we are to appreciate fully Reid's merit in criticising the idea-theory of cognition, it is necessary to remember the context in which he was working ; if we do that and realise that he was questioning the genuineness of the whole accepted currency of philosophical discourse, we may be more ready to admit his importance.

Secondly, it may be urged with more cogency that if Reid's main object in criticising the idea-theory was to overthrow the conclusions which Hume reached in the *Treatise*, then he gave Hume's system the credit for a closer interlocking than it possessed and than its author would have claimed for it. It is true that having in Part I reduced all the objects of the mind to impressions and ideas, Hume continues throughout the book to use the impression-idea terminology ; this applies to his theory of belief,<sup>2</sup> of cause,<sup>3</sup> of induction,<sup>4</sup> and of identity.<sup>5</sup> But it is also true that Hume could have scrapped Part I entire and have substituted almost any other analysis of the objects of cognition without having to alter in essentials any of the arguments that followed. What was vital to his main theories was that our experience should be made up of a sequence of discrete particulars, but what the mental or material status of those particulars was was not of much account. Indeed Reid's greatest mistake over Hume was to have grossly overestimated the importance for him of his view that all ideas were the copies of previous impressions of sensation or introspection. It is indeed

<sup>1</sup> *Discussions on Philosophy and Literature*, pp. 69-88.

<sup>2</sup> " An opinion, therefore, or belief may be most accurately defined ' a lively idea related to or associated with a present impression ' " (*Treatise*, I. 3. 7).

<sup>3</sup> " A cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other " (*ib.* I. 3. 14).

<sup>4</sup> *V. ib.* I. 3. 12 *passim*.

<sup>5</sup> *V. ib.* I. 4. 2 *passim*.

surprising, and it is certainly a serious defect in Reid, that he should so have devoted himself to criticising Hume's premises that he published his *Inquiry* especially to refute them, without sufficiently considering whether in fact the impression-idea analysis of experience was necessary to Hume's conclusions. But it is certainly going too far to say with Professor N. Kemp-Smith that "what Reid seems constantly to have had in mind when he thought of Hume was the teaching of the first twenty pages of Book I of the *Treatise*, where Hume states his version of what Reid calls the 'ideal theory' ".<sup>1</sup> In the *Intellectual Powers* alone he discusses Hume's views on belief, on memory, on cause, on personal identity, on scepticism with regard to reason,<sup>2</sup> and in one place he quotes Hume's modification in the *Appendix* to his theory of belief as originally propounded in the *Treatise*.<sup>3</sup>

The final chapter of the *Active Powers* is devoted to a detailed criticism of Hume's theory of Moral Sense. And his letters are full of references to Hume, particularly to his theory of cause. Indeed it would be very surprising if Professor Kemp Smith could make out his case against a man who not only in addressing Hume wrote "I shall always avow myself your disciple in metaphysics",<sup>4</sup> but also spent the whole of his philosophical career in combating his doctrines.

Kant's condemnation of Reid is easily disposed of, for it is fairly clear that he had never read him. In the one passage where he is mentioned<sup>5</sup> Reid is joined with Oswald, Beattie, and Priestley as one of a quartet who completely missed the point of Hume's problem of cause, and who by appealing against his arguments to the bar of Common Sense were appealing from the reflective minority to the prejudices of the multitude. Now, whatever may be said of the other three, that is not true of Reid: he was quite aware<sup>6</sup> that Hume's problem was to show how "cause"

<sup>1</sup> *Proceedings of the Aristotelian Society*, Suppl. Vol. xviii. p. xvii.

<sup>2</sup> *V.* pp. 222 seq., 377-8, 396 seq., 439 seq.

<sup>3</sup> *P.* 227.

<sup>4</sup> Letter to Hume (H. p. 91).

<sup>5</sup> *Prolegomena to any Future Metaphysic*, Introduction.

<sup>6</sup> Cf. p. 382, H. p. 386.

could be an empirical concept, although the causal relation neither could be *inferred* from the ideas of either of the two events between which it appeared to hold, nor was experientially *observed* to hold between the two events, in the way in which the relations of temporal continuity and spatial contiguity were observed to hold. However, the plain fact is that Kant had not read any Reid: when the *Prolegomena* was published in 1783 Reid's only work then available, even in English, was the *Inquiry* (1764); and in that work so far from misinterpreting Hume's theory of cause, he does not discuss it at all; <sup>1</sup> his remarks on it are all to be found in his correspondence and in his two later works. From the fact that Kant mentions Reid in the company of Oswald, Beattie, and Priestley it may be *inferred* that he had seen Priestley's book in which the three others are lumped together for the purposes of destruction,<sup>2</sup> and that he accepted the interpretation there given, an acceptance which he could hardly have made if he had had access to Reid's *Inquiry* itself. It might also be added that Hume himself, after reading the manuscript of the *Inquiry*, commended both the spirit and the perspicuity which it revealed,<sup>3</sup> and made no suggestion that the author had missed the point. Kant's other criticism, that the appeal to Common Sense was the debasement of philosophy to authority, and to a very inferior authority at that, will be dealt with later.<sup>4</sup>

Reid believed that the then prevailing theory of knowledge, according to which the immediate objects of the mind's awareness are ideas, owed most of its influence to its advocacy by Locke. But, as Berkeley had shown,<sup>5</sup> Locke's position was untenable. In particular the am-

<sup>1</sup> There are, I think, only two references in the *Inquiry*, H. pp. 142 and 209; in both cases Reid is simply cataloguing Hume's sceptical disbeliefs.

<sup>2</sup> *An Examination of Dr. Reid's "Inquiry", Dr. Beattie's "Essay on the Nature of Truth", and Dr. Oswald's "Appeal to Common Sense" (1774).*

<sup>3</sup> Hume's letter to Reid, quoted by Stewart (H. p. 8). It is worth noting further that not only had Kant not read Reid, but also he had only read Hume in the *Enquiry concerning Human Understanding*. Reid's criticisms in his *Inquiry* were directed against the far more violently sceptical Hume of the *Treatise*.

<sup>4</sup> V. pp. 29 *seq.* below.

<sup>5</sup> V. H. pp. 286-7.

biguity of the words "immediate object" revealed its weakness,<sup>1</sup> whether the representative theory be intended as an account of perception only, or of judgment in general: either ideas are the only objects of awareness or they are not; if they are not, then objects other than ideas can be present to the mind, a conclusion inconsistent with Locke's premise; if ideas are the only possible objects, we have no reason to suppose that anything exists beyond them, of which they are to be representative. The difficulties of this dualism having thus led to the immaterialism of Berkeley, and thence, as Reid supposed, to the scepticism of Hume, the time had come to consider how well grounded was the initial assumption that the objects of the mind's awareness are ideas. Reid's criticisms of this assumption are numerous and scattered throughout his writings,<sup>2</sup> but are most concisely stated in the third of his *Philosophical Orations*, dating from 1759;<sup>3</sup> his later arguments are for the most part elaborations of these.

(1) The supposition that sensible objects are in any way mental images or ideas is pure hypothesis, for which there is no positive evidence. The only evidence that there could be is that of inspection, and when we dispassionately inspect sensible objects we find nothing about them to suggest either that they are peculiarly mental, in the sense of being mind-dependent or private to the mind having them, or that they are representative of further objects. He instances the case of memory, in which the image-theory might *prima facie* appear most plausible. But to it he opposes a stern realism, asking two eminently reasonable questions: given that I heard the sound of a bell struck half an hour ago, (a) what difficulty is there in supposing that the sound I remember now is *precisely* the sound I heard then? and (b) what intrinsic difference is there between the datum of the memory-situation and the datum of the situation remembered? Here Reid is illustrating the first cardinal principle of his philosophical

<sup>1</sup> *V.* pp. 342 *seq.*

<sup>2</sup> *V.* esp. pp. 13, 86 *seq.*, 101 *seq.*, 134 *seq.*

<sup>3</sup> *Op. cit.* pp. 33-8.

method, that the truest empiricism is that which is most truly empirical, proceeding by careful observation and induction, spurning fanciful hypotheses.<sup>1</sup> His insistence on applying to epistemology the procedure which had been so successfully developed in the natural sciences by Bacon and Newton is given repeated emphasis throughout the *Essays*,<sup>2</sup> and is indeed one of the chief features of his philosophy. That he owed his method at least in part to Descartes cannot be doubted ;<sup>3</sup> that he practised it far more consistently than Descartes practised his accounts both for the cautiousness which many of his critics have called cowardice, and for the remarkable clarity of analysis and insight which he frequently displays.

(2) Even as a hypothesis the postulate of ideas is valueless, because it does not help to explain what it was introduced for, namely, the manner of perception and memory. Whether the ideas are thought of as faithful representatives or merely as signs of their originals, they are not self-certifying or self-interpretative. We have still to ask what reason we have, on examining any given idea, for interpreting it in the way prescribed by the theory ;<sup>4</sup> and to this question no satisfactory answer can be produced. And with regard to judgment in general Reid finds the notion of *mediate* thinking, by which the object thought about is not itself present to the mind but yet *is* the object thought about, wholly unintelligible.

These two arguments, which exactly follow the first of Newton's "Regulae Philosophandi" in *Principia Mathematica*, Book 3,<sup>4</sup> are followed by a final argument (3) in which he discusses the considerations which have led philosophers into the idea-theory and finds them either inadequate or proving too much. (i) The fact that physical objects cannot act on each other unless they are contiguous in time and place either directly with each other

<sup>1</sup> Cf. Stewart, *Memoir*, H. pp. 11 and 18-20 ; Cousin, *Philosophie Écossaise*, pp. iii *seq.* and 301-6 ; Jouffroy, *Œuvres de Reid*, vol. i. pp. i-xviii.

<sup>2</sup> Cf. esp. pp. 30-35, 62, H. p. 271-2.

<sup>3</sup> *V. Inquiry*, 7.

<sup>4</sup> "Causas rerum naturalium non plures admitti debere, quam quae et verae sint et earum phenomenis explicandis sufficiant." Cf. p. 62.

or with further intermediary objects which thus provide an unbroken chain of temporal and spatial contiguities, has misled philosophers into supposing the same must be true of mind : that in perception, because the act of perceiving and the object perceived are not in the same place, there must be something which *is* in the same place as the mind, to act as intermediary between it and the object perceived ; and that in memory, because the act of remembering and the situation remembered are neither in the same place nor in the same time, there must again be an intermediary. This argument, Reid suggests, involves a *petitio principii*, because it assumes an analogy in a certain respect between physical events and mental events, for which the only evidence could be the independent discovery that mental events do resemble physical events in that respect ; whether they do so resemble them is precisely the question at issue. (ii) If the analogy is accepted as valid, one of two alternatives must be accepted : if the idea is to be an intermediary between mind and object in the sense required by the analogy, it must itself be linked directly or mediately with the object — how is this accounted for except by reviving the doctrine of sensible species, the unplausibility of which had largely led to the introduction of the idea-theory at all ? The alternative is to suppose that there is no further object with which the idea requires to be connected. This is the view which Berkeley consistently and Hume less consistently held, and, Reid maintains, it is the logical conclusion of the representative theory of knowledge.

Reid's main points, then, are that there is not the slightest positive evidence in favour of the theory of ideas, and that it must lead (at the least) to the conclusion that the world is populated only by minds and their ideas. He has not proved that this conclusion is false, nor does he ever do so, although if the fifth of his *Principles of Common Sense* is true <sup>1</sup> it certainly is false. Despite his anxiety to distinguish between the various ambiguities of the word "idea", Locke's use of which was in particular

<sup>1</sup> P. 380.

reprehensible,<sup>1</sup> Reid was himself obsessed with the notion of "idea" as a peculiarly mental entity as contrasted with material objects, that he never seriously tackled the question how far, if at all, ideas as maintained by Berkeley and Hume are inconsistent with material objects; in particular he does not seem ever to have adequately considered the phenomenalist account hinted at by both his chief victims,<sup>2</sup> according to which, in modern terminology, material objects are said to be logical constructions out of sense-data.<sup>3</sup> Had Reid thought more in terms of some more neutral word than "idea", such as "sense-datum", he might at least have discussed this theory, although he would certainly have rejected it on the ground that when we talk of material objects we do not in the least mean what the theory requires us to mean.<sup>4</sup>

His own theory of perception, although it takes up much of his attention in the *Intellectual Powers* and almost all of it in the *Inquiry*,<sup>5</sup> is so obscure and incomplete as hardly to constitute a theory at all. As might be expected from his rejection of ideas he is a realist of a sort, but of what sort it is exceedingly hard to say. First a sharp distinction is drawn between sensation and perception, according to which "having a sensation" is very much what is meant nowadays by "having a sense-datum", with the important condition added, that is not accepted by all persons using the sense-datum terminology, that no distinction, let alone separation, is possible between a sensum and a sensing. "There is no difference between the sensation and the feeling of it — they are one and the same thing. It is for this reason that we before observed that in sensation there is no object distinct from that act of mind by which it is felt — and this holds true with regard to all sensations."<sup>6</sup> As far as sensation is concerned, then, Reid is outdoing Berkeley: not merely is

<sup>1</sup> Cf. esp. pp. 105-11.

<sup>2</sup> *Principles*, 3; *Treatise*, I. 4. 2 and 3.

<sup>3</sup> Cf. H. H. Price, *Perception*, pp. 282 seq.

<sup>4</sup> Cf. pp. 116-18, 131-2, 371-2.

<sup>5</sup> References will, so far as is possible, be given to the *Intellectual Powers*, but it should be remembered that Reid's most detailed discussion of perception comes in the *Inquiry*.

<sup>6</sup> Pp. 150-51.

he denying that *sensa* can exist unsensed, but he also adds what Berkeley was not quite so sure about,<sup>1</sup> that even a distinction in thought between them is impossible. All sensing is according to Reid non-prehensive,<sup>2</sup> and is most clearly illustrated by some somatic sensation, like toothache, where his view seems most plausible:<sup>3</sup> not merely do I suppose that I could not have toothache without feeling it (although my tooth might still be decayed), but also I mean by "I have toothache" precisely what I mean by "I feel toothache". Further, he argues, if sensation is in this sense immediate, it cannot be fallacious.<sup>4</sup> And again, if sensation is of this kind, it can neither provide us with the conception of a material object nor furnish any reason for supposing material objects to exist.<sup>5</sup> That is, there is nothing about our sensations which entitles us to infer the existence of anything beyond them. To this extent Reid agrees with Berkeley; where he disagrees is in his belief that in addition to sensation there is also perception, which Berkeley failed (or refused) to allow for altogether.<sup>6</sup>

So far Reid's account is both clear and acute, and anticipates a good deal of modern discussion on the subject, but when it has to be related to perception proper the difficulties begin. Perception is defined as a belief in a quality of a material object as the cause of a given sensation,<sup>7</sup> and its difference from sensation is most simply illustrated by the difference between the sentence "I see a tree" and the sentence "I feel a pain", where both sentences are of the same grammatical type,<sup>8</sup> but the first is a perception-sentence and the second a sensation-sentence. Perception involves three essentials: (a) a conception of the object perceived; (b) an irresistible conviction and belief of its present existence; (c) this

<sup>1</sup> Cf. *2nd Dialogue*: "These ideas, or things by me perceived, either themselves or their archetypes, exist independently of my mind" (*Works*, ed. Fraser, vol. i. p. 427).

<sup>2</sup> For a short and very lucid account of the commonly accepted distinction between prehensive and non-prehensive sensing v. Broad, *Examination of McTaggart's Philosophy*, vol. ii. Pt. I. pp. 77-80.

<sup>3</sup> Cf. pp. 18-20, 165-6.

<sup>4</sup> Cf. p. 169.

<sup>5</sup> P. 156.

<sup>6</sup> P. 125.

<sup>7</sup> Cf. p. 151 n. 2.

<sup>8</sup> *Inquiry*, VI. 20.

conviction and belief are immediate and not the effect of reasoning.<sup>1</sup> Perception then is not a form of immediate apprehension of a given, and Reid is not a realist in that sense. On the other hand it is not an inference based on sensation, because as a matter of fact we do not in perceiving try to draw inferences from the sensation we have — indeed, when not philosophising we do not distinguish between perception and sensation at all<sup>2</sup> — and because sensation could not justify any inference that we might make. Sensations do not in the least resemble the qualities which cause them, and although the distinction between primary and secondary qualities is valid, Locke's criterion for distinguishing them is not.<sup>3</sup> The fact that I give the same name (*e.g.* "red") both to the sense-datum I have and to the quality in the object which I believe is the cause of it, is simply a convenience of language, due to our having no need in everyday life to distinguish between sensation and perception. But to ask such futile questions as "Is what I now see as red red when I am not seeing it?" is simply due to the failure to realise that "red" in the sense in which a sense-datum is red is quite different from "red" in the sense in which a material object is red. What is meant by saying that a particular carpet is red is that the carpet has a quality such that anyone looking at it under normal conditions will have red (*i.e. actually* red) sense-data.<sup>4</sup> That is to say, qualities of material objects are to be defined somehow in terms of sensations. The question just how they are to be so defined brings out the difficulties in Reid's theory of perception.

According to Reid, although sensations neither resemble the objects of perception nor furnish us with any foundation for inference as to the nature or existence of

<sup>1</sup> P. 79.

<sup>2</sup> *Inquiry*, VI. 20.

<sup>3</sup> Pp. 162-4.

<sup>4</sup> *V.* p. 151: "It is here to be observed that the sensation I feel and the quality in the rose which I perceive are both called by the same name. The smell of a rose is the name given to both; so that this name hath two meanings; and the distinguishing its different meanings removes all perplexity, and enables us to give clear and distinct answers to questions about which philosophers have held much dispute."

any material object,<sup>1</sup> yet sensations do stand to objects of perception (and in correct perception, to material objects) in the relation of sign to thing signified, the sensation signifying the object of perception which is its regular concomitant. Now it may be objected that for a sign to fulfil its function and by its appearance to provide us with any information about what it signifies we must have some prior means of finding out which objects of the one category are to be correlated with which of the other; and, if this condition is to apply to sensation and perception, we must be able sometimes to apprehend objects of perception directly, in order to correlate them with their concomitant sensations. But Reid distinguished between artificial and natural signs:<sup>2</sup> the former are produced by custom and convention — *i.e.* they do require some experience of each of a pair of concomitants before one can be taken as the sign of the other; the latter are the effect not “of habit, but of the original constitution of our minds”. And among natural signs are sensations, which when they occur *suggest* to our minds certain qualities of objects: *e.g.* the notion of hardness in bodies is suggested by a certain sensation, which no more resembles the hardness which it suggests than pain resembles the point of a sword. By this distinction Reid endeavoured to avoid the very criticisms which he had himself levelled against Locke (cf. p. xvi). However, as Reid nowhere further explained what precisely he meant by “suggest” in this context, nor how one thing could naturally indicate another, let alone provide us with information about it, his theory of natural signs cannot

<sup>1</sup> It should be noted that “object of perception” and “material object” cannot mean the same for Reid, although both are distinguished from sensation. I perceive an object (object of perception) whenever I have a sensation and believe the sensation to have been caused by a certain quality. If my belief (*i.e.* my perception) is correct, that object of perception will be a material object. If I am having an illusion (*e.g.* mistaking a wax apple for the real fruit), the object of perception will not be a material object (for there is no fruit present), although another material object (the wax apple) is present. If I am having a hallucination (*e.g.* supposing I see a dagger when there is nothing there whatever), there is an object of perception, but there is no material object at all.

<sup>2</sup> *Inquiry*, V. 3.

be regarded as particularly helpful. He must accept one or other of two alternatives : either (*a*) we know nothing of any material object other than what we know of sensations — *i.e.* we can only distinguish between one material object and another by reference to different sensations ; or (*b*) we do have information about material objects independent of our sensations. Either of these alternatives might in itself be possible, but neither was acceptable to Reid. Alternative (*b*) he cannot have believed because, although he was clear that certain concepts necessary to all perceptual experience such as substance<sup>1</sup> were not data of sensation but were somehow categorial in character, yet such descriptions as he gives of objects perceived are in fact descriptions derived from sensations — *i.e.* he thought that the qualities distinguishing one object from another could only be known somehow or other from their different respective sensations.

He on the whole inclined to alternative (*a*), which may be called a dispositional theory of material objects. According to this theory any given material object will be defined in terms of the sensations to be had of it under standard conditions ; and if I say, for instance, that I am now perceiving a red object, what is meant is either that the object is such that I am now having a red sensation, or, that it is such that under standard conditions I would now be having a red sensation. In short, when one says that one perceives a material object which has certain independent and relatively enduring properties (*e.g.* perceiving a table with a square top and fluted legs), one means that under standard conditions certain sensations are available. Now that is almost precisely what Reid does say in his clearest moments ; *e.g.* " I conclude that colour is not a sensation . . . [but] a certain power or virtue in bodies, that in fair daylight exhibits to the eye an appearance which is very familiar to us, although it hath no name ".<sup>2</sup> But if he were holding a straightforward dispositional theory of perception, he would neither be disagreeing with Berkeley as strongly as he believes he is,

<sup>1</sup> Pp. 396-7.

<sup>2</sup> *Inquiry*, VI. 4.

nor be advocating a theory as acceptable to the plain man as he thinks his is. The plain man is not prepared to define a material object as a bundle of dispositions, nor in the last resort is Reid. For he maintains in conjunction with the dispositional theory a causal theory as well. (Indeed it may be argued that his apparently "dispositional" statements are really ambiguous "causal" statements.) "The permanent colour of the body is the cause, which by the mediation of various kinds or degrees of light, and of various transparent bodies interpos'd, produces all this variety of appearances."<sup>1</sup> But to hold a causal theory requires the existence of things to *be* causes; and until the mysterious concept of "suggesting" is cleared up, Reid has no good reason for holding a causal theory; his premises do not entitle him to go beyond a dispositional theory.

In the *Intellectual Powers* Reid is less explicit than in the *Inquiry* on the relation of sensations to material objects, and he may have suspected that his theory of perception was not as like the plain man's as he had hoped. That is conjecture, but the greater obscurity in the later work is evident. In particular the distinction between sensations on the one hand and qualities of objects on the other is less clear-cut.

Quoting Descartes' example of the sensation of pain got from a pinprick he says it is clear that the pain is a sensation, but that the pin is not, for the pin has length, thickness, figure, and weight.<sup>2</sup> Again, he says that when he presses forcibly on a table "I feel pain, and I feel the table to be hard. The pain is a sensation of the mind, and there is nothing that resembles it in the table. The hardness is in the table, nor is there anything resembling it in the mind."<sup>3</sup> Now in each case he has both pain-sensations and hardness-thickness-sensations and others. Why is he clear that the pain is not a sign of a quality in the object but that the other sensations are, unless he supposes that the other sensations belong to the object in a way different from merely being caused by powers in it?

<sup>1</sup> *Ibid.*<sup>2</sup> P. 126.<sup>3</sup> P. 152.

Although the theory requires him to say that the sensations are signs of qualities in the object (and then a pain-sensation would be as much a sign as a "pointed" or "hard" sensation), yet he cannot help believing that some sensations do somehow reveal the objects more directly. Once more he is trying to have it both ways: his theory impels him towards a dispositional view of material objects, but he is compelled with the ordinary man to believe that the objects "really are there" in a literal sense, and he compromises on a causal view. His theory of the sign-function of sensations either makes his causal view virtually tautologous or deprives it of all means of evidence in its favour; but he is compelled with the ordinary man to believe both that some of his sensations (*e.g.* hardness, pointedness, etc.) do belong to material objects in a way in which others (*e.g.* pain) do not, and that the first reveal more of the determinate properties of the objects to which they belong than they could if they merely stood to them as signs.<sup>1</sup>

But just because of its confusions Reid's account of perception is of importance. He is honestly trying to marshal the facts and to generalise from them, and at the same time to avoid flouting Common Sense. Common Sense dictates that we know a certain amount about the world, in particular that material objects exist, that our senses do not normally misinform us about them,<sup>2</sup> and that other persons exist.<sup>3</sup> Those are the facts of experience from which we start, and are not to be denied. Yet, when we begin to analyse the nature of experience, we find that basically it derives from our sensations, and that our sensations do not provide us with the means of inferring the existence of these objects which we know to exist. Reid's problem was to reconcile those two positions. His attempt to do it in the case of perception was muddled and unsuccessful, but if it did not resolve the issue, it set it clearly

<sup>1</sup> Cf. p. 123: "If I may trust the faculties that God has given me, I do perceive matter objectively — that is, something which is extended and solid, which may be measured and weighed, is the immediate object of my touch and sight".

<sup>2</sup> P. 380.

<sup>3</sup> P. 385.

enough. Professor G. E. Moore has made it clearer still: <sup>1</sup> for him and for Reid the problems of philosophy are the same—by analysis of what is experientially complex to make clearer to ourselves what we know already to be true.<sup>2</sup> We know perfectly well that other things and persons exist; our function as philosophers is to reveal both *how* we know that and *what* precisely it is that we are knowing; any conclusion that we do not know these facts violates Common Sense, and is an indication of faulty analysis, not of initial ignorance. "Though common sense and my external senses demand my assent to their dictates upon their own authority, yet philosophy is not entitled to that privilege."<sup>3</sup>

The chief interest of Reid's theory of memory is that it is intended to be in principle analogous to his account of perception, and that it exhibits very clearly the uncertain compromise between his reasoning and his actual common sense beliefs. Like perception memory is an immediate act, involving no inference; <sup>4</sup> it has as its object the event or situation remembered; <sup>5</sup> and no reason can be given to establish conclusively the reliability of any act of remembering—if I remember having washed my hands this morning, the proposition "I washed my hands this morning" is not logically entailed by the proposition "I remember having washed my hands this morning": that is to say, all my memory-beliefs may be fallacious, and I can give no reason why I believe them other than that it is the way my faculties work, but only a fool or a professional sceptic would refuse to believe them.<sup>6</sup> Now one would expect Reid to say, if the analogy between perception and memory is to continue,

<sup>1</sup> *The Nature and Reality of Objects of Perception* (*Philosophical Studies*, pp. 31-96); cf. p. 45.

<sup>2</sup> P. 256; cf. *Philosophical Orations*, p. 31.

<sup>3</sup> P. 143.

<sup>4</sup> P. 194.

<sup>5</sup> P. 195.

<sup>6</sup> P. 197. Reid's statement that no memory-judgments are necessary judgments anticipates Bertrand Russell's discussion, *Analysis of Mind*, pp. 159-60.

that in remembering one has an image which is a sign of the thing remembered ; he would then be holding a commonly accepted view, and would in fact be agreeing with Hume.<sup>1</sup> Actually he subjects Hume's theory to very effective criticism,<sup>2</sup> and denies that there are any images in memory, at any rate in the sense of "image" commonly accepted.<sup>3</sup> He later makes the interesting suggestion that imagining is only a special mode of conceiving, and that images are not entities at all distinct from the things imagined.<sup>4</sup> In the case of memory he points out that there is the special difficulty for the orthodox image-theory, that as part of the evidence for itself it must take for granted the straightforward realist view which it is intended to replace.<sup>5</sup>

Despite denying the intervention of images, and despite saying that past events are the immediate objects of an act of remembering, Reid does not hold a realist view — *i.e.* he does not believe that memory is a simple act of apprehending the past event. If that were the case, memory could not be mistaken, which he has admitted it can be, and it would not require to be "always accompanied with the belief of that which we remember, as perception is accompanied with the belief of that which we perceive".<sup>6</sup> But in that case what exactly is the object present to the mind in memory ? There is not, as in his theory of perception, a belief suggested by a present sensation, because in remembering there is no present sensation or anything parallel to it that can be distinguished from the act of remembering itself. Reid does not give an answer to that question, and the status of the objects of memory-situations is left unexplained, although his common sense belief that they are the actual events from the past constantly recurs. It may very well be the actual event in the case of a veridical memory, but what is it when a memory is false ? Here unhappily Reid's caution creeps in, and his analysis stops short. He is quite clear (*a*) that we can and often do remember cor-

<sup>1</sup> *Treatise*, I. 1. 3 and 3. 5.

<sup>4</sup> Pp. 233, 239, 251, etc.

<sup>2</sup> Pp. 222-8.

<sup>5</sup> P. 222.

<sup>3</sup> Pp. 216 *seq.*

<sup>6</sup> P. 195.

rectly; (b) that we remember past events directly, not through the mediation of images. Presumably some distinction is required, corresponding to that between material objects and objects of perception.<sup>1</sup> How memory-knowledge of the past should be possible is no more explicable (and is no more to be questioned) than how perceptual knowledge of the present should be possible; they are both due to the original faculties of our minds, bestowed on us by God.<sup>2</sup> Once more Reid is refusing to give so intricate an analysis of a subject that it will lead to conclusions contradicting the knowledge with which we begin; the right analysis may be intricate, but it is not right *because* it is intricate, and Reid prefers to stop while he is still sure of himself rather than risk being caught in fallacious entanglements. His account of memory is characteristic of all his thinking: lucid, careful, full of penetrating suggestions and criticisms, but very incomplete and deliberately unsystematic.

Essays IV and V consist of logical and psychological discussions<sup>3</sup> of Conception, again making a number of good points but leaving the reader to fit them together as best he can. As already indicated, Reid admits no distinction in kind between imagining and conceiving; he does not allow that in the first the mind has for objects mental pictures of particulars and in the second pure universals. In this he agrees with his empiricist predecessors, Berkeley and Hume, but whereas they had denied the possibility of the mind's apprehending or thinking in pure universals, Reid rejected images as pictures of particulars. That is not to say that he thought all conception was of universals — indeed he tends to confusion by not distinguishing the sense in which we conceive an individual from the sense in which we conceive a universal — nor does he deny imagining. Imagining is a form of con-

<sup>1</sup> Cf. p. xxi n. 1.

<sup>2</sup> Pp. 198-9.

<sup>3</sup> Cf. pp. 321-6, where in his long-winded discussion whether judgment presupposes conception or *vice versa* he fails to consider whether he is trying to answer a question in psychology or in logical analysis.

ceiving, and although in all conception the act of conceiving must be distinguished from the object conceived,<sup>1</sup> "image" is the name not, as might be supposed, for an object present to the mind in conception, but for the act of conceiving itself.<sup>2</sup> This account is obscure, but is of a piece with his rejection of the whole philosophical idea-theory, which again comes in for long criticisms in these two Essays. If conception is to be of two kinds, of individuals and of universals, it is hard to see how the first can occur without some kind of "pictures" of particular qualities. This Reid half admits, for having said that imagining and conceiving are synonymous,<sup>3</sup> he also says that imagining is a species of conception, namely, conception of visible objects,<sup>4</sup> that there is an analogy between image and conception (thereby implying that they are different from each other<sup>5</sup>), and again that they must not be confused nor must be supposed to be synonymous.<sup>6</sup> From such a variety of inconsistent statements, it is impossible to extract one coherent theory. What seems clear is that imagination is confined to individuals and does not involve mental pictures, at any rate in the ordinary sense. "Imagination properly signifies a conception of the appearance an object would make to the eye if actually seen."<sup>7</sup> But how this special conception takes place is not explained. It can hardly be denied that in imagining visible particulars I do have some kind of a visual picture; but perhaps what Reid was trying to argue was that this picture was not a representation of the object nor was peculiarly mental, but *was* the object as imagined. This would make imagination epistemologically parallel to memory; but it must be confessed that he has not left it sufficiently clear that this was his view of imagination.

Again on the relation between universals and conception he is not free from ambiguity. He distinguished between the particular qualities of particular objects and the universal which unites them;<sup>8</sup> *i.e.* the whiteness of

<sup>1</sup> P. 243.<sup>2</sup> P. 233.<sup>3</sup> *Ibid.*<sup>4</sup> P. 239.<sup>5</sup> P. 251.<sup>6</sup> P. 300.<sup>7</sup> *Ibid.*<sup>8</sup> P. 277.

a white sheet is different from Whiteness. But what he thought the universal proper was it is hard to say. He might appear to be most inclined towards the realist Platonic theory, which he refers to with approval, if it were not that he denied one of its cardinal principles, that universals exist independently of any particulars that might instantiate them.<sup>1</sup> On the whole he seems, like his predecessors in the English school, to have been less interested in the ontological question of universals than in the epistemological question of our knowledge of them, and he (and they) may even believe that the first question is not to be distinguished from the second. Despite one reference to Conceptualism, where he talks of it almost as a discredited theory,<sup>2</sup> Reid's own account seems to come closer to Conceptualism than to anything else :

Universals are always expressed by general words ; all the words of language, excepting proper names, are general words ; they are the signs of general conceptions or of some circumstance relating to them.<sup>3</sup>

If now it should be asked, What is the idea of a circle ? I answer, It is the conception of a circle. What is the immediate object of this conception ? The immediate and only object of it is a circle. But where is this circle ? It is nowhere. If it was an individual and had a real existence, it must have a place ; but, being a universal, it has no existence and therefore no place. Is it not in the mind of him that conceives it ? The conception of it is in the mind, being an act of the mind ; and in common language, a thing being in the mind is a figurative expression signifying that the thing is conceived or remembered.<sup>4</sup>

This is near-Conceptualism, but not pure Conceptualism. In short Reid is not finally interested in the question, "What is a universal ?" (and may not even think it a genuine question at all<sup>5</sup>), because, as hinted at in the first of the above quotations, he is far more interested in another subject, in universals as related to words — *i.e.* in the meaningfulness of language — and for that concepts,

<sup>1</sup> Pp. 247-8.

<sup>2</sup> P. 296.

<sup>3</sup> P. 237.

<sup>4</sup> P. 252.

<sup>5</sup> Cf. p. 295 : "Such profound speculations about the nature of universals we find even in the first ages of philosophy. I wish I could make them more intelligible to myself and to the reader."

whether they are *of* universals or *are* universals, are what matter.

Reid recognised as much as any of our contemporaries the importance of language for philosophy. He repeatedly emphasised the structure of languages as evidence of uniform metaphysical beliefs; <sup>1</sup> he argued with some force that although most language was artificial and depended on convention, it must on that account presuppose some natural language, for the very establishing of a convention required the use of signs; <sup>2</sup> he came close to the positivist doctrine that unverifiable hypotheses are meaningless; <sup>3</sup> and he had unmistakable verbalist tendencies, which particularly come out in what he has to say about concepts and words, and about definition. Unfortunately here again he is not consistent: on the one hand he maintains that all definition is of words, <sup>4</sup> and that having concepts is understanding the meaning of words, <sup>5</sup> on the other hand that there is a difference between analysing a concept and defining a word, <sup>6</sup> and that words and concepts are two different kinds of thing, one standing as signs of the other. <sup>7</sup> There is indeed one place where Reid expressly denies the distinction between real and verbal definitions:

The logicians indeed distinguish between the definition of a word and the definition of a thing, considering the former as the mean office of a lexicographer, but the last as the grand work of a philosopher. But what they have said about the definition of a thing is beyond my comprehension. All the rules of definition agree to the definition of a word; and if they mean by the definition of a thing the giving an adequate conception of the nature and essence of anything that exists, this is impossible, and is the vain boast of men unconscious of the weakness of human understanding. <sup>8</sup>

<sup>1</sup> *V. esp.* pp. 18, 29, 40-41, 371.

<sup>2</sup> *Inquiry*, VI. 2.

<sup>3</sup> *Cf.* p. 32 n.

<sup>4</sup> *P.* 2.

<sup>5</sup> *P.* 304: "The labour of forming abstract notions is the labour of learning to speak". But, later in the same paragraph, "men have *hardly any* general notions but those which are expressed by the general words they hear and use in conversation" (my italics) — *i.e.* it is logically possible to have a concept without words.

<sup>6</sup> *Pp.* 268-71.

<sup>7</sup> *P.* 268.

<sup>8</sup> *Brief Account of Aristotle's Logic*, II. 4

This passage fairly indicates the source of Reid's uncertainties and confusion : because no attempted definition of a thing may be completely adequate — *i.e.* because all we can know of a thing is its *nominal* essence as opposed to its *real* essence — it does not, as Reid supposes, follow that a definition of a thing is logically impossible. Our attempted definitions of things may always fall short (although they might be true as far as they go), but they appear to be different from our definitions of words, and indeed in general to prescribe the latter : how one uses the word "cat" will depend on what one thinks the properties of a cat are ; in attempting to discover the latter one may be, and probable is, helping to establish a convention for the former, but the discovery of the one does not appear to be identical with the establishing of the other.

Reid had a good deal to say on the question whether inconceivability was a criterion of a proposition's logical impossibility, and most of it is eminently sensible.<sup>1</sup> To conceive a proposition is to understand its meaning ; but I understand the meaning of the proposition "any two sides of a triangle are together equal to the third" as well as I understand "any two sides of a triangle are together greater than the third" ; yet the first of the two propositions is logically impossible ; therefore I can conceive a proposition which cannot be true. The objection, alleged to this passage by Hamilton, that in such a case we understand the meaning of the words of the sentence but not the sentence as a whole, has recurred in modern discussions,<sup>2</sup> but is invalid without a specified criterion for understanding a sentence as a whole. For whatever is meant by understanding the sentence expressing the second proposition at any rate appears to be applicable to the first. And Reid makes the good point that all *reductio ad absurdum* arguments start from propositions which are logically impossible, but which must be conceivable if the

<sup>1</sup> Pp. 256 *seq.*

<sup>2</sup> Cf. A. C. Ewing, *Meaninglessness* (*Mind*, N.S. vol. xlv. No. 83, pp. 362-4).

argument is to proceed, and which must entail other propositions if their own impossibility is to be revealed.<sup>1</sup> The chief merit of his lucid discussion is its revelation of the distressingly loose and ambiguous use of words like "conceivable" and "significant", to which the recent vogue of the verification theory of meaning has, mainly by its own confusions, recalled our attention.

As the philosopher of Common Sense Reid may appear to say remarkably little about it, for the chapter which has it as its title is quite short.<sup>2</sup> But the material provided is in fact considerably greater, consisting both of the last five chapters of Essay VI and, more important, of Reid's practice throughout the whole work. The term "Common Sense" itself bears a variety of meanings for Reid and undergoes a certain development in the course of his career.<sup>3</sup> Although the gradations of meaning are numerous, the classification which most clearly reveals the development is best given as threefold: (i) Common Sense as the body of propositions generally accepted as true, although not demonstrably true; <sup>4</sup> (ii) Common Sense as the principle of matter-of-fact self-evidence underlying those propositions; <sup>5</sup> (iii) Common Sense as that power of the mind by which we detect the truth of those propositions.<sup>6</sup> The last is the meaning given in the chapter on the subject, where the difference between Common Sense and Reason is stated to be that the function of the first is to grasp intuitive truths, and of the second to draw conclusions from these primary truths—*i.e.* "reason" is used in the narrow sense of "reasoning".<sup>7</sup> It is also, as Stewart points out,<sup>8</sup> the most usual meaning given at that time. But, as he objects, to define it as the "power by which the mind perceives the truth of any

<sup>1</sup> P. 261.<sup>2</sup> Pp. 329-40.<sup>3</sup> Cf. O. M. Jones, *Empiricism and Intuitionism in Reid's Common Sense Philosophy*, ch. 5.<sup>4</sup> Cf. p. 28.<sup>5</sup> Cf. p. 339.<sup>6</sup> Essay, VI. 2 *passim*.<sup>7</sup> P. 339.<sup>8</sup> *Memoir*, H. p. 27.

intuitive proposition", and then to include among intuitive propositions not only the axioms of mathematics and logic but also propositions recording an immediate experience of perception or memory and propositions which are "those fundamental laws of belief which are implied in the application of our faculties to the ordinary business of life", is to exhibit an alarming laxity of thought. For the sense in which the axioms of mathematics and logic are intuitive is so different from the sense in which basic propositions of experience and any other empirical propositions which we cannot help believing are intuitive, that they should not all be referred indiscriminately to the same principle in us. This is a fair objection to the current use of the phrase "Common Sense", but, as Stewart admits, does not apply to Reid, who carefully distinguishes between logically necessary and matter-of-fact self-evident propositions, and who is on the whole careful to restrict Common Sense to the latter: his distinction between the First Principles of Necessary Truths, which include besides the axioms of mathematics and logic certain principles of grammar, aesthetics, morals (*e.g.* that a generous action has more merit than a merely just one <sup>1</sup>), and metaphysics (*e.g.* sensible qualities must have a subject — body — and introspectible data must have a subject — mind <sup>2</sup>), and the First Principles of Contingent Truths makes that clear.

Now if all that is meant by calling a belief a Common Sense proposition is that it is a commonly accepted belief, *i.e.* if Reid had stuck to meaning (i), then he would have been fairly open to Kant's charge of making the criterion of a philosophical principle's acceptability not the long-considered reflection of the trained thinker but the uncritical prejudices of the people.<sup>3</sup> But even in those passages where Reid says that on fundamental propositions appeal must be away from the few to the authority of the many, he is careful to add the condition that the opinion of the many should be that of those with "a sound mind free from prejudice" and with "a distinct conception of

<sup>1</sup> P. 394.<sup>2</sup> P. 396.<sup>3</sup> *V.* p. xiv above.

the question".<sup>1</sup> That condition is important, because it indicates that Reid's attitude was diametrically opposed to the authoritarianism which Kant attributes to him, and because it illustrates what must be the fundamental principle of any Common Sense philosophy, that the statement and distinguishing of beliefs are far more difficult than the judging of them when stated, and that the function of the philosopher is to perform the first of these tasks.<sup>2</sup>

As then Reid insists on distinguishing between beliefs of Common Sense and ill-informed or biased prejudices, he cannot include under the first all commonly accepted beliefs. He in fact confines them to those beliefs which although they cannot be demonstrably proved to be true, nor are logically necessary in themselves, yet obviously are true; that indeed is what he means by calling them self-evident.<sup>3</sup> They are those principles which, although we cannot prove them, we cannot help believing, so that the scepticism of Hume is the idlest perverseness, which even he cannot keep up for long at a time.<sup>4</sup> This advances us to the connected meanings (ii) and (iii) of Common Sense, which for Reid seem only to differ from each other in emphasis; whether we choose to give the name "Common Sense" to the principle underlying these self-evident, though contingent propositions or to our power of discovering their self-evidence and distinguishing them from others is only of verbal interest; however, as the phrase is commonly used as the name for the judging faculty which we possess, Reid prefers sense (iii).

Nevertheless there does appear to be a difference which is something more than verbal, and the nature of which Reid never brought out clearly, even, it may be suspected, to himself. The difference is to be found in the looseness of the phrase "self-evident", which plays the most important part in Reid's Common Sense. A self-evident

<sup>1</sup> P. 367.

<sup>2</sup> Cf. H. Sidgwick, *The Philosophy of Common Sense* (*Mind*, N.S. vol. iv. No. 14).

<sup>3</sup> *V.* p. 114 n. 1.

<sup>4</sup> *Treatise*, I. 4. 7.

proposition, it must be remembered, is a proposition which we accept as obviously true, although it neither is axiomatic in the strict sense nor can be conclusively proved to be true ; that is to say, it is a contingent proposition. A list of such propositions is given in Essay VI, ch. 5, some examples being : everything of which I am conscious by introspection exists (*i.e.* my thoughts, sensations, etc.), those events<sup>1</sup> which I distinctly remember did in fact happen, I am a continuing and identical person at any rate as far back as I can remember, what we distinctly perceive by our senses really exists and is what we perceive it to be, we have some degree of power over our actions, there are other persons like ourselves possessing life and intelligence, future events will probably resemble past events in some respects, given resemblance in other respects. He does not claim that the list from which these examples are selected is either exhaustive or perfect<sup>1</sup> — *i.e.* there may be some propositions included which should not be there — but it is sufficient to indicate what sort of propositions he is thinking of as self-evident. Now there are two factors relevant to them, which he thinks are at any rate symptomatic, suggesting very strongly that propositions of this class are true : the first is the structure of language, which is the image of thought, and which being in certain essentials uniform from one language to another indicates certain basic uniformities of thought ; and the other is the fundamental identity of human conduct. Both of these are constantly appealed to by Reid,<sup>2</sup> and both of them depend on a further single principle, that unanimity or uniformity of thought on a subject is a strong indication that the thought is true. The fact that this principle is virtually identical with the tenth proposition in Reid's list of self-evident propositions<sup>3</sup> does not perhaps convict him of logical fallacy, as the two factors of uniformity of language and uniformity of conduct are not intended as direct evidence for the

<sup>1</sup> H. p. 441.

<sup>2</sup> Cf. pp. 17-18, 29-30, 355, 371, 439.

<sup>3</sup> P. 388 : " There is a certain regard due to human testimony in matters of fact, and even to human authority in matters of opinion ".

truth of the self-evident propositions but rather as points which we should take into consideration before we try to *doubt* the truth of the self-evident propositions ; nevertheless it does make his exposition untidy.

Both these factors indicate what Reid was most concerned to emphasise, and what suggests the difference referred to at the beginning of the previous paragraph — that self-evident propositions or propositions<sup>1</sup> of Common Sense are those propositions which we not merely do obviously believe (as reflected in all languages) but which we also cannot help believing (as reflected in our conduct). This last he drove home very forcibly as the strongest argument against scepticism,<sup>1</sup> that however elaborate and cogent the arguments of the sceptical philosopher may appear, however little reason he may find for accepting, say, inductively established beliefs, yet his conduct contains those beliefs implicitly in it : he may doubt them methodically, he cannot doubt them practically. Now Hume was the sceptic Reid had most in mind, and Hume, it may reasonably be argued, was not entirely the sceptic that Reid took him to be, but that does not matter here : whether the occasion of Reid's elevation of Common Sense was largely misunderstanding, the conclusion is clear. The beliefs of Common Sense in meaning (ii) are those beliefs which, although not logically necessary, are practically necessary. However much we may deny them as philosophers, as ordinary men in our everyday conduct we accept them, and cannot help accepting them. They are the axioms of practice.

Now here the real difference between Common Sense in meanings (ii) and (iii) emerges. If a Common Sense belief is, as in meaning (ii), a belief which I cannot help accepting, due to the nature of my constitution as a man, it does not follow that the belief is true ; it might very well be a constitutional error on my part, although if it is constitutional to me as a man the error is unlikely ever to be detected. Common Sense in this meaning is clearly different and should be distinguished from Common Sense

<sup>1</sup> *V.* p. xxxv n. 2 above.

in meaning (iii), according to which it is the power we have of detecting the truth of contingent first principles ; for meaning (iii) entails that the principles *are* true. This distinction between Common Sense as our inability to disbelieve certain propositions and Common Sense as our faculty of knowing these propositions to be true did not, so far as one can tell from the text, present itself, at any rate clearly, to Reid. His regular reference of our acceptance of certain beliefs to our original faculties may be a sketch of the Kantian categories, but the frequency with which it occurs and his unwillingness to pursue the question further have brought down on him, not altogether unjustly, the charge of intellectual laziness ;<sup>1</sup> how far it was laziness and how far it was his caution one cannot now say, but his failure to distinguish between meanings (ii) and (iii) of Common Sense implicit in what he wrote, and his increasing reliance as time went on on first principles revealed to Common Sense suggest something of the first.

To what extent Reid was working along similar lines to Kant can only be a matter of conjecture. He may have been trying to suggest that although the propositions of Common Sense may not in themselves be necessarily true, yet as propositions limiting the possibility of experience such as ours they *are* necessary and may therefore be known *a priori*. But this interpretation seems unlikely, for two reasons : first, the propositions which he might be expected to argue for as *a priori* in this sense — *e.g.* the necessity of the categories of substance and cause — are expressly distinguished from those at present under consideration, and are given as first principles of *necessary* truths ;<sup>2</sup> secondly, the contingent principles are stated as principles about our experience and still are stated as contingent, which is inconsistent with their being known *a priori* to be necessary conditions of our experience being what it is.

Indeed it is impossible to interpret Reid any further

<sup>1</sup> Cf. Stewart, *Memoir*, H. pp. 22-6 ; Jones, *op. cit.*, Foreword by Prof. A. A. Bowman.

<sup>2</sup> Pp. 396, 398.

on the subject without reading into him views which he might have been willing to accept, but did not in fact think of. When he had satisfied himself that our acceptance of a given proposition was one that we could not help making, our faculties being what they are, the matter had gone as far as it could. His final conclusion is given on the last page of his *Account of Aristotle's Logic* :

It is difficult to give any reason for distrusting our other faculties, that will not reach consciousness itself. And he who distrusts the faculties of judging and reasoning which God hath given him must even rest in his scepticism till he come to a sound mind, or until God give him new faculties to sit in judgment upon the old. If it be not a first principle that our faculties are not fallacious, we must be absolute sceptics ; for this principle is incapable of a proof ; and if it is not certain, nothing else can be certain.<sup>1</sup>

Although he made no further advances than these for the philosophy of Common Sense, Reid by his work did enormously more than utter a plea for sanity among philosophers. He did that indeed, but he also laid the foundations of a type of philosophy which has had a hold ever since, although at times precarious, and which has had a particularly strong influence in our own day, most obviously illustrated by Professor Moore, to some extent even in Bertrand Russell. There is scarcely a thought in the former's article, "A Defence of Common Sense",<sup>2</sup> which Reid would not approve of or which we would be surprised to find in the *Intellectual Powers* ; and the latter, who in general has followed a method exactly opposed to that of Reid, comes close to him in his paper on "The Limits of Empiricism."<sup>3</sup>

Reid was anti-empiricist only in the sense that he held the empiricist psychology to be faulty — that by viewing our experience as made up of simple elements which our minds compound into various types of complex it gave a false account of what we are conscious of as happening.<sup>4</sup>

<sup>1</sup> H. p. 713.      <sup>2</sup> *Contemporary British Philosophy*, vol. ii. pp. 193-223.

<sup>3</sup> *Proceedings of the Aristotelian Society*, vol. xxxvi. pp. 131-50.

<sup>4</sup> Cf. p. 256.

and that it led to a philosophy the procedure of which was synthetic but the material of which was too oversimplified for synthesis to produce true conclusions. Fundamentally this interpretation of empiricism seems fair: although Locke sometimes spoke as though ideas could be experientially complex,<sup>1</sup> and although Hume admitted complex impressions,<sup>2</sup> yet they concentrated their attention almost wholly on what they took to be the *simple* data of experience, and on the question what knowledge could be built up from them. The fallacy of this type of sensationalist empiricism Reid exposes with two main arguments: first, that we do know a number of propositions to be true which according to empiricism we should query if not openly deny; and secondly, that although the empiricist may be required by his premises to call in question such propositions — *e.g.* propositions asserting the existence of material objects independent of ourselves, and the existence of other persons possessing intelligence like ourselves — yet he has also said other things inconsistent with his questionings. This argument has been more clearly stated by Moore than it ever was by Reid,<sup>3</sup> but it can hardly be denied to the latter. The thinker who finds himself unable to accommodate his beliefs to his philosophy would do well to question the assumptions of the latter. This I take to be the real importance of Reid's attack on the doctrine of ideas, which was a doctrine of *simples* as much as it was a doctrine of specifically *mental* simples. He insisted, and it seems rightly, that there are a number of complex facts of experience from which we start, among them our knowledge of other things and persons, and that the problem for the philosopher was partly critical, partly one of analysis — to explain under what conditions such knowledge is possible, and to unravel more precisely than is needed by the non-philosopher the meaning of the propositions concerned. That is not to say that Common Sense is always right; one cannot say that until the notion of Common Sense

<sup>1</sup> *E.g.* Essay, II. 22. 9.

<sup>2</sup> *E.g.* *Treatise*, I. 1. 1.

<sup>3</sup> *Op. cit.* pp. 202-3, 204-6.

itself has been more fully analysed than it has, and until it has been freed both of the vagueness and the ambiguities which still veil it. But it *is* to say that there are at least certain fundamental pieces of knowledge, far more complicated than empiricism can allow; to-day empiricism has done its best to come to terms with this principle of Common Sense by its phenomenalist account of objects, but with no great success. The fact remains, as Reid saw,<sup>1</sup> that certain propositions have been formulated to describe certain experiences, that we have, in modern terminology, learned the meanings of certain sentences by taking them to be statements recording certain experiences; but if we have learned the meanings of the sentences by having the experiences which they record, then it is the purest folly to doubt whether what is expressed by the sentences is true. From the very nature of the case it must be true; and if philosophers had realised this important fact about language more clearly, they would have lost their way less often. To grasp this principle is not to deprive philosophy of its problems, but is to put them in a clearer light: among them will be the tasks of clearing up the notion of Common Sense, of analysing the necessarily veridical propositions of experience, and of distinguishing these from others which it is not nonsensical to doubt.

A. D. W.

<sup>1</sup> Cf. *Inquiry*, II. 8: "Suppose that such a man meets with a modern philosopher and wants to be informed what smell in plants is. The philosopher tells him that there is no smell in plants, nor anything but in the mind; that it is impossible there can be smell but in a mind; and that all this hath been demonstrated by modern philosophy. The plain man will, no doubt, be apt to think him merry; but if he finds that he is serious, his next conclusion will be that he is mad; or that philosophy, like magic, puts men into a new world, and gives them different faculties from common men. And thus philosophy and common sense are set at variance. But who is to blame for it? In my opinion the philosopher is to blame. For if he means by smell what the rest of mankind most commonly mean, he is certainly mad. But if he puts a different meaning upon the word, without observing it himself or giving warning to others, he abuses language and disgraces philosophy, without doing any service to truth."

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## REID'S PREFACE

HUMAN knowledge may be reduced to two general heads, according as it relates to body or to mind ; to things material or to things intellectual.

The whole system of bodies in the universe, of which we know but a very small part, may be called the Material World ; the whole system of minds, from the infinite Creator to the meanest creature endowed with thought, may be called the Intellectual World. These are the two great kingdoms of nature that fall within our notice ; and about the one or the other, or things pertaining to them, every art, every science, and every human thought is employed ; nor can the boldest flight of imagination carry us beyond their limits.

Many things there are, indeed, regarding the nature and the structure both of body and of mind, which our faculties cannot reach ; many difficulties which the ablest philosopher cannot resolve : but of other natures, if any other there be, we have no knowledge, no conception at all.

- That everything that exists must be either corporeal or incorporeal is evident. But it is not so evident that everything that exists must either be corporeal or endowed with thought. Whether there be in the universe beings which are neither extended, solid, and inert like body, nor active and intelligent like mind, seems to be beyond the reach of our knowledge. There appears to be a vast interval between body and mind ; and whether there be any intermediate nature that connects them together, we know not.

- We have no reason to ascribe intelligence, or even sensation, to plants ; yet there appears in them an active force and energy, which cannot be the result of any arrangement or combination of inert matter. The same thing may be said of those powers by which animals are

nourished and grow, by which matter gravitates, by which magnetical and electrical bodies attract and repel each other, and by which the parts of solid bodies cohere.

Some have conjectured that the phenomena of the material world, which require active force, are produced by the continual operation of intelligent beings : others have conjectured that there may be in the universe beings that are active, without intelligence, which, as a kind of incorporeal machinery, contrived by the supreme wisdom, perform their destined task without any knowledge or intention. But, laying aside conjecture, and all pretences to determine in things beyond our reach, we must rest in this, that body and mind are the only kinds of being of which we can have any knowledge, or can form any conception. If there are other kinds, they are not discoverable by the faculties which God hath given us ; and, with regard to us, are as if they were not.

As therefore all our knowledge is confined to body and mind, or things belonging to them, there are two great branches of philosophy, one relating to body, the other to mind. The properties of body, and the laws that obtain in the material system, are the objects of natural philosophy, as that word is now used. The branch which treats of the nature and operations of minds has, by some, been called Pneumatology. And to the one or the other of these branches, the principles of all the sciences belong.

Every man is conscious of a thinking principle, or mind, in himself ; and we have sufficient evidence of a like principle in other men. The actions of brute animals show that they have some thinking principle, though of a nature far inferior to the human mind. And everything about us may convince us of the existence of a supreme mind, the Maker and Governor of the universe. These are all the minds of which reason can give us any certain knowledge.

The mind of man is the noblest work of God which reason discovers to us, and, therefore, on account of its dignity, deserves our study. It must, indeed, be acknowledged that, although it is of all objects the nearest to us, and seems the most within our reach, it is very difficult

to attend to its operations so as to form a distinct notion of them ; and on that account there is no branch of knowledge in which the ingenious and speculative have fallen into so great errors, and even absurdities. These errors and absurdities have given rise to a general prejudice against all inquiries of this nature. Because ingenious men have, for many ages, given different and contradictory accounts of the powers of the mind, it is concluded that all speculations concerning them are chimerical and visionary.

But whatever effect this prejudice may have with superficial thinkers, the judicious will not be apt to be carried away with it. About two hundred years ago, the opinions of men in natural philosophy were as various and as contradictory as they are now concerning the powers of the mind. Galileo, Torricelli, Kepler, Bacon, and Newton had the same discouragement in their attempts to throw light upon the material system, as we have with regard to the intellectual. If they had been deterred by such prejudices, we should never have reaped the benefit of their discoveries, which do honour to human nature, and will make their names immortal. The motto which Lord Bacon prefixed to some of his writings was worthy of his genius, *Inveniam viam aut faciam*.

There is a natural order in the progress of the sciences, and good reasons may be assigned why the philosophy of body should be *elder sister* to that of mind, and of a quicker growth ; but the last hath the principle of life no less than the first, and will grow up, though slowly, to maturity. The remains of ancient philosophy upon this subject are venerable ruins, carrying the marks of genius and industry, sufficient to inflame, but not to satisfy our curiosity. In later ages, Descartes was the first that pointed out the road we ought to take in those dark regions. Malebranche, Arnauld, Locke, Berkeley, Buffier, Hutcheson, Butler, Hume, Price, Lord Kames, have laboured to make discoveries—nor have they laboured in vain ; for, however different and contrary their conclusions are, however sceptical some of them, they have all given new light, and cleared the way to those who shall come after them.

We ought never to despair of human genius, but rather to hope that, in time, it may produce a system of the powers and operations of the human mind no less certain than those of optics or astronomy.

This is the more devoutly to be wished, that a distinct knowledge of the powers of the mind would undoubtedly give great light to many other branches of science. Mr. Hume hath justly observed, that "all the sciences have a relation to human nature; and, however wide any of them may seem to run from it, they still return back by one passage or another. This is the centre and capital of the sciences, which, being once masters of, we may easily extend our conquests everywhere." <sup>1</sup>

The faculties of our minds are the tools and engines we must use in every disquisition; and the better we understand their nature and force, the more successfully we shall be able to apply them. Mr. Locke gives this account of the occasion of his entering upon his essay concerning human understanding: "Five or six friends", says he, "meeting at my chamber, and discoursing on a subject very remote from this, found themselves quickly at a stand by the difficulties that rose on every side. After we had for a while puzzled ourselves, without coming any nearer to a resolution of those doubts that perplexed us, it came into my thoughts that we took a wrong course; and that, before we set ourselves upon inquiries of that nature, it was necessary to examine our own abilities and see what objects our understandings were fitted or not fitted to deal with. This I proposed to the company, who all readily assented; and thereupon it was agreed that this should be our first enquiry." <sup>2</sup> If this be commonly the cause of perplexity in those disquisitions which have least relation to the mind, it must be so much more in those that have an immediate connection with it.

<sup>1</sup> *Treatise*, Introduction.

<sup>2</sup> *Essay*, Epistle to Reader.

# ESSAY I

## PRELIMINARY

### CHAPTER I

#### EXPLICATION OF WORDS

THERE is no greater impediment to the advancement of knowledge than the ambiguity of words. To this chiefly it is owing that we find sects and parties in most branches of science ; and disputes which are carried on from age to age, without being brought to an issue.

Sophistry has been more effectually excluded from mathematics and natural philosophy than from other sciences. In mathematics it had no place from the beginning ; mathematicians having had the wisdom to define accurately the terms they use, and to lay down, as axioms, the first principles on which their reasoning is grounded. Accordingly, we find no parties among mathematicians, and hardly any disputes.

In natural philosophy there was no less sophistry, no less dispute and uncertainty, than in other sciences, until, about a century and a half ago, this science began to be built upon the foundation of clear definitions and self-evident axioms. Since that time the science, as if watered with the dew of Heaven, hath grown apace ; disputes have ceased, truth hath prevailed, and the science hath received greater increase in two centuries than in two thousand years before.<sup>1</sup>

<sup>1</sup> Cf. Descartes, *Discourse on Method*, Pt. 1. Reid's faith in the stability and progress of the natural sciences contrasts strongly with the scepticism of Descartes (who agreed about the certainty of mathematics, and indeed elaborated his whole method from it), and illustrates the enormous influence which the work of men such as Newton and Boyle had had on thought, particularly in England, during the 150 years which intervened between the publications of the two philosophers' essays. Cf. p. 364.

It were to be wished that this method, which hath been so successful in those branches of science, were attempted in others ; for definitions and axioms are the foundations of all science. But that definitions may not be sought where no definition can be given, nor logical definitions be attempted where the subject does not admit of them, it may be proper to lay down some general principles concerning definition, for the sake of those who are less conversant in this branch of logic.

A definition is nothing else but an explication of the meaning of a word by words whose meaning is already known.<sup>1</sup> Hence it is evident that every word cannot be defined ; for the definition must consist of words ; and there could be no definition if there were not words previously understood without definition. Common words, therefore, ought to be used in their common acceptation ; and, when they have different acceptations in common language, these, when it is necessary, ought to be distinguished. But they require no definition. It is sufficient to define words that are uncommon, or that are used in an uncommon meaning.

It may further be observed that there are many words which, though they may need explication, cannot be logically defined. A logical definition — that is, a strict and proper definition — must express the kind of the thing defined, and the specific difference by which the species defined is distinguished from every other species belonging to that kind. It is natural to the mind of man to class things under various kinds, and again to subdivide every kind into its various species. A species may often be subdivided into subordinate species, and then it is considered as a kind.

From what has been said of logical definition, it is evident that no word can be logically defined which does not denote a species ; because such things only can have a specific difference ; and a specific difference is essential

<sup>1</sup> This downright assertion that all definition is of words is unfortunate in the light of Reid's distinction in practice, *e.g.* in the remainder of this chapter, between *verbal* definitions, a statement about linguistic usage, and *real* definition, a statement about the nature of an object or characteristic.

to a logical definition. On this account there can be no logical definition of individual things, such as London or Paris. Individuals are distinguished either by proper names or by accidental circumstances of time or place ; but they have no specific difference ; and, therefore, though they may be known by proper names, or may be described by circumstances or relations, they cannot be defined. It is no less evident that the most general words cannot be logically defined, because there is not a more general term of which they are a species.

Nay, we cannot define every species of things, because it happens sometimes that we have not words to express the specific difference. Thus a scarlet colour is, no doubt, a species of colour ; but how shall we express the specific difference by which scarlet is distinguished from green or blue ? The difference of them is immediately perceived by the eye ; but we have not words to express it. These things we are taught by logic.

Without having recourse to the principles of logic, we may easily be satisfied that words cannot be defined, which signify things perfectly simple, and void of all composition.

When men attempt to define things which cannot be defined, their definitions will always be either obscure or false. It was one of the capital defects of Aristotle's philosophy that he pretended to define the simplest things which neither can be, nor need to be defined — such as *time* and *motion*. Among modern philosophers I know none that has abused definition so much as Carolus Wolfius, the famous German philosopher, who, in a work on the human mind called *Psychologia Empirica*, consisting of many hundred propositions, fortified by demonstrations, with a proportional accompaniment of definitions, corollaries, and scholia, has given so many definitions of things which cannot be defined, and so many demonstrations of things self-evident, that the greatest part of the work consists of tautology and ringing changes upon words.

There is no subject in which there is more frequent

occasion to use words that cannot be logically defined than in treating of the powers and operations of the mind. The simplest operations of our minds must all be expressed by words of this kind. No man can explain, by a logical definition, what it is to *think*, to *apprehend*, to *believe*, to *will*, to *desire*. Every man who understands the language has some notion of the meaning of those words ; and every man who is capable of reflection may, by attending to the operations of his own mind which are signified by them, form a clear and distinct notion of them ; but they cannot be logically defined.

Since, therefore, it is often impossible to define words which we must use on this subject, we must as much as possible use common words, in their common acceptation, pointing out their various senses where they are ambiguous ; and, when we are obliged to use words less common, we must endeavour to explain them as well as we can, without affecting to give logical definitions when the nature of the thing does not allow it.

The following observations on the meaning of certain words are intended to supply, as far as we can, the want of definitions, by preventing ambiguity or obscurity in the use of them.

1. By the *mind* of a man we understand that in him, which thinks, remembers, reasons, wills. The essence both of body and of mind is unknown to us. We know certain properties of the first, and certain operations of the last, and by these only we can define or describe them. We define body to be that which is extended, solid, movable, divisible. In like manner we define mind to be that which thinks. We are conscious that we think, and that we have a variety of thoughts of different kinds — such as seeing, hearing, remembering, deliberating, resolving, loving, hating, and many other kinds of thought — all which we are taught by nature to attribute to one internal principle ; and this principle of thought we call the *mind* or *soul* of a man.

2. By the *operations* of the mind we understand every mode of thinking of which we are conscious.

It deserves our notice that the various modes of thinking have always, and in all languages, as far as we know, been called by the name of operations of the mind, or by names of the same import. To body we ascribe various properties, but not operations, properly so called : it is extended, divisible, movable, inert ; it continues in any state in which it is put ; every change of its state is the effect of some force impressed upon it, and is exactly proportional to the force impressed, and in the precise direction of that force. These are the general properties of matter, and these are not operations ; on the contrary, they all imply its being a dead, inactive thing which moves only as it is moved, and acts only by being acted upon.

But the mind is, from its very nature, a living and active being. Everything we know of it implies life and active energy ; and the reason why all its modes of thinking are called its operations is that in all, or in most of them, it is not merely passive, as body is, but is really and properly active.

In all ages, and in all languages ancient and modern, the various modes of thinking have been expressed by words of active signification, such as seeing, hearing, reasoning, willing, and the like. It seems, therefore, to be the natural judgment of mankind that the mind is active in its various ways of thinking : and, for this reason, they are called its operations, and are expressed by active verbs.

It may be made a question, What regard is to be paid to this natural judgment ? May it not be a vulgar error ? Philosophers who think so have, no doubt, a right to be heard. But, until it is proved that the mind is not active in thinking, but merely passive, the common language with regard to its operations ought to be used, and ought not to give place to a phraseology invented by philosophers which implies its being merely passive.

3. The words *power* and *faculty*, which are often used in speaking of the mind, need little explication. Every operation supposes a power in the being that operates ; for to suppose anything to operate, which has no power to operate, is manifestly absurd. But, on the other hand,

there is no absurdity in supposing a being to have power to operate when it does not operate. Thus I may have power to walk, when I sit ; or to speak, when I am silent. Every operation, therefore, implies power ; but the power does not imply the operation.

The *faculties* of the mind, and its *powers*, are often used as synonymous expressions. But, as most synonyms have some minute distinction that deserves notice, I apprehend that the word *faculty* is most properly applied to those powers of the mind which are original and natural, and which make a part of the constitution of the mind. There are other powers, which are acquired by use, exercise, or study, which are not called faculties, but *habits*. There must be something in the constitution of the mind necessary to our being able to acquire habits — and this is commonly called *capacity*.

4. We frequently meet with a distinction in writers upon this subject, between things *in the mind* and things *external* to the mind. The powers, faculties, and operations of the mind are things in the mind. Everything is said to be in the mind of which the mind is the *subject*. It is self-evident that there are some things which cannot exist without a subject to which they belong, and of which they are attributes. Thus, colour must be in something coloured ; figure in something figured ; thought can only be in something that thinks ; wisdom and virtue cannot exist but in some being that is wise and virtuous. When, therefore, we speak of things in the mind, we understand by this, things of which the mind is the subject. Excepting the mind itself, and things in the mind, all other things are said to be external. It ought therefore to be remembered that this distinction between things in the mind and things external is not meant to signify the place of the things we speak of, but their subject.<sup>1</sup>

<sup>1</sup> Reid's insistence on the danger of the spatial metaphor as applied to the mind plays an important part in his criticism of the theory according to which the only direct objects of awareness are *ideas in the mind*, a phrase which although unexceptionable in everyday use may be philosophically misleading because it suggests that ideas cannot exist independent of the mind, with the conclusion either that they are representative of the external

There is a figurative sense in which things are said to be in the mind which it is sufficient barely to mention. We say such a thing was not in my mind ; meaning no more than that I had not the least thought of it. By a figure, we put the thing for the thought of it. In this sense external things are in the mind as often as they are the objects of our thought.

5. *Thinking* is a very general word which includes all the operations of our minds, and is so well understood as to need no definition.

To *perceive*, to *remember*, to be *conscious*, and to *conceive* or *imagine*, are words common to philosophers and to the vulgar. They signify different operations of the mind which are distinguished in all languages, and by all men that think. I shall endeavour to use them in their most common and proper acceptation, and I think they are hardly capable of strict definition. But as some philosophers, in treating of the mind, have taken the liberty to use them very improperly, so as to corrupt the English language and to confound things which the common understanding of mankind hath always led them to distinguish, I shall make some observations on the meaning of them that may prevent ambiguity or confusion in the use of them.

• 6. *First*, We are never said to *perceive* things of the existence of which we have not a full conviction. I may *conceive* or *imagine* a mountain of gold or a winged horse ; but no man says that he perceives such a creature of imagination. Thus *perception* is distinguished from *conception* or imagination.<sup>1</sup> *Secondly*, Perception is applied only to external objects, not to those that are in the mind itself. When I am pained, I do not say that I perceive pain,

world (Locke) or that because they cannot be thus representative there is no external world beyond them (Berkeley and, most of the time, Hume). Cf. pp. 71, 105.

<sup>1</sup> As he explains on p. 9, Reid regards conceiving and imagining as synonymous. In his more detailed discussion of the subject (Essay IV) he treats imagining as a special mode of conceiving, and denies that images are a separate class of entities at all (p. 251) ; " image " is the name for a certain way of conceiving (pp. 239 and 255), namely the conceiving of visible objects. V. p. 233 n.

but that I feel it, or that I am conscious of it. Thus, *perception* is distinguished from *consciousness*. *Thirdly*, The immediate object of perception must be something present, and not what is past. We may remember what is past, but do not perceive it. I may say, I perceive such a person has had the smallpox ; but this phrase is figurative, although the figure is so familiar that it is not observed. The meaning of it is that I perceive the pits in his face, which are certain signs of his having had the smallpox. We say we perceive the thing signified when we only perceive the sign. But when the word *perception* is used properly, and without any figure, it is never applied to things past. And thus it is distinguished from *remembrance*.

7. *Consciousness* is a word used by philosophers to signify that immediate knowledge which we have of our present thoughts and purposes, and, in general, of all the present operations of our minds.<sup>1</sup> Whence we may observe that consciousness is only of things present. To apply consciousness to things past, which sometimes is done in popular discourse, is to confound consciousness with memory ; and all such confusion of words ought to be avoided in philosophical discourse. It is likewise to be observed that consciousness is only of things in the mind and not of external things. It is improper to say, I am, conscious of the table which is before me. I perceive it, I see it ; but do not say I am conscious of it. As that consciousness by which we have a knowledge of the operations of our own minds is a different power from that by which we perceive external objects, and as these different powers have different names in our language, and, I believe, in all languages, a philosopher ought carefully to preserve this distinction and never to confound things so different in their nature.

<sup>1</sup> Reid's "consciousness" seems here equivalent to what is now more usually called "Self-consciousness" or "apperception"; his treatment of it as a specific faculty, on a par with the others which he is considering in this chapter, is misleading. On the other hand, he elsewhere (cf. pp. 41-2) speaks of it as though it had for its function not so much the realisation of self-identity, that "this is *my* thought", as an emphatically vague awareness of any given mental operation, to be distinguished from careful introspection only by a difference in degree.

8. *Conceiving, imagining, and apprehending* are commonly used as synonymous in our language, and signify the same thing which the logicians call simple apprehension. This is an operation of the mind different from all those we have mentioned. Whatever we perceive, whatever we remember, whatever we are conscious of, we have a full persuasion or conviction of its existence. But we may conceive or imagine what has no existence, and what we firmly believe to have no existence. What never had an existence cannot be remembered ; what has no existence *at present* cannot be the object of perception or of consciousness ; but what never had, nor has any existence, may be conceived. Every man knows that it is as easy to conceive a winged horse or a centaur as it is to conceive a horse or a man. Let it be observed, therefore, that to *conceive*, to *imagine*, to *apprehend*, when taken in the proper sense, signify an act of the mind which implies no belief or judgment at all. It is an act of the mind by which nothing is affirmed or denied and which, therefore, can neither be true nor false.

But there is another and a very different meaning of those words, so common and so well authorised in language that it cannot easily be avoided ; and on that account we ought to be the more on our guard that we be not misled by the ambiguity. Politeness and good-breeding lead men, on most occasions, to express their opinions with modesty, especially when they differ from others whom they ought to respect. Therefore, when we would express our opinion modestly, instead of saying " This is my opinion " or " This is my judgment ", which has the air of dogmatism, we say, " I conceive it to be thus — I imagine, or apprehend it to be thus " ; which is understood as a modest declaration of our judgment. In like manner, when anything is said which we take to be impossible, we say " We cannot conceive it ", meaning that we cannot believe it.

Thus we see that the words *conceive, imagine, apprehend* have two meanings, and are used to express two operations of the mind which ought never to be confounded. Some-

times they express simple apprehension which implies no judgment at all ; sometimes they express judgment or opinion. This ambiguity ought to be attended to, that we may not impose upon ourselves or others in the use of them. The ambiguity is indeed remedied, in a great measure, by their construction. When they are used to express simple apprehension, they are followed by a noun in the *accusative case*, which signifies the object conceived ; But, when they are used to express opinion or judgment, they are commonly followed by a verb in the *infinitive mood*. “ I conceive an Egyptian pyramid.” This implies no judgment. “ I conceive the Egyptian pyramids to be the most ancient monuments of human art.” This implies judgment. When the words are used in the last sense, the thing conceived must be a proposition, because judgment cannot be expressed but by a proposition. When they are used in the first sense, the thing conceived may be no proposition but a simple term only — as a pyramid, an obelisk. Yet it may be observed that even a proposition may be simply apprehended, without forming any judgment of its truth or falsehood : for it is one thing to conceive the meaning of a proposition ; it is another thing to judge it to be true or false.

9. Most of the operations of the mind, from their very nature, must have objects to which they are directed and about which they are employed. He that perceives must perceive something ; and that which he perceives is called the object of his perception. To perceive, without having any object of perception, is impossible. The mind that perceives, the object perceived, and the *operation* of perceiving that object, are distinct things, and are distinguished in the structure of all languages. In this sentence, “ I see, or perceive the moon ”, *I* is the person or *mind*, the active verb *see* denotes the operation of that mind, and the *moon* denotes the object. What we have said of perceiving is equally applicable to most operations of the mind. Such operations are, in all languages, expressed by active transitive verbs ; and we know that, in all languages, such verbs require a thing or person, which is the agent, and a

noun following in an oblique case, which is the object. Whence it is evident that all mankind, both those who have contrived language and those who use it with understanding, have distinguished these three things as different — to wit, the operations of the mind, which are expressed by active verbs ; the mind itself, which is the nominative to those verbs ; and the object, which is, in the oblique case, governed by them.

It would have been unnecessary to explain so obvious a distinction if some systems of philosophy had not confounded it. Mr. Hume's system, in particular, confounds all distinction between the operations of the mind and their objects. When he speaks of the ideas of memory, the ideas of imagination, and the ideas of sense, it is often impossible, from the tenor of his discourse, to know whether by those ideas he means the operations of the mind or the objects about which they are employed. And indeed, according to his system, there is no distinction between the one and the other.<sup>1</sup>

A philosopher is, no doubt, entitled to examine even those distinctions that are to be found in the structure of all languages ; and, if he is able to show that there is no foundation for them in the nature of the things distinguished — if he can point out some prejudice common to mankind which has led them to distinguish things that are not really different — in that case, such a distinction may be imputed to a vulgar error which ought to be corrected in philosophy. But when, in his first setting out, he takes it for granted, without proof, that distinctions found in the structure of all languages have no foundation in nature, this, surely, is too fastidious a way of treating the common sense of mankind. When we come to be instructed by philosophers, we must bring the old light of common sense along with us, and by it judge of the new light which the philosopher communicates to us. But when we are required to put out the old light altogether that we may follow the new, we have reason to be on our guard. There may be distinctions that have a real foundation and which

<sup>1</sup> Cf. p. 16 n.

may be necessary in philosophy, which are not made in common language, because not necessary in the common business of life. But I believe no instance will be found of a distinction made in all languages which has not a just foundation in nature.

10. The word *idea* occurs so frequently in modern philosophical writings upon the mind, and is so ambiguous in its meaning, that it is necessary to make some observations upon it. There are chiefly two meanings of this word in modern authors—a popular and a philosophical.

*First*, In popular language *idea* signifies the same thing as conception, apprehension, notion. To have an idea of anything is to conceive it. To have a distinct idea is to conceive it distinctly. To have no idea of it is not to conceive it at all. It was before observed that conceiving or apprehending has always been considered by all men as an act or operation of the mind, and, on that account, has been expressed in all languages by an active verb. When, therefore, we use the phrase of having ideas, in the popular sense, we ought to attend to this, that it signifies precisely the same thing which we commonly express by the active verbs, conceiving or apprehending.

When the word *idea* is taken in this popular sense, no man can possibly doubt whether he has ideas. For he that doubts must think, and to think is to have ideas.

*Secondly*, According to the philosophical meaning of the word *idea*, it does not signify that act of the mind which we call thought or conception, but some object of thought. Ideas, according to Mr. Locke (whose very frequent use of this word has probably been the occasion of its being adopted into common language), "are nothing but the immediate objects of the mind in thinking".<sup>1</sup> But of those objects of thought called ideas, different sects of philosophers have given a very different account. Bruckerus, a learned German, wrote a whole book, giving the history of ideas.<sup>2</sup>

<sup>1</sup> Cf. *Essay*, I. 1. 8; IV. 1. 1.

<sup>2</sup> *Historia Philosophicæ Doctrinæ de Ideis* (1723). In a historical passage which follows and has been omitted from this edition Reid argues that fundamentally "ideas" have been used in two main senses by philo-

Modern philosophers, as well as the Peripatetics and Epicureans of old, have conceived that external objects cannot be the immediate objects of our thought; that there must be some image of them in the mind itself in which, as in a mirror, they are seen. And the name *idea*, in the philosophical sense of it, is given to those internal and immediate objects of our thoughts. The external thing is the remote or mediate object; but the idea, or image of that object in the mind, is the immediate object without which we could have no perception, no remembrance, no conception of the mediate object.

When therefore, in common language, we speak of having an idea of anything, we mean no more by that expression but thinking of it. The vulgar allow that this expression implies a mind that thinks, an act of that mind which we call thinking, and an object about which we think. But besides these three, the philosopher conceives that there is a fourth — to wit, the *idea*, which is the immediate object. The idea is in the mind itself, and can have no existence but in a mind that thinks; but the remote or mediate object may be something external, as the sun or moon; it may be something past or future; it may be something which never existed. This is the philosophical meaning of the word *idea*; and we may observe that this meaning of that word is built upon a philosophical opinion: for, if philosophers had not believed that there are such immediate objects of all our thoughts in the mind, they would never have used the word *idea* to express them.

I shall only add, on this article, that although I may have occasion to use the word *idea* in this philosophical sense in explaining the opinions of others, I shall have no occasion to use it in expressing my own, because I believe *ideas*, taken in this sense, to be a mere fiction of philosophers.<sup>1</sup>

sophers: (a) as the independent, eternal, and immutable objects of thought, as maintained by Plato; (b) as purely mental representations of the objects of perception, as maintained by the school of Aristotle.

<sup>1</sup> This disagreement with the philosophical theory of "ideas" as: he immediate objects of cognition is fundamental to Reid and runs throughout his writings. Cf. pp. 105, 137, 147, etc.

And, in the popular meaning of the word, there is the less occasion to use it, because the English words *thought*, *notion*, *apprehension*, answer the purpose as well as the Greek word *idea*; with this advantage, that they are less ambiguous. There is, indeed, a meaning of the word *idea* which I think most agreeable to its use in ancient philosophy, and which I would willingly adopt, if use, the arbiter of language, did permit. But this will come to be explained afterwards.<sup>1</sup>

11. The word *impression* is used by Mr. Hume, in speaking of the operations of the mind, almost as often as the word *idea* is by Mr. Locke. What the latter calls ideas, the former divides into two classes; one of which he calls impressions, the other ideas. I shall make some observations upon Mr. Hume's explication of *that* word, and then consider the proper meaning of it in the English language.

"We may divide" (says Mr. Hume<sup>2</sup>), "all the perceptions of the human mind into two classes or species, which are distinguished by their different degrees of force and vivacity. The less lively and forcible are commonly denominated thoughts or ideas. The other species want a name in our language, and in most others. Let us, therefore, use a little freedom and call them impressions. By the term *impression*, then, I mean all our more lively perceptions, when we hear, or see, or feel; or love, or hate, or desire, or will. Ideas are the less lively perceptions, of which we are conscious, when we reflect on any of those sensations or movements above mentioned."

This is the explication Mr. Hume hath given in his *Essays* of the term *impressions*, when applied to the mind; and his explication of it, in his *Treatise of Human Nature*, is to the same purpose.<sup>3</sup>

Disputes about words belong rather to grammarians than to philosophers; but philosophers ought not to escape censure when they corrupt a language, by using words in

<sup>1</sup> P. 291.

<sup>2</sup> *An Enquiry concerning Human Understanding*, § 2.

<sup>3</sup> *Treatise*, Bk. I, opening sentences.

a way which the purity of the language will not admit. I find fault with Mr. Hume's phraseology in the words I have quoted —

*First*, Because he gives the name of perceptions to every operation of the mind. Love is a perception, hatred a perception ; desire is a perception, will is a perception ; and, by the same rule, a doubt, a question, a command, is a perception. This is an intolerable abuse of language which no philosopher has authority to introduce.

*Secondly*, When Mr. Hume says *that we may divide all the perceptions of the human mind into two classes or species, which are distinguished by their degrees of force and vivacity*, the manner of expression is loose and unphilosophical. To differ in species is one thing ; to differ in degree is another. Things which differ in degree only must be of the same species. It is a maxim of common sense, admitted by all men, that *greater* and *less* do not make a change of species. The same man may differ in the degree of his force and vivacity, in the morning and at night, in health and in sickness ; but this is so far from making him a different species that it does not so much as make him a different individual. To say, therefore, that two different classes, or species of perceptions, are distinguished by the degrees of their force and vivacity, is to confound a difference of *degree* with a difference of *species* which every man of understanding knows how to distinguish.

*Thirdly*, We may observe that this author, having given the general name of perception to all the operations of the mind, and distinguished them into two classes or species which differ only in degree of force and vivacity, tells us that he gives the name of impressions to all our more lively perceptions — to wit, when we hear, or see, or feel, or love, or hate, or desire, or will. There is great confusion in this account of the meaning of the word *impression*. When I see, this is an *impression*. But why has not the author told us whether he gives the name of *impression* to the object seen, or to that act of my mind by which I see it ? When I see the full moon, the full moon is one thing, my

perceiving it is another thing. Which of these two things does he call an impression? We are left to guess this; nor does all that this author writes about impressions clear this point. Everything he says tends to darken it, and to lead us to think that the full moon which I see, and my seeing it, are not two things, but one and the same thing.<sup>1</sup>

The same observation may be applied to every other instance the author gives to illustrate the meaning of the word *impression*. "When we hear, when we feel, when we love, when we hate, when we desire, when we will." In all these acts of the mind there must be an *object* which is heard, or felt, or loved, or hated, or desired, or willed. Thus, for instance, I love my country. This, says Mr. Hume, is an *impression*. But what is the *impression*? Is it my country, or is it the affection I bear to it? I ask the philosopher this question; but I find no answer to it. And when I read all that he has *written* on this subject, I find this word *impression* sometimes used to signify an operation of the mind, sometimes the object of the operation; but, for the most part, it is a vague and indetermined word that signifies both.

I know not whether it may be considered as an apology for such abuse of words, in an author who understood the language so well and used it with so great propriety in writing on other subjects, that Mr. Hume's system, with regard to the mind, required a language of a different structure from the common: or, if expressed in plain English, would have been too shocking to the common sense of mankind. To give an instance or two of this. If a man receives a present on which he puts a high value, if he see and handle it and put it in his pocket, this, says Mr. Hume, is an *impression*. If the man only dream that he received such a present, this is an *idea*. Wherein lies the difference between this impression and this idea — between the

<sup>1</sup> As long as he consistently follows Berkeley, Hume says that the moon which I see, or rather that part of it which I see, and my seeing the moon, *are* the same thing. *V.* p. 70 n. 2. Reid himself denies that within sensation proper a distinction can be drawn between sensing and sensum. *V.* p. 18 and n., and pp. 150 *seq.*

dream and the reality? They are different classes or species, says Mr. Hume: so far all men will agree with him. \*But he adds that they are distinguished only by different degrees of force and vivacity. Here he insinuates a tenet of his own, in contradiction to the common sense of mankind. Common sense convinces every man that a lively dream is no nearer to a reality than a faint one; and that, if a man should dream that he had all the wealth of Cræsus, it would not put one farthing in his pocket. It is impossible to fabricate arguments against such undeniable principles without confounding the meaning of words.

In the most extensive sense, an impression is a change produced in some passive subject by the operation of an external cause. If we suppose an active being to produce any change in itself by its own active power, this is never called an impression. It is the act or operation of the being itself, not an impression upon it. From this it appears that to give the name of an impression to any effect produced in the mind is to suppose that the mind does not act at all in the production of that effect. If seeing, hearing, desiring, willing, be operations of the mind, they cannot be impressions. If they be impressions, they cannot be operations of the mind. In the structure of all languages they are considered as acts or operations of the mind itself, and the names given them imply this. To call them impressions, therefore, is to trespass against the structure, not of a particular language only, but of all languages.

If the word *impression* be an improper word to signify the operations of the mind, it is at least as improper to signify their objects; for would any man be thought to speak with propriety who should say that the sun is an impression, that the earth and the sea are impressions?

It is commonly believed, and taken for granted, that every language, if it be sufficiently copious in words, is equally fit to express all opinions, whether they be true or false. I apprehend, however, that there is an exception to this general rule which deserves our notice. There are certain common opinions of mankind upon which the

structure and grammar of all languages are founded. While these opinions are common to all men, there will be a great similarity in all languages that are to be found on the face of the earth. Such a similarity there really is ; for we find in all languages the same parts of speech, the distinction of nouns and verbs, the distinction of nouns into adjective and substantive, of verbs into active and passive. In verbs we find like tenses, moods, persons, and numbers. There are general rules of grammar, the same in all languages. This similarity of structure in all languages, shows a uniformity among men in those opinions upon which the structure of language is founded.

If, for instance, we should suppose that there was a nation who believed that the things which we call attributes might exist without a subject, there would be in their language no distinction between adjectives and substantives, nor would it be a rule with them that an adjective has no meaning unless when joined to a substantive. If there was any nation who did not distinguish between acting and being acted upon, there would in their language, be no distinction between active and passive verbs ; nor would it be a rule that the active verb must have an agent in the nominative case, but that, in the passive verb, the agent must be in an oblique case.

The structure of all languages is grounded upon common notions which Mr. Hume's philosophy opposes and endeavours to overturn. This, no doubt, led him to warp the common language into a conformity with his principles ; but we ought not to imitate him in this until we are satisfied that his principles are built on a solid foundation.

12. *Sensation* is a name given by philosophers to an act of mind which may be distinguished from all others by this, that it hath no object distinct from the act itself.<sup>1</sup> Pain of every kind is an uneasy sensation. When I am pained, I cannot say that the pain I feel is one thing, and

<sup>1</sup> Reid is careful throughout the whole work to confine "sensation" to this strict sense, which he explains more fully in Chapter 16 of the next essay, and to distinguish it from "perception" or the awareness of material objects. He insists that the alleged distinction between sensing and that which is sensed is invalid.

that my feeling it is another thing. They are one and the same thing, and cannot be disjoined, even in imagination. Pain, when it is not felt, has no existence. It can be neither greater nor less in degree or duration, nor anything else in kind than it is felt to be. It cannot exist by itself, nor in any subject but in a sentient being. No quality of an inanimate insentient being can have the least resemblance to it.

What we have said of pain may be applied to every other sensation. Some of them are agreeable, others uneasy, in various degrees. These being objects of desire or aversion, have some attention given to them ; but many are indifferent, and so little attended to that they have no name in any language.

Most operations of the mind that have names in common language are complex in their nature, and made up of various ingredients, or more simple acts ; which, though conjoined in our constitution, must be disjoined by abstraction in order to our having a distinct and scientific notion of the complex operation. In such operations, sensation, for the most part, makes an ingredient. Those who do not attend to the complex nature of such operations are apt to resolve them into some one of the simple acts of which they are compounded, overlooking the others. And from this cause many disputes have been raised, and many errors have been occasioned with regard to the nature of such operations.

The perception of external objects is accompanied with some sensation corresponding to the object perceived, and such sensations have, in many cases, in all languages, the same name with the external object which they always accompany. The difficulty of disjoining, by abstraction, things thus constantly conjoined in the course of nature, and things which have one and the same name in all languages, has likewise been frequently an occasion of errors in the philosophy of the mind. To avoid such errors, nothing is of more importance than to have a distinct notion of that simple act of the mind which we call *sensation*, and which we have endeavoured to describe. By this

means we shall find it more easy to distinguish it from every external object that it accompanies, and from every other act of the mind that may be conjoined with it. For this purpose it is likewise of importance that the name of *sensation* should, in philosophical writings, be appropriated to signify this simple act of the mind, without including anything more in its signification, or being applied to other purposes.

I shall add an observation concerning the word *feeling*. This word has two meanings. *First*, it signifies the perceptions we have of external objects, by the sense of touch. When we speak of feeling a body to be hard or soft, rough or smooth, hot or cold, to feel these things is to perceive them by touch. They are external things, and that act of the mind by which we feel them is easily distinguished from the objects felt. *Secondly*, the word *feeling* is used to signify the same thing as *sensation*, which we have just now explained ; and, in this sense, it has no object ; the feeling and the thing felt are one and the same.

Perhaps betwixt feeling, taken in this last sense, and sensation there may be this small difference, that sensation is most commonly used to signify those feelings which we have by our external senses and bodily appetites, and all our bodily pains and pleasures. But there are *feelings* of a nobler nature accompanying our affections, our moral judgments, and our determinations in matters of taste, to which the word *sensation* is less properly applied.

I have premised these observations on the meaning of certain words that frequently occur in treating of this subject, for two reasons : *First*, That I may be the better understood when I use them ; and, *Secondly*, That those who would make any progress in this branch of science may accustom themselves to attend very carefully to the meaning of words that are used in it. They may be assured of this, that the ambiguity of words, and the vague and improper application of them, have thrown more darkness upon this subject than the subtlety and intricacy of things.

When we use common words, we ought to use them in

the sense in which they are most commonly used by the best and purest writers in the language ; and, when we have occasion to enlarge or restrict the meaning of a common word, or give it more precision than it has in common language, the reader ought to have warning of this, otherwise we shall impose upon ourselves and upon him.

Other words that need explication shall be explained as they occur.

## CHAPTER 2

### PRINCIPLES TAKEN FOR GRANTED

AS there are words common to philosophers and to the vulgar which need no explication, so there are principles common to both which need no proof, and which do not admit of direct proof.

One who applies to any branch of science must be come to years of understanding, and, consequently, must have exercised his reason, and the other powers of his mind, in various ways. He must have formed various opinions and principles by which he conducts himself in the affairs of life. Of those principles, some are common to all men, being evident in themselves, and so necessary in the conduct of life that a man cannot live and act according to the rules of common prudence without them.

All men that have common understanding agree in such principles, and consider a man as lunatic or destitute of common sense who denies or calls them in question. Thus, if any man were found of so strange a turn as not to believe his own eyes, to put no trust in his senses, nor have the least regard to their testimony, would any man think it worth while to reason gravely with such a person and, by argument, to convince him of his error ? Surely no wise man would. For, before men can reason together, they must agree in first principles ; and it is impossible

to reason with a man who has no principles in common with you.

There are, therefore, common principles which are the foundation of all reasoning and of all science. Such common principles seldom admit of direct proof, nor do they need it. Men need not to be taught them ; for they are such as all men of common understanding know ; or such, at least, as they give a ready assent to, as soon as they are proposed and understood.

Such principles when we have occasion to use them in science, are called *axioms*. And, although it be not absolutely necessary, yet it may be of great use to point out the principles or axioms on which a science is grounded.

Thus mathematicians, before they prove any of the propositions of mathematics, lay down certain axioms, or common principles, upon which they build their reasonings. And although those axioms be truths which every man knew before — such as, That the whole is greater than a part, That equal quantities added to equal quantities make equal sums ; yet, when we see nothing assumed in the proof of mathematical propositions but such self-evident axioms, the propositions appear more certain, and leave no room for doubt or dispute.

In all other sciences, as well as in mathematics, it will be found that there are a few common principles upon which all the reasonings in that science are grounded, and into which they may be resolved. If these were pointed out and considered, we should be better able to judge what stress may be laid upon the conclusions in that science. If the principles be certain, the conclusions justly drawn from them must be certain. If the principles be only probable, the conclusions can only be probable. If the principles be false, dubious, or obscure, the superstructure that is built upon them must partake of the weakness of the foundation.

Sir Isaac Newton, the greatest of natural philosophers, has given an example well worthy of imitation, by laying down the common principles or axioms on which the

reasonings in natural philosophy are built. Before this was done, the reasonings of philosophers in that science were as vague and uncertain as they are in most others. Nothing was fixed ; all was dispute and controversy ; but, by this happy expedient, a solid foundation is laid in that science, and a noble superstructure is raised upon it, about which there is now no more dispute or controversy among men of knowledge than there is about the conclusions of mathematics.

It may, however, be observed that the first principles of natural philosophy are of a quite different nature from mathematical axioms : they have not the same kind of evidence, nor are they necessary truths, as mathematical axioms are. They are such as these : That similar effects proceed from the same or similar causes ; That we ought to admit of no other causes of natural effects but such as are true, and sufficient to account for the effects. These are principles which, though they have not the same kind of evidence that mathematical axioms have, yet have such evidence that every man of common understanding readily assents to them, and finds it absolutely necessary to conduct his actions and opinions by them in the ordinary affairs of life.

- Though it has not been usual, yet I conceive it may be useful to point out some of those things which I shall take for granted, as first principles, in treating of the mind and its faculties. There is the more occasion for this, because very ingenious men, such as Descartes, Malebranche, Arnauld, Locke, and many others, have lost much labour by not distinguishing things which require proof from things which, though they may admit of illustration, yet, being self-evident, do not admit of proof. When men attempt to deduce such self-evident principles from others more evident, they always fall into inconclusive reasoning : and the consequence of this has been that others, such as Berkeley and Hume, finding the arguments brought to prove such first principles to be weak and inconclusive, have been tempted first to doubt of them, and afterwards to deny them.

It is so irksome to reason with those who deny first principles, that wise men commonly decline it. Yet it is not impossible that what is only a vulgar prejudice may be mistaken for a first principle. Nor is it impossible that what is really a first principle may, by the enchantment of words, have such a mist thrown about it as to hide its evidence, and to make a man of candour doubt of it. Such cases happen more frequently, perhaps, in this science than in any other ; but they are not altogether without remedy. There are ways by which the evidence of first principles may be made more apparent when they are brought into dispute ; but they require to be handled in a way peculiar to themselves. Their evidence is not demonstrative, but intuitive. They require not proof, but to be placed in a proper point of view. This will be shown more fully in its proper place,<sup>1</sup> and applied to those very principles which we now assume. In the meantime, when they are proposed as first principles, the reader is put on his guard, and warned to consider whether they have a just claim to that character.

1. *First*, then, I shall take it for granted that I *think*, that I *remember*, that I *reason*, and, in general, that I really perform all those operations of mind of which I am conscious.

The operations of our minds are attended with consciousness ; and this consciousness is the evidence, the only evidence, which we have or can have of their existence. If a man should take it into his head to think or to say that his consciousness may deceive him, and to require proof that it cannot, I know of no proof that can be given him ; he must be left to himself, as a man that denies first principles, without which there can be no reasoning. Every man finds himself under a necessity of believing what consciousness testifies, and everything that hath this testimony is to be taken as a first principle.

2. As by consciousness we know certainly the existence of our present thoughts and passions, so we know the past by remembrance. And, when they are recent, and the remembrance of them fresh, the knowledge of them, from

<sup>1</sup> Pp. 358 *seq.*

such distinct remembrance, is, in its certainty and evidence, next to that of consciousness.<sup>1</sup>

3. But it is to be observed that we are conscious of many things to which we give little or no attention. We can hardly attend to several things at the same time ; and our attention is commonly employed about that which is the object of our thought, and rarely about the thought itself. Thus, when a man is angry his attention is turned to the injury done him, or the injurious person ; and he gives very little attention to the passion of anger, although he is conscious of it. It is in our power, however, when we come to the years of understanding, to give attention to our own thoughts and passions, and the various operations of our minds. And, when we make these the objects of our attention, either while they are present or when they are recent and fresh in our memory, this act of the mind is called *reflection*.

We take it for granted, therefore, that by attentive reflection a man may have a clear and certain knowledge of the operations of his own mind ; a knowledge no less clear and certain than that which he has of an external object when it is set before his eyes.

This reflection is a kind of intuition, it gives a like conviction with regard to internal objects, or things in the mind, as the faculty of seeing gives with regard to objects of sight. A man must, therefore, be convinced beyond possibility of doubt, of everything with regard to the operations of his own mind which he clearly and distinctly discerns by attentive reflection.

<sup>1</sup> In admitting variations of reliability in memory, according to the freshness of the remembrance and the nearness in time of the event remembered, Reid illustrates his loose use of "knowledge", which must be understood as capable of being false. This leads to a good deal of obscurity and ambiguity in his epistemology, particularly in his treatment of perception, memory, and self-evident propositions (v. pp. 114 and 339) which are defined in such a way that they are what common sense would accept as obviously true, although logically they might be corrigible. The irresistible and immediate conviction in the reality of the objects of perception and memory appears to possess the same common-sense status (v. pp. 79, 195). "This belief, which we have from distinct memory, we account real knowledge." Cf. p. 341 : "Far the greatest part of what all men call human knowledge is in things which neither admit of intuitive nor of demonstrative proof".

4. I take it for granted that all the thoughts I am conscious of, or remember, are the thoughts of one and the same thinking principle which I call *myself*, or my *mind*. Every man has an immediate and irresistible conviction, not only of his present existence, but of his continued existence and identity, as far back as he can remember. If any man should think fit to demand a proof that the thoughts he is successively conscious of belong to one and the same thinking principle — if he should demand a proof that he is the same person to-day as he was yesterday, or a year ago — I know no proof that can be given him : he must be left to himself either as a man that is lunatic, or as one who denies first principles, and is not to be reasoned with.

Every man of a sound mind finds himself under a necessity of believing his own identity and continued existence. The conviction of this is immediate and irresistible ; and, if he should lose this conviction, it would be a certain proof of insanity, which is not to be remedied by reasoning.

5. I take it for granted that there are some things which cannot exist by themselves, but must be in something else, to which they belong as qualities or attributes.

Thus motion cannot exist but in something that is moved. And to suppose that there can be motion while everything is at rest is a gross and palpable absurdity. In like manner, hardness and softness, sweetness and bitterness, are things which cannot exist by themselves ; they are qualities of something which is hard or soft, sweet or bitter. That thing, whatever it be, of which they are qualities is called their subject ; and such qualities necessarily suppose a subject.

Things which may exist by themselves, and do not necessarily suppose the existence of anything else, are called substances ; and, with relation to the qualities or attributes that belong to them, they are called the subjects of such qualities or attributes.

All the things which we immediately perceive by our senses, and all the things we are conscious of, are things

which must be in something else, as their subject. Thus by my senses I perceive figure, colour, hardness, softness, motion, resistance, and such like things. But these are qualities, and must necessarily be in something that is figured, coloured, hard or soft, that moves, or resists. It is not to these qualities, but to that which is the subject of them, that we give the name of body. If any man should think fit to deny that these things are qualities, or that they require any subject, I leave him to enjoy his opinion as a man who denies first principles and is not fit to be reasoned with. If he has common understanding he will find that he cannot converse half an hour without saying things which imply the contrary of what he professes to believe.

In like manner, the things I am conscious of, such as thought, reasoning, desire, necessarily suppose something that thinks, that reasons, that desires. We do not give the name of mind to thought, reason, or desire, but to that being which thinks, which reasons, and which desires.

That every act or operation, therefore, supposes an agent, that every quality supposes a subject, are things which I do not attempt to prove, but take for granted. Every man of common understanding discerns this immediately, and cannot entertain the least doubt of it. In all languages we find certain words which by grammarians are called adjectives. Such words denote attributes, and every adjective must have a substantive to which it belongs — that is, every attribute must have a subject. In all languages we find active verbs which denote some action or operation; and it is a fundamental rule in the grammar of all languages, that such a verb presupposes a person — that is, in other words, that every action must have an agent. We take it therefore as a first principle, that goodness, wisdom, and virtue can only be in some being that is good, wise, and virtuous; that thinking presupposes a being that thinks; and that every operation we are conscious of supposes an agent that operates, which we call mind.

6. I take it for granted that in most operations of the mind there must be an object distinct from the operation

itself. I cannot see without seeing something. To see without having any object of sight is absurd.<sup>1</sup> I cannot remember without remembering something. The thing remembered is past, while the remembrance of it is present ; and, therefore, the operation and the object of it must be distinct things. The operations of our mind are denoted in all languages by active transitive verbs, which, from their construction in grammar, require not only a person or agent, but likewise an object of the operation. Thus the verb " know " denotes an operation of mind. From the general structure of language this verb requires a person — I know, you know, or he knows ; but it requires no less a noun in the accusative case, denoting the thing known ; for he that knows must know something ; and to know without having any object of knowledge is an absurdity too gross to admit of reasoning.

7. We ought likewise to take for granted, as first principles, things wherein we find a universal agreement, among the learned and unlearned, in the different nations and ages of the world. A consent of ages and nations, of the learned and vulgar, ought at least to have great authority, unless we can show some prejudice as universal as that consent is, which might be the cause of it. Truth is one, but error is infinite. There are many truths so obvious to the human faculties that it may be expected that men should universally agree in them.

Perhaps it may be thought that it is impossible to collect the opinions of all men upon any point whatsoever ; and, therefore, that this maxim can be of no use. But there are many cases wherein it is otherwise. Who can doubt, for instance, whether mankind have in all ages believed the existence of a material world, and that those things which they see and handle are real and not mere illusions and apparitions ? Who can doubt whether mankind have universally believed that everything that begins to exist, and every change that happens in nature, must have a cause ? Who can doubt whether mankind have been

<sup>1</sup> For the question whether this statement is consistent with Reid's theory of perception, *v.* p. 151 n. 2, and p. 250 n. 1.

universally persuaded that there is a right and a wrong in human conduct ? — some things which, in certain circumstances, they ought to do, and other things which they ought not to do ? The universality of these opinions, and of many such that might be named, is sufficiently evident, from the whole tenor of men's conduct, as far as our acquaintance reaches, and from the records of history, in all ages and nations, that are transmitted to us.

There are other opinions that appear to be universal, from what is common in the structure of all languages, ancient and modern, polished and barbarous. Language is the express image and picture of human thoughts ; and from the picture we may often draw very certain conclusions with regard to the original. We find in all languages the same parts of speech — nouns substantive and adjective, verbs active and passive, varied according to the tenses of past, present, and future ; we find adverbs, prepositions, and conjunctions. There are general rules of syntax common to all languages. This uniformity in the structure of language shows a certain degree of uniformity in those notions upon which the structure of language is grounded.

We find in the structure of all languages the distinction of acting and being acted upon, the distinction of action and agent, of quality and subject, and many others of the like kind ; which shows that these distinctions are founded in the universal sense of mankind. We shall have frequent occasion<sup>1</sup> to argue from the sense of mankind expressed in the structure of language ; and therefore it was proper here to take notice of the force of arguments drawn from this topic.

8. I need hardly say that I shall also take for granted such facts as are attested to the conviction of all sober and reasonable men, either by our senses, by memory, or by human testimony. Although some writers on this subject have disputed the authority of the senses, of memory, and of every human faculty, yet we find that such persons, in the conduct of life, in pursuing their ends, or in avoiding dangers, pay the same regard to the authority of their senses

<sup>1</sup> Cf. pp. 17-18, 27, 371.

and other faculties as the rest of mankind. By this they give us just ground to doubt of their candour in their professions of scepticism.

This, indeed, has always been the fate of the few that have professed scepticism, that, when they have done what they can to discredit their senses, they find themselves, after all, under a necessity of trusting to them. Mr. Hume has been so candid as to acknowledge this;<sup>1</sup> and it is no less true of those who have not shown the same candour; for I never heard that any sceptic run his head against a post, or stepped into a kennel, because he did not believe his eyes.

Upon the whole, I acknowledge that we ought to be cautious that we do not adopt opinions as first principles which are not entitled to that character. But there is surely the least danger of men's being imposed upon in this way when such principles openly lay claim to the character, and are thereby fairly exposed to the examination of those who may dispute their authority. We do not pretend that those things that are laid down as first principles may not be examined, and that we ought not to have our ears open to what may be pleaded against their being admitted as such. Let us deal with them as an upright judge does with a witness who has a fair character. He pays a regard to the testimony of such a witness while his character is unimpeached; but, if it can be shown that he is suborned, or that he is influenced by malice or partial favour, his testimony loses all its credit and is justly rejected.

## CHAPTER 3

### OF HYPOTHESES

EVERY branch of human knowledge hath its proper principles, its proper foundation and method of reasoning;

<sup>1</sup> *Treatise*, I. 4. 2.

and if we endeavour to build it upon any other foundation it will never stand firm and stable. Thus the historian builds upon testimony and rarely indulges conjecture ; the antiquarian mixes conjecture with testimony, and the former often makes the larger ingredient ; the mathematician pays not the least regard either to testimony or conjecture, but deduces everything by demonstrative reasoning from his definitions and axioms. Indeed, whatever is built upon conjecture is improperly called science ; for conjecture may beget opinion, but cannot produce knowledge. Natural philosophy must be built upon the phenomena of the material system, discovered by observation and experiment.

When men first began to philosophise — that is, to carry their thoughts beyond the objects of sense, and to inquire into the causes of things and the secret operations of nature — it was very natural for them to indulge conjecture ; nor was it to be expected that, in many ages, they should discover the proper and scientific way of proceeding in philosophical disquisitions. Accordingly we find that the most ancient systems in every branch of philosophy were nothing but the conjectures of men famous for their wisdom, whose fame gave authority to their opinions. Thus in early ages wise men conjectured that this earth is a vast plane surrounded on all hands by a boundless ocean ; that from this ocean the sun, moon, and stars emerge at their rising, and plunge into it again at their setting.

With regard to the mind, men in their rudest state are apt to conjecture that the principle of life in a man is his breath ; because the most obvious distinction between a living and a dead man is that the one breathes and the other does not. To this it is owing that in ancient languages the word which denotes the soul is that which properly signifies breath or air.

As men advance in knowledge, their first conjectures appear silly and childish, and give place to others which tally better with later observations and discoveries. Thus one system of philosophy succeeds another, without any claim to superior merit but this — that it is a more in-

genious system of conjectures and accounts better for common appearances.

Such conjectures in philosophical matters have commonly got the name of *hypotheses* or *theories*.<sup>1</sup> And the invention of a hypothesis, founded on some slight probabilities, which accounts for many appearances of nature, has been considered as the highest attainment of a philosopher. If the hypothesis hangs well together, is embellished by a lively imagination, and serves to account for common appearances, it is considered by many as having all the qualities that should recommend it to our belief, and all that ought to be required in a philosophical system.

There is such proneness in men of genius to invent hypotheses, and in others to acquiesce in them, as the utmost which the human faculties can attain in philosophy, that it is of the last consequence to the progress of real knowledge that men should have a clear and distinct understanding of the nature of hypotheses in philosophy, and of the regard that is due to them.

Although some conjectures may have a considerable degree of probability, yet it is evidently in the nature of conjecture to be uncertain. In every case the assent ought to be proportioned to the evidence; for to believe firmly what has but a small degree of probability is a manifest abuse of our understanding. Now though we may, in many cases, form very probable conjectures concerning the works of men, every conjecture we can form with regard to the works of God has as little probability as the conjectures of a child with regard to the works of a man.

If a thousand of the greatest wits that ever the world produced were, without any previous knowledge in

<sup>1</sup> Reid uses "hypothesis", "conjecture", and "theory" synonymously, and with a contempt which he thought any proposition deserved that could not be verified — *i.e.* that could not have some indisputable evidence produced, tending either for or against it. It should be noted that in consequence he does not attack *all* hypotheses: an empirically verifiable hypothesis, such as Newton's law of gravity (*v.* the last paragraph of this chapter), is acceptable. But a secondary hypothesis, *e.g.* one pretending to account for the law of gravity itself, he like Newton would reject, if not as meaningless, at any rate as useless. Cf. pp. 46, 58 *seq.*, 85; *Inquiry*, I. 1; *Treatise*, I. 1. 4.

anatomy, to sit down and contrive how, and by what internal organs, the various functions of the human body are carried on, how the blood is made to circulate and the limbs to move, they would not, in a thousand years, hit upon anything like the truth.

Of all the discoveries that have been made concerning the inward structure of the human body, never one was made by conjecture. Accurate observations of anatomists have brought to light innumerable artifices of nature in the contrivance of this machine of the human body, which we cannot but admire as excellently adapted to their several purposes. But the most sagacious physiologist never dreamed of them till they were discovered. On the other hand, innumerable conjectures, formed in different ages, with regard to the structure of the body have been confuted by observation, and none ever confirmed.

What we have said of the internal structure of the human body may be said, with justice, of every other part of the works of God wherein any real discovery has been made. Such discoveries have always been made by patient observation, by accurate experiments, or by conclusions drawn by strict reasoning from observations and experiments ; and such discoveries have always tended to refute, but not to confirm, the theories and hypotheses which ingenious men have invented.

As this is a fact confirmed by the history of philosophy in all past ages, it ought to have taught men, long ago, to treat with just contempt hypotheses in every branch of philosophy, and to despair of ever advancing real knowledge in that way. The Indian philosopher, being at a loss to know how the earth was supported, invented the hypothesis of a huge elephant ; and this elephant he supposed to stand upon the back of a huge tortoise. This hypothesis, however ridiculous it appears to us, might seem very reasonable to other Indians, who knew no more than the inventor of it ; and the same will be the fate of all hypotheses invented by men to account for the works of God. They may have a decent and plausible appearance to those who are not more knowing than the inventor ; but, when men

come to be more enlightened, they will always appear ridiculous and childish.

The world has been so long befooled by hypotheses in all parts of philosophy that it is of the utmost consequence to every man, who would make any progress in real knowledge, to treat them with just contempt, as the reveries of vain and fanciful men, whose pride makes them conceive themselves able to unfold the mysteries of nature by the force of their genius. A learned man, in an epistle to Descartes, has the following observation, which very much deserved the attention of that philosopher and of all that come after him : " When men, sitting in their closet, and consulting only their books, attempt disquisitions into nature, they may, indeed, tell how they would have made the world, if God had given them that in commission ; that is, they may describe chimeras, which correspond with the imbecility of their own minds, no less than the admirable beauty of the universe corresponds with the infinite perfection of its Creator ; but without an understanding truly divine, they can never form such an idea to themselves as the Deity had in creating things ".

Let us, therefore, lay down this as a fundamental principle in our inquiries into the structure of the mind and its operations — that no regard is due to the conjectures or hypotheses of philosophers, however ancient, however generally received. Let us accustom ourselves to try every opinion by the touchstone of fact and experience. What can fairly be deduced from facts, duly observed or sufficiently attested, is genuine and pure ; it is the voice of God and no fiction of human imagination.

The first rule of philosophising laid down by the great Newton is this : *Causas rerum naturalium, non plures admitti debere, quam quae et verae sint, et earum phaenomenis explicandis sufficient.* " No more causes, nor any other causes of natural effects, ought to be admitted but such as are both true, and are sufficient for explaining their appearances."<sup>1</sup> This is a golden rule ; it is the true and proper test by which what is sound and solid in philosophy

<sup>1</sup> *Principia*, Bk. 3, *Reg.* 1.

may be distinguished from what is hollow and vain.

If a philosopher, therefore, pretends to show us the cause of any natural effect, whether relating to matter or to mind, let us first consider whether there is sufficient evidence that the cause he assigns does really exist. If there is not, reject it with disdain as a fiction which ought to have no place in genuine philosophy. If the cause assigned really exists, consider, in the next place, whether the effect it is brought to explain necessarily follows from it. Unless it has these two conditions, it is good for nothing.

When Newton had shown the admirable effects of gravitation in our planetary system, he must have felt a strong desire to know its cause. He could have invented a hypothesis for this purpose, as many had done before him. But his philosophy was of another complexion. Let us hear what he says : *Rationem harum gravitatis proprietatum ex phaenomenis non potui deducere, et hypotheses non fingo. Quicquid enim ex phaenomenis non deducitur hypothesis vocanda est. Et hypotheses, seu metaphysicae, seu physicae, seu qualitatum occultarum, seu mechanicae, in philosophia experimentalis locum non habent.*<sup>1</sup>

## CHAPTER 4

### OF ANALOGY

It is natural to men to judge of things less known, by some similitude they observe, or think they observe, between them and things more familiar or better known. In many cases we have no better way of judging. And, where the things compared have really a great similitude in their nature, when there is reason to think that they are subject to the same laws, there may be a considerable degree of probability in conclusions drawn from analogy.

<sup>1</sup> *Ib.* Bk. 3, Scholium Generale.

Thus, we may observe a very great similitude between this earth which we inhabit, and the other planets, Saturn, Jupiter, Mars, Venus, and Mercury. They all revolve round the sun, as the earth does, although at different distances and in different periods. They borrow all their light from the sun, as the earth does. Several of them are known to revolve round their axis like the earth, and, by that means, must have a like succession of day and night. Some of them have moons that serve to give them light in the absence of the sun, as our moon does to us. They are all, in their motions, subject to the same law of gravitation, as the earth is. From all this similitude, it is not unreasonable to think that those planets may, like our earth, be the habitation of various orders of living creatures. There is some probability in this conclusion from analogy.

In medicine physicians must, for the most part, be directed in their prescriptions by analogy. The constitution of one human body is so like to that of another that it is reasonable to think that what is the cause of health or sickness to one may have the same effect upon another. And this generally is found true, though not without some exceptions.

In politics we reason, for the most part, from analogy. The constitution of human nature is so similar in different societies or commonwealths that the causes of peace and war, of tranquillity and sedition, of riches and poverty, of improvement and degeneracy, are much the same in all.

Analogical reasoning, therefore, is not in all cases to be rejected. It may afford a greater or a less degree of probability, according as the things compared are more or less similar in their nature. But it ought to be observed that, as this kind of reasoning can afford only probable evidence at best, so, unless great caution be used, we are apt to be led into error by it. For men are naturally disposed to conceive a greater similitude in things than there really is.

To give an instance of this : Anatomists, in ancient ages, seldom dissected human bodies ; but very often the bodies of those quadrupeds whose internal structure was

thought to approach nearest to that of the human body. Modern anatomists have discovered many mistakes the ancients were led into, by their conceiving a greater similitude between the structure of men and of some beasts than there is in reality. By this, and many other instances that might be given, it appears that conclusions built on analogy stand on a slippery foundation, and that we ought never to rest upon evidence of this kind when we can have more direct evidence.

I know no author who has made a more just and a more happy use of this mode of reasoning than Bishop Butler in his *Analogy of Religion, Natural and Revealed, to the Constitution and Course of Nature*. In that excellent work the author does not ground any of the truths of religion upon analogy as their proper evidence. He only makes use of analogy to answer objections against them. When objections are made against the truths of religion, which may be made with equal strength against what we know to be true in the course of nature, such objections can have

- no weight.

Analogical reasoning, therefore, may be of excellent use in answering objections against truths which have other evidence. It may likewise give a greater or a less degree of probability in cases where we can find no other evidence. But all arguments drawn from analogy are still the weaker, the greater disparity there is between the things compared ; and, therefore, must be weakest of all when we compare body with mind, because there are no two things in nature more unlike.

There is no subject in which men have always been so prone to form their notions by analogies of this kind as in what relates to the mind. We form an early acquaintance with material things by means of our senses, and are bred up in a constant familiarity with them. Hence we are apt to measure all things by them, and to ascribe to things most remote from matter the qualities that belong to material things. It is for this reason that mankind have, in all ages, been so prone to conceive the mind itself to be some subtle kind of matter : that they have been disposed

to ascribe human figure and human organs not only to angels, but even to the Deity. Though we are conscious of the operations of our own minds when they are exerted, and are capable of attending to them so as to form a distinct notion of them, this is so difficult a work to men whose attention is constantly solicited by external objects, that we give them names from things that are familiar and which are conceived to have some similitude to them ; and the notions we form of them are no less analogical than the names we give them. Almost all the words by which we express the operations of the mind are borrowed from material objects. To understand, to conceive, to imagine, to comprehend, to deliberate, to infer, and many others, are words of this kind ; so that the very language of mankind, with regard to the operations of our minds, is analogical. Because bodies are affected only by contact and pressure, we are apt to conceive that what is an immediate object of thought, and affects the mind, must be in contact with it, and make some impression upon it. When we imagine anything, the very word leads us to think that there must be some image in the mind of the thing conceived. It is evident that these notions are drawn from some similitude conceived between body and mind, and between the properties of body and the operations of mind.

To illustrate more fully that analogical reasoning from a supposed similitude of mind to body, which I conceive to be the most fruitful source of error with regard to the operations of our minds, I shall give an instance of it.

When a man is urged by contrary motives — those on one hand inciting him to do some action, those on the other to forbear it — he deliberates about it, and at last resolves to do it or not to do it. The contrary motives are here compared to the weights in the opposite scales of a balance ; and there is not, perhaps, any instance that can be named of a more striking analogy between body and mind. Hence the phrases of weighing motives, of deliberating upon actions, are common to all languages.

From this analogy some philosophers draw very

important conclusions. They say that, as the balance cannot incline to one side more than the other when the opposite weights are equal, so a man cannot possibly determine himself if the motives on both hands are equal ; and, as the balance must necessarily turn to that side which has most weight, so the man must necessarily be determined to that hand where the motive is strongest. And on this foundation some of the schoolmen maintained that if a hungry ass were placed between two bundles of hay equally inviting, the beast must stand still and starve to death, being unable to turn to either, because there are equal motives to both.<sup>1</sup> This is an instance of that analogical reasoning which I conceive ought never to be trusted ; for the analogy between a balance and a man deliberating, though one of the strongest that can be found between matter and mind, is too weak to support any argument. A piece of dead inactive matter and an active intelligent being are things very unlike ; and, because the one would remain at rest in a certain case, it does not follow that the other would be inactive in a case somewhat similar. The argument is no better than this : That, because a dead animal moves only as it is pushed, and, if pushed with equal force in contrary directions, must remain at rest, therefore the same thing must happen to a living animal ; for, surely, the similitude between a dead animal and a living is as great as that between a balance and a man.

The conclusion I would draw from all that has been said on analogy is that, in our inquiries concerning the mind and its operations, we ought never to trust to reasonings drawn from some supposed similitude of body to mind ; and that we ought to be very much upon our guard that we be not imposed upon by those analogical terms and phrases by which the operations of the mind are expressed in all languages.

<sup>1</sup> This example, traditionally known as "Buridan's ass", is not in fact to be found in that philosopher's writings. A fourteenth-century Nominalist, Johannes Buridanus, maintained that our acts of will are dependent entirely on our intellectual judgments, and that the only freedom we have is a certain power of control over the intellectual process itself.

## CHAPTER 5

OF THE PROPER MEANS OF KNOWING THE  
OPERATIONS OF THE MIND

SINCE we ought to pay no regard to hypotheses, and to be very suspicious of analogical reasoning, it may be asked, From what source must the knowledge of the mind and its faculties be drawn ?

I answer, the chief and proper source of this branch of knowledge is accurate reflection upon the operations of our own minds. The language of mankind is expressive of their thoughts, and of the various operations of their minds. The various operations of the understanding, will, and passions, which are common to mankind, have various forms of speech corresponding to them in all languages, which are the signs of them and by which they are expressed ; and a due attention to the signs may in many cases give considerable light to the things signified by them.

There are in all languages modes of speech, by which men signify their judgment or give their testimony ; by which they accept or refuse ; by which they ask information or advice ; by which they command, or threaten, or supplicate ; by which they plight their faith in promises or contracts. If such operations were not common to mankind, we should not find in all languages forms of speech by which they are expressed.

All languages indeed have their imperfections — they can never be adequate to all the varieties of human thought; and therefore things may be really distinct in their nature, and capable of being distinguished by the human mind, which are not distinguished in common language. We can only expect in the structure of languages those distinctions which all mankind in the common business of life have occasion to make. There may be peculiarities in a particular language, of the causes of which we are

ignorant, and from which therefore we can draw no conclusion. But whatever we find common to all languages must have a common cause ; must be owing to some common notion or sentiment of the human mind.

We gave some examples of this before,<sup>1</sup> and shall here add another. All languages have a plural number in many of their nouns ; from which we may infer that all men have notions not of individual things only, but of attributes, or things which are common to many individuals ; for no individual can have a plural number.

All the notions we have of mind and of its operations are by Mr. Locke called *ideas of reflection*.<sup>2</sup> A man may have as distinct notions of remembrance, of judgment, of will, of desire, as he has of any object whatever. Such notions, as Mr. Locke justly observes, are got by the power of reflection. But what is this power of reflection ? " It is ", says the same author, " that power by which the mind turns its view inward, and observes its own actions and operations."<sup>3</sup> He observes elsewhere, " That the understanding, like the eye, whilst it makes us see and perceive all other things, takes no notice of itself ; and that it requires art and pains to set it at a distance, and make it its own object".<sup>4</sup> Cicero hath expressed this sentiment most beautifully (*Tusc.* I. 28).<sup>5</sup>

This power of the understanding to make its own operations its object, to attend to them, and examine them on all sides, is the power of reflection, by which alone we can have any distinct notion of the powers of our own or of other minds.

This reflection ought to be distinguished from consciousness, with which it is too often confounded, even by Mr. Locke. All men are conscious of the operations of their own minds, at all times, while they are awake ; but there are few who reflect upon them, or make them objects of thought.

<sup>1</sup> P. 27

<sup>2</sup> *Essay*, II. 1. 4.

<sup>3</sup> *Ib.* II. 6. 1.

<sup>4</sup> *Ib.* I. 1. 1.

<sup>5</sup> " Sic mentem hominis, quamvis eam non videas, ut deum non vides, tamen, ut deum agnoscis ex operibus eius, sic ex memoria rerum et inventione et celeritate motus omnique pulchritudine virtutis, vim divinam mentis agnoscito "

From infancy, till we come to the years of understanding, we are employed solely about external objects. And, although the mind is conscious of its operations, it does not attend to them ; its attention is turned solely to the external objects about which those operations are employed. Thus, when a man is angry, he is conscious of his passion ; but his attention is turned to the person who offended him, and the circumstances of the offence, while the passion of anger is not in the least the object of his attention.

I conceive this is sufficient to show the difference between consciousness of the operations of our minds and reflection upon them, and to show that we may have the former without any degree of the latter. The difference between consciousness and reflection is like to the difference between a superficial view of an object which presents itself to the eye while we are engaged about something else, and that attentive examination which we give to an object when we are wholly employed in surveying it. Attention is a voluntary act ; it requires an active exertion to begin and to continue it, and it may be continued as long as we will ; but consciousness is involuntary and of no continuance, changing with every thought.

The power of reflection upon the operations of their own minds does not appear at all in children. Men must be come to some ripeness of understanding before they are capable of it. Of all the powers of the human mind, it seems to be the last that unfolds itself. Most men seem incapable of acquiring it in any considerable degree. Like all our other powers, it is greatly improved by exercise ; and until a man has got the habit of attending to the operations of his own mind, he can never have clear and distinct notions of them, nor form any steady judgment concerning them. His opinions must be borrowed from others, his notions confused and indistinct, and he may easily be led to swallow very gross absurdities. To acquire this habit is a work of time and labour, even in those who begin it early and whose natural talents are tolerably fitted for it ; but the difficulty will be daily diminishing, and the advantage of it is great. They will, thereby, be enabled

to think with precision and accuracy on every subject, especially on those subjects that are more abstract. They will be able to judge for themselves in many important points, wherein others must blindly follow a leader.

## CHAPTER 6

### OF THE DIFFICULTY OF ATTENDING TO THE OPERATIONS OF OUR OWN MINDS

THE difficulty of attending to our mental operations ought to be well understood, and justly estimated, by those who would make any progress in this science : that they may neither, on the one hand, expect success without pains and application of thought ; nor, on the other, be discouraged by conceiving that the obstacles that lie in the way are insuperable, and that there is no certainty to be attained in it. I shall, therefore, endeavour to point out the causes of this difficulty, and the effects that have arisen from it, that we may be able to form a true judgment of both.

1. The number and quick succession of the operations of the mind make it difficult to give due attention to them. The scene is constantly shifting. Every man will be sensible of this, who tries but for one minute to keep the same thought in his imagination, without addition or variation. He will find it impossible to keep the scene of his imagination fixed. Other objects will intrude without being called, and all he can do is to reject these intruders as quickly as possible and return to his principal object.

2. In this exercise we go contrary to habits which have been early acquired, and confirmed by long unvaried practice. From infancy we are accustomed to attend to objects of sense, and to them only ; and, when sensible objects have got such strong hold of the attention by confirmed habit, it is not easy to dispossess them. When we grow up, a variety of external objects solicits our attention, excites our

curiosity, engages our affections, or touches our passions ; and the constant round of employment, about external objects, draws off the mind from attending to itself ; so that nothing is more just than the observation of Mr. Locke before mentioned, " That the understanding, like the eye, while it surveys all the objects around it, commonly takes no notice of itself " .

3. The operations of the mind, from their very nature, lead the mind to give its attention to some other object. Our sensations, as will be shown afterwards,<sup>1</sup> are natural signs, and turn our attention to the things signified by them ; so much that most of them, and those the most frequent and familiar, have no name in any language. In perception, memory, judgment, imagination, and reasoning, there is an object distinct from the operation itself ; and, while we are led by a strong impulse to attend to the object, the operation escapes our notice. As to passions, affections, and all our active powers have in a manner their objects which engross our attention and divert it from the passion itself.

4. To this we may add a just observation made by Mr. Hume, That, when the mind is agitated by any passion, as soon as we turn our attention from the object to the passion itself, the passion subsides or vanishes, and, by that means, escapes our inquiry. This, indeed, is common to almost every operation of the mind. When it is exerted, we are conscious of it ; but then we do not attend to the operation, but to its object. When the mind is drawn off from the object to attend to its own operation, that operation ceases, and escapes our notice.

5. As it is not sufficient to the discovery of mathematical truths that a man be able to attend to mathematical figures, as it is necessary that he should have the ability to distinguish accurately things that differ, and to discern clearly the various relations of the quantities he compares — an ability which, though much greater in those who have the force of genius than in others, yet, even in them, requires exercise and habit to bring it to maturity — so, in order to

<sup>1</sup> V. p. 152 *seq.*

discover the truth in what relates to the operations of the mind, it is not enough that a man be able to give attention to them : he must have the ability to distinguish accurately their minute differences ; to resolve and analyse complex operations into their simple ingredients ; to unfold the ambiguity of words, which in this science is greater than in any other, and to give them the same accuracy and precision that mathematical terms have ; for, indeed, the same precision in the use of words, the same cool attention to the minute differences of things, the same talent for abstraction and analysing, which fit a man for the study of mathematics, are no less necessary in this. But there is this great difference between the two sciences — that the objects of mathematics being things external to the mind, it is much more easy to attend to them, and fix them steadily in the imagination.

The difficulty attending our inquiries into the powers of the mind serves to account for some events respecting this branch of philosophy which deserve to be mentioned.

While most branches of science have, either in ancient or in modern times, been highly cultivated and brought to a considerable degree of perfection, this remains, to this day, in a very low state and, as it were, in its infancy.

• Every science invented by men must have its beginning and its progress ; and, from various causes, it may happen that one science shall be brought to a great degree of maturity while another is yet in its infancy. The maturity of a science may be judged of by this — When it contains a system of principles, and conclusions drawn from them, which are so firmly established that, among thinking and intelligent men, there remains no doubt or dispute about them ; so that those who come after may raise the superstructure higher, but shall never be able to overturn what is already built, in order to begin on a new foundation.

Geometry seems to have been in its infancy about the time of Thales and Pythagoras, because many of the elementary propositions, on which the whole science is built, are ascribed to them as the inventors. Euclid's *Elements*, which were written some ages after Pythagoras,

exhibit a system of geometry which deserves the name of a science ; and, though great additions have been made by Apollonius, Archimedes, Pappus, and others among the ancients, and still greater by the moderns, yet what was laid down in Euclid's *Elements* was never set aside. It remains as the firm foundation of all future superstructures in that science.

Natural philosophy remained in its infant state near two thousand years after geometry had attained to its manly form : for natural philosophy seems not to have been built on a stable foundation, nor carried to any degree of maturity, till the last century. The system of Descartes, which was all hypothesis, prevailed in the most enlightened part of Europe till towards the end of last century. Sir Isaac Newton has the merit of giving the form of a science to this branch of philosophy ; and it need not appear surprising if the philosophy of the human mind should be a century or two later in being brought to maturity.

It has received great accessions from the labours of several modern authors, and perhaps wants little more to entitle it to the name of a science but to be purged of certain hypotheses which have imposed on some of the most acute writers on this subject, and led them into downright scepticism.

What the ancients have delivered to us concerning the mind and its operations is almost entirely drawn, not from accurate reflection, but from some conceived analogy between body and mind. And, although the modern authors I formerly named have given more attention to the operations of their own minds, and by that means have made important discoveries, yet, by retaining some of the ancient analogical notions, their discoveries have been less useful than they might have been and have led to scepticism.

It may happen in science, as in building, that an error in the foundation shall weaken the whole ; and the farther the building is carried on, this weakness shall become the more apparent and the more threatening. Something of this kind seems to have happened in our

systems concerning the mind. The accession they have received by modern discoveries, though very important in itself, has thrown darkness and obscurity upon the whole, and has led men rather to scepticism than to knowledge. This must be owing to some fundamental errors that have not been observed ; and when these are corrected, it is to be hoped that the improvements that have been made will have their due effect.

The last effect I observe of the difficulty of inquiries into the powers of the mind is, that there is no other part of human knowledge in which ingenious authors have been so apt to run into strange paradoxes, and even into gross absurdities.

When we find philosophers maintaining that there is no heat in the fire nor colour in the rainbow ; when we find the gravest philosophers, from Descartes down to Bishop Berkeley, mustering up arguments to prove the existence of a material world, and unable to find any that will bear examination ; when we find Bishop Berkeley and Mr. Hume, the acutest metaphysicians of the age, maintaining that there is no such thing as matter in the universe — that sun, moon, and stars, the earth which we inhabit, our own bodies, and those of our friends, are only ideas in our minds, and have no existence but in thought ; when we find the last maintaining that there is neither body nor mind — nothing in nature but ideas and impressions, without any substance on which they are impressed — that there is no certainty, nor indeed probability, even in mathematical axioms : I say, when we consider such extravagances of many of the most acute writers on this subject, we may be apt to think the whole to be only a dream of fanciful men who have entangled themselves in cobwebs spun out of their own brain. But we ought to consider that the more closely and ingeniously men reason from false principles, the more absurdities they will be led into ; and when such absurdities help to bring to light the false principles from which they are drawn, they may be the more easily forgiven.

[CHAPTER 7. DIVISION OF THE POWERS  
OF THE MIND] <sup>1</sup>

## CHAPTER 8

## OF SOCIAL OPERATIONS OF MIND

THERE is another division of the powers of the mind, which, though it has been, ought not to be overlooked by writers on this subject, because it has a real foundation in nature. Some operations of our minds, from their very nature, are *social*, others are *solitary*.

By the first I understand such operations as necessarily suppose an intercourse with some other intelligent being. A man may understand and will ; he may apprehend, and judge, and reason, though he should know of no intelligent being in the universe besides himself. But, when he asks information, or receives it ; when he bears testimony, or receives the testimony of another ; when he asks a favour, or accepts one ; when he gives a command to his servant, or receives one from a superior ; when he plights his faith in a promise or contract — these are acts of social intercourse between intelligent beings, and can have no place in solitude. They suppose understanding and will ; but they suppose something more which is neither understanding nor will ; that is, society with other intelligent beings. They may be called intellectual, because they can only be in intellectual beings ; but they are neither simple apprehension, nor judgment, nor reasoning, nor are they any combination of these operations.

<sup>1</sup> The whole of this chapter has been omitted, as Reid does little in it but confuse psychological with logical divisions. He concludes that no certainly exhaustive division of the operations of the mind can be offered, and instead of attempting a complete enumeration gives a list of those which he proposes to consider : the powers we have by means of our external senses, memory, conception, abstraction, judgment, reasoning, taste, and consciousness.

To ask a question is as simple an operation as to judge or to reason ; yet it is neither judgment nor reasoning, nor simple apprehension, nor is it any composition of these. Testimony is neither simple apprehension, nor judgment, nor reasoning. The same may be said of a promise or of a contract. These acts of mind are perfectly understood by every man of common understanding ; but, when philosophers attempt to bring them within the pale of their divisions, by analysing them, they find inexplicable mysteries, and even contradictions, in them. One may see an instance of this, of many that might be mentioned, in Mr. Hume's *Enquiry concerning the Principles of Morals*, § 3, part 2, note, near the end.

The attempts of philosophers to reduce the social operations under the common philosophical divisions resemble very much the attempts of some philosophers to reduce all our social affections to certain modifications of self-love. • The Author of our being intended us to be social beings, and has, for that end, given us social intellectual powers as well as social affections. Both are original parts of our constitution, and the exertions of both no less natural than the exertions of those powers that are solitary and selfish.

• Our social intellectual operations, as well as our social affections, appear very early in life, before we are capable of reasoning ; yet both suppose a conviction of the existence of other intelligent beings. When a child asks a question of his nurse, this act of his mind supposes not only a desire to know what he asks ; it supposes, likewise, a conviction that the nurse is an intelligent being to whom he can communicate his thoughts, and who can communicate her thoughts to him. How he came by this conviction so early is a question of some importance in the knowledge of the human mind, and, therefore, worthy of the consideration of philosophers. But they seem to have given no attention either to this early conviction or to those operations of mind which suppose it. Of this we shall have occasion to treat afterwards.<sup>1</sup>

<sup>1</sup> H. pp. 383 *seq.*

All languages are fitted to express the social as well as the solitary operations of the mind. It may indeed be affirmed that to express the former is the primary and direct intention of language. A man who had no intercourse with any other intelligent being would never think of language. He would be as mute as the beasts of the field ; even more so, because they have some degree of social intercourse with one another, and some of them with man. When language is once learned, it may be useful even in our solitary meditations ; and by clothing our thoughts with words, we may have a firmer hold of them. But this was not its first intention ; and the structure of every language shows that it is not intended solely for this purpose.

In every language a question, a command, a promise, which are social acts, can be expressed as easily and as properly as judgment, which is a solitary act. The expression of the last has been honoured with a particular name ; it is called a proposition ; it has been an object of great attention to philosophers ; it has been analysed into its very elements of subject, predicate, and copula. All the various modifications of these, and of propositions which are compounded of them, have been anxiously examined in many voluminous tracts. The expression of a question, of a command, or of a promise, is as capable of being analysed as a proposition is ; but we do not find that this has been attempted ; we have not so much as given them a name different from the operations which they express.

Why have speculative men laboured so anxiously to analyse our solitary operations and given so little attention to the social ? I know no other reason but this, that, in the divisions that have been made of the mind's operations, the social have been omitted, and thereby thrown behind the curtain.

In all languages the second person of verbs, the pronoun of the second person, and the vocative case in nouns, are appropriated to the expression of social operations of mind, and could never have had place in language but for this purpose : nor is it a good argument against this

observation that, by a rhetorical figure, we sometimes address persons that are absent, or even inanimated beings, in the second person. For it ought to be remembered that all figurative ways of using words or phrases suppose a natural and literal meaning of them.

# ESSAY II

## OF THE POWERS WE HAVE BY MEANS OF OUR EXTERNAL SENSES

### CHAPTER I

#### OF THE ORGANS OF SENSE

OF all the operations of our minds the perception of external objects is the most familiar. The senses come to maturity even in infancy, when other powers have not yet sprung up. They are common to us with brute animals, and furnish us with the objects about which our other powers are the most frequently employed. We find it easy to attend to their operations ; and, because they are familiar, the names which properly belong to them are applied to other powers which are thought to resemble them. For these reasons they claim to be first considered.

The perception of external objects is one main link of that mysterious chain which connects the material world with the intellectual. We shall find many things in this operation unaccountable ; sufficient to convince us that we know but little of our own frame ; and that a perfect comprehension of our mental powers, and of the manner of their operation, is beyond the reach of our understanding.

In perception there are impressions upon the organs of sense, the nerves, and brain, which, by the laws of our nature, are followed by certain operations of mind. These two things are apt to be confounded, but ought most carefully to be distinguished. Some philosophers, without good reason, have concluded that the impressions made on the body are the proper efficient cause of perception. Others, with as little reason, have concluded that impressions are made on the mind similar to those made on the

body. From these mistakes many others have arisen. The wrong notions men have rashly taken up with regard to the senses have led to wrong notions with regard to other powers which are conceived to resemble them. Many important powers of mind have, especially of late, been called internal senses from a supposed resemblance to the external — such as the sense of beauty, the sense of harmony, the moral sense.<sup>1</sup> And it is to be apprehended that errors, with regard to the external, have, from analogy, led to similar errors with regard to the internal; it is, therefore, of some consequence, even with regard to other branches of our subject, to have just notions concerning the external senses.

In order to this, we shall begin with some observations on the organs of sense, and on the impressions which in perception are made upon them and upon the nerves and brain.

We perceive no external object but by means of certain bodily organs which God has given us for that purpose. The Supreme Being who made us, and placed us in this world, hath given us such powers of mind as he saw to be suited to our state and rank in his creation. He has given us the power of perceiving many objects around us — the sun, moon, and stars, the earth and sea, and a variety of animals, vegetables, and inanimate bodies. But our power of perceiving these objects is limited in various ways, and particularly in this — that, without the organs of the several senses, we perceive no external object. We cannot

<sup>1</sup> Locke used the phrase "internal sense" for the source of the ideas of reflection or the power of introspecting our own mental operations. *Essay*, II. 1. 4. "This source of ideas every man has wholly within himself: and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called internal sense." But the reference here is more probably to Hutcheson, who maintained exactly the position here described. "It is of no consequence whether we call these ideas of Beauty and Harmony perceptions of the External Senses of seeing and hearing, or not. I should rather choose to call our power of perceiving these ideas an Internal Sense, were it only for the convenience of distinguishing them from other sensations of seeing or hearing, which men may have without perception of Beauty and Harmony" (*Inquiry Concerning Beauty, Order, etc.*, I. 10). For the Moral Sense v. *Inquiry Concerning Moral Good and Evil*, I. 1, and *System of Moral Philosophy*, I. 2 and 4.

see without eyes nor hear without ears ; it is not only necessary that we should have these organs, but that they should be in a sound and natural state. There are many disorders of the eye that cause total blindness ; others that impair the powers of vision without destroying it altogether : and the same may be said of the organs of all the other senses.

All this is so well known from experience that it needs no proof ; but it ought to be observed that we know it from experience only. We can give no reason for it but that such is the will of our Maker. No man can show it to be impossible to the Supreme Being to have given us the power of perceiving external objects without such organs. We have reason to believe that, when we put off these bodies and all the organs belonging to them, our perceptive powers shall rather be improved than destroyed or impaired. We have reason to believe that the Supreme Being perceives everything in a much more perfect manner than we do, without bodily organs. We have reason to believe that there are other created beings endowed with powers of perception more perfect and more extensive than ours, without any such organs as we find necessary.

We ought not, therefore, to conclude that such bodily organs are, in their own nature, necessary to perception ; but rather that, by the will of God, our power of perceiving external objects is limited and circumscribed by our organs of sense ; so that we perceive objects in a certain manner, and in certain circumstances, and in no other.

Another necessary caution in this matter is, that we ought not to confound the organs of perception with the being that perceives. Perception must be the act of some being that perceives. The eye is not that which sees ; it is only the organ by which we see. The ear is not that which hears, but the organ by which we hear ; and so of the rest.

The eye is a machine most admirably contrived for refracting the rays of light and forming a distinct picture of objects upon the retina ; but it sees neither the object nor the picture. It can form the picture after it is taken

out of the head ; but no vision ensues. Even when it is in its proper place, and perfectly sound, it is well known that an obstruction in the optic nerve takes away vision, though the eye has performed all that belongs to it.

If anything more were necessary to be said on a point so evident, we might observe that, if the faculty of seeing were in the eye, that of hearing in the ear, and so of the other senses, the necessary consequence of this would be that the thinking principle, which I call myself, is not one but many. But this is contrary to the irresistible conviction of every man. When I say I see, I hear, I feel, I remember, this implies that it is one and the same self that performs all these operations ; and, as it would be absurd to say that my memory, another man's imagination, and a third man's reason, may make one individual intelligent being, it would be equally absurd to say that one piece of matter seeing, another hearing, and a third feeling, may make one and the same percipient being.

These sentiments are not new ; they have occurred to thinking men from early ages. Cicero in his *Tusculan Questions*, Bk. I, ch. 20, has expressed them very distinctly. Those who choose may consult the passage.<sup>1</sup>

## CHAPTER 2

### OF THE IMPRESSIONS ON THE ORGANS, NERVES, AND BRAIN

A SECOND law of our nature regarding perception is, that we perceive no object, unless some impression is made

<sup>1</sup> " Saepe aut cogitatione aut aliqua vi morbi impediti apertis atque integris et oculis et auribus nec videmus nec audimus, ut facile intellegi possit animum et videre at audire, non eas partes, quae quasi fenestrae sint animi, quibus tamen sentire nihil queat mens, nisi id agat et adsit. Quid ? quod eadem mente res dissimillimas comprehendimus, ut colorem, saporem, calorem, odorem, sonum ? quae nunquam quinque nuntiis animus cognosceret nisi ad eum omnia referrentur et is omnium iudex solus esset."

upon the organ of sense, either by the immediate application of the object, or by some medium which passes between the object and the organ.

In two of our senses — to wit, *touch* and *taste* — there must be an immediate application of the object to the organ. In the other three the object is perceived at a distance, but still by means of a medium, by which some impression is made upon the organ.

The effluvia of bodies drawn into the nostrils with the breath are the medium of smell; the undulations of the air are the medium of hearing; and the rays of light passing from visible objects to the eye are the medium of sight. We see no object unless rays of light come from it to the eye. We hear not the sound of any body unless the vibrations of some elastic medium, occasioned by the tremulous motion of the sounding body, reach our ear. We perceive no smell unless the effluvia of the smelling body enter into the nostrils. We perceive no taste unless the sapid body be applied to the tongue, or some part of the organ of taste. Nor do we perceive any tangible quality of a body, unless it touch the hands or some part of our bodies.

These are facts known from experience to hold universally and invariably both in men and brutes. By this law of our nature, our powers of perceiving external objects are further limited and circumscribed. Nor can we give any other reason for this than that it is the will of our Maker, who knows best what powers, and what degrees of them, are suited to our state. We were once in a state, I mean in the womb, wherein our powers of perception were more limited than in the present, and, in a future state, they may be more enlarged.

It is likewise a law of our nature that, in order to our perceiving objects, the impressions made upon the organs of sense must be communicated to the nerves, and by them to the brain. This is perfectly known to those who know anything of anatomy.

The nerves are fine cords which pass from the brain, or from the spinal marrow, which is a production of the brain, to all parts of the body, dividing into smaller branches

as they proceed, until at last they escape our eyesight : and it is found by experience that all the voluntary and involuntary motions of the body are performed by their means. When the nerves that serve any limb are cut, or tied hard, we have then no more power to move that limb than if it was no part of the body.

As there are nerves that serve the muscular motions, so there are others that serve the several senses ; and as without the former we cannot move a limb, so without the latter we can have no perception.

This train of machinery the wisdom of God has made necessary to our perceiving objects. Various parts of the body concur to it, and each has its own function. *First*, The object, either immediately or by some medium, must make an impression on the organ. The organ serves only as a medium by which an impression is made on the nerve ; and the nerve serves as a medium to make an impression upon the brain. Here the material part ends ; at least we can trace it no further ; the rest is all intellectual.

The proof of these impressions upon the nerves and brain in perception is this, that, from many observations and experiments, it is found that, when the organ of any sense is perfectly sound, and has the impression made upon it by the object ever so strongly, yet, if the nerve which serves that organ be cut or tied hard, there is no perception ; and it is well known that disorders in the brain deprive us of the power of perception when both the organ and its nerve are sound.

There is, therefore, sufficient reason to conclude that, in perception, the object produces some change in the organ ; that the organ produces some change upon the nerve ; and that the nerve produces some change in the brain. And we give the name of an *impression* to those changes because we have not a name more proper to express, in a general manner, any change produced in a body, by an external cause, without specifying the nature of that change. *Whether it be pressure, or attraction, or repulsion, or vibration, or something unknown for which we have no name, still it may be called an impression.*

But, with regard to the particular kind of this change or impression, philosophers have never been able to discover anything at all.

But, whatever be the nature of those impressions upon the organs, nerves, and brain, we perceive nothing without them. Experience informs that it is so ; but we cannot give a reason why it is so. In the constitution of man, perception, by fixed laws of nature, is connected with those impressions ; but we can discover no necessary connection. The Supreme Being has seen fit to limit our power of perception, so that we perceive not without such impressions ; and this is all we know of the matter.

This, however, we have reason to conclude in general — that, as the impressions on the organs, nerves, and brain, correspond exactly to the nature and conditions of the objects by which they are made, so our perceptions and sensations correspond to those impressions, and vary in kind, and in degree, as they vary.<sup>1</sup> Without this exact correspondence, the information we receive by our senses would not only be imperfect, as it undoubtedly is, but would be fallacious, which we have no reason to think it is.

### CHAPTER 3

#### HYPOTHESES CONCERNING THE NERVES AND BRAIN

WE are informed by anatomists that, although the two coats which enclose a nerve, and which it derives from the coats of the brain, are tough and elastic, yet the nerve itself has a very small degree of consistence, being almost like marrow. It has, however, a fibrous texture, and may be

<sup>1</sup> This "exact correspondence" between the effects on the nervous system and the objects which produce them is to be understood in the sense only of correlation between the two series of events. There is no suggestion of any similarity between them, or of images in the brain. Reid explicitly rejects the latter view in Chapter 4 of the present essay ; cf. *Inquiry*, 6. 12.

divided and subdivided till its fibres escape our senses; and, as we know so very little about the texture of the nerves, there is great room left for those who choose to indulge themselves in conjecture.

The ancients conjectured that the nervous fibres are fine tubes filled with a very subtle spirit, or vapour, which they called *animal spirits*; that the brain is a gland by which the animal spirits are secreted from the finer part of the blood and their continual waste repaired; and that it is by these animal spirits that the nerves perform their functions. Descartes has shown how, by these animal spirits going and returning in the nerves, muscular motion, perception, memory, and imagination, are effected. All this he has described as distinctly as if he had been an eye-witness of all those operations. But it happens that the tubular structure of the nerves was never perceived by the human eye nor shown by the nicest injections; and all that has been said about animal spirits, through more than fifteen centuries, is mere conjecture.

Dr. Briggs, who was Sir Isaac Newton's master in anatomy, was the first, as far as I know, who advanced a new system concerning the nerves. He conceived them to be solid filaments of prodigious tenuity; and this opinion, as it accords better with observation, seems to have been more generally received since his time. As to the manner of performing their office, Dr. Briggs thought that, like musical cords, they have vibrations differing according to their length and tension. They seem, however, very unfit for this purpose, on account of their want of tenacity, their moisture, and being through their whole length in contact with moist substances; so that, although Dr. Briggs wrote a book upon this system called *Nova Visionis Theoria*, it seems not to have been much followed.

Sir Isaac Newton, in all his philosophical writings, took great care to distinguish his doctrines, which he pretended to prove by just induction, from his conjectures,<sup>1</sup> which were to stand or fall according as future experiments and

<sup>1</sup> Cf. p. 32 note. The main interest of this chapter lies in its statement and illustration of the conditions necessary for a hypothesis to be acceptable.

observations should establish or refute them. His conjectures he has put in the form of queries, that they might not be received as truths, but be inquired into, and determined according to the evidence to be found for or against them. Those who mistake his queries for a part of his doctrine do him great injustice, and degrade him to the rank of the common herd of philosophers who have in all ages adulterated philosophy by mixing conjecture with truth and their own fancies with the oracles of nature. Among other queries this truly great philosopher proposed this. Whether there may not be an elastic medium, or ether, immensely more rare than air, which pervades all bodies, and which is the cause of gravitation; of the refraction and reflection of the rays of light; of the transmission of heat through spaces void of air; and of many other phenomena? In the 23rd query subjoined to his *Optics*,<sup>1</sup> he puts this question with regard to the impressions made on the nerves and brain in perception, Whether vision is effected chiefly by the vibrations of this medium, excited in the bottom of the eye by the rays of light, and propagated along the solid, pellucid, and uniform capillaments of the optic nerve? And whether hearing is effected by the vibrations of this or some other medium, excited by the tremor of the air in the auditory nerves, and propagated along the solid, pellucid, and uniform capillaments of those nerves? And so with regard to the other senses.

What Newton only proposed as a matter to be inquired into, Dr. Hartley conceived to have such evidence that, in his *Observations on Man*, he has deduced, in a mathematical form, a very ample system concerning the faculties of the mind, from the doctrine of vibrations, joined with that of association.

His notion of the vibrations excited in the nerves is expressed in Propositions 4 and 5 of the first part of his *Observations on Man*. "Prop. 4. External objects impressed on the senses occasion, first in the nerves on which they are irapressed, and then in the brain, vibrations of the small, and, as one may say, infinitesimal medullary par-

<sup>1</sup> 2nd and subsequent editions.

ticles. Prop. 5. The vibrations mentioned in the last proposition are excited, propagated, and kept up, partly by the ether — that is, by a very subtle elastic fluid ; partly by the uniformity, continuity, softness, and active powers of the medullary substance of the brain, spinal marrow, and nerves."

It may be observed, in general, that Dr. Hartley's work consists of a chain of propositions, with their proofs and corollaries, digested in good order and in a scientific form. A great part of them, however, are, as he candidly acknowledges, conjectures and hints only ; yet these are mixed with the propositions legitimately proved, without any distinction. Corollaries are drawn from them, and other propositions grounded upon them, which, all taken together, make up a system. A system of this kind resembles a chain of which some links are abundantly strong, others very weak. The strength of the chain is determined by that of the weakest links ; for, if they give way, the whole falls to pieces, and the weight supported by it falls to the ground.

Philosophy has been, in all ages, adulterated by hypotheses ; that is, by systems built partly on facts and much upon conjecture. It is pity that a man of Dr. Hartley's knowledge and candour should have followed the multitude in this fallacious tract, after expressing his approbation of the proper method of philosophising, pointed out by Bacon and Newton. The last considered it as a reproach when his system was called his hypothesis ; and says, with disdain of such imputation, *Hypotheses non fingo*.<sup>1</sup> And it is very strange that Dr. Hartley should not only follow such a method of philosophising himself, but that he should direct others in their inquiries to follow it. So he does in Proposition 87, Part I, where he deduces rules for the ascertainment of truth, from the rule of false, in arithmetic, and from the art of deciphering, and in other places.

As to the vibrations and vibratiuncles, whether of an elastic ether or of the infinitesimal particles of the brain and nerves, there may be such things for what we know ; and

<sup>1</sup> *Principia*, Bk. 3, Scholium Generale.

men may rationally inquire whether they can find any evidence of their existence ; but, while we have no proof of their existence, to apply them to the solution of phenomena, and to build a system upon them, is what I conceive we call building a castle in the air.

When men pretend to account for any of the operations of nature, the causes assigned by them ought, as Sir Isaac Newton has taught us,<sup>1</sup> to have two conditions, otherwise they are good for nothing. *First*, They ought to be true, to have a real existence, and not to be barely conjectured to exist without proof. *Secondly*, They ought to be sufficient to produce the effect.

As to the existence of vibratory motions in the medullary substance of the nerves and brain, the evidence produced is this : *First*, It is observed that the sensations of seeing and hearing, and some sensations of touch, have some short duration and continuance. *Secondly*, Though there be no direct evidence that the sensations of taste and smell, and the greater part of those of touch, have the like continuance, yet, says the author, analogy would incline one to believe that they must resemble the sensations of sight and hearing in this particular. *Thirdly*, The continuance of all our sensations being thus established, it follows that external objects impress vibratory motions on the medullary substance of the nerves and brain ; because no motion, besides a vibratory one, can reside in any part for a moment of time.

This is the chain of proof, in which the first link is strong, being confirmed by experience ; the second is very weak ; and the third still weaker. For other kinds of motion besides that of vibration may have some continuance — such as rotation, bending or unbending of a spring, and perhaps others which we are unacquainted with ; nor do we know whether it is motion that is produced in the nerves — it may be pressure, attraction, repulsion, or something we do not know. This, indeed, is the common refuge of all hypotheses, that we know no other way in which the phenomena may be produced,

<sup>1</sup> *Principia*, Bk. 3, Reg. 1.

and, therefore, they must be produced in this way. There is, therefore, no proof of vibrations in the infinitesimal particles of the brain and nerves.

It may be thought that the existence of an elastic vibrating ether stands on a firmer foundation, having the authority of Sir Isaac Newton. But it ought to be observed that, although this great man had formed conjectures about this ether near fifty years before he died, and had it in his eye during that long space as a subject of inquiry, yet it does not appear that he ever found any convincing proof of its existence, but considered it to the last as a question whether there be such an ether or not. In the premonition to the reader prefixed to the second edition of his *Optics*, anno 1717, he expresses himself thus with regard to it: "Lest anyone should think that I place gravity among the essential properties of bodies, I have subjoined one question concerning its cause; a question, I say, for I do not hold it as a thing established". If, therefore, we regard the authority of Sir Isaac Newton, we ought to hold the existence of such an ether as a matter not established by proof, but to be examined into by experiments; and I have never heard that, since his time, any new evidence has been found of its existence.

"But", says Dr. Hartley, "supposing the existence of the ether, and of its properties, to be destitute of all direct evidence, still, if it serves to account for a great variety of phenomena, it will have an indirect evidence in its favour by this means."<sup>1</sup> There never was an hypothesis invented by an ingenious man which has not this evidence in its favour. The vortices of Descartes, the sylphs and gnomes of Mr. Pope, serve to account for a great variety of phenomena.

The author tells us "that any hypothesis that has so much plausibility as to explain a considerable number of facts, helps us to digest these facts in proper order, to bring new ones to light, and to make *experimenta crucis* for the sake of future inquirers".

Let hypotheses be put to any of these uses as far as they

<sup>1</sup> *Observations on Man*, I. 1. 5.

can serve. Let them suggest experiments or direct our inquiries ; but let just induction alone govern our belief.

" The rule of false affords an obvious and strong instance of the possibility of being led, with precision and certainty, to a true conclusion from a false position. And it is of the very essence of algebra to proceed in the way of supposition." <sup>1</sup>

This is true ; but, when brought to justify the accounting for natural phenomena by hypotheses, is foreign to the purpose. When an unknown number, or any unknown quantity, is sought which must have certain conditions, it may be found in a scientific manner by the rule of false, or by an algebraical analysis ; and, when found, may be synthetically demonstrated to be the number or the quantity sought, by its answering all the conditions required. But it is one thing to find a quantity which shall have certain conditions ; it is a very different thing to find out the laws by which it pleases God to govern the world and produce the phenomena which fall under our observation. And we can then only allow some weight to this argument in favour of hypotheses, when it can be shown that the cause of any one phenomenon in nature has been, or can be found, as an unknown quantity is, by the rule of false, or by algebraical analysis. This, I apprehend, will never be till the era arrives which Dr. Hartley seems to foretell, " When future generations shall put all kinds of evidences and inquiries into mathematical forms ; and, as it were, reduce Aristotle's ten Categories, and Bishop Wilkins' forty *Summa Genera* to the head of quantity alone, so as to make mathematics and logic, natural history and civil history, natural philosophy and philosophy of all other kinds, coincide *omni ex parte* ".<sup>2</sup>

Since Sir Isaac Newton laid down the rules of philosophising in our inquiries into the works of nature, many philosophers have deviated from them in practice ; perhaps few have paid that regard to them which they deserve. But they have met with very general approbation as being founded in reason, and pointing out the only path to the

<sup>1</sup> *Observations on Man*, I. 1. 5.

<sup>2</sup> *Ib.* III. 2. 87.

knowledge of nature's works. Dr. Hartley is the only author I have met with who reasons against them, and has taken pains to find out arguments in defence of the exploded method of hypothesis.

Another condition which Sir Isaac Newton requires in the causes of natural things assigned by philosophers is, that they be sufficient to account for the phenomena.<sup>1</sup> Vibrations, and vibratiuncles of the medullary substance of the nerves and brain, are assigned by Dr. Hartley to account for all our sensations and ideas, and, in a word, for all the operations of our minds. Let us consider very briefly how far they are sufficient for that purpose.

It would be unreasonable to require that his theory of vibrations should, in the proper sense, account for our sensations. It would, indeed, be ridiculous in any man to pretend that thought of any kind must necessarily result from motion, or that vibrations in the nerves must necessarily produce thought, any more than the vibrations of a pendulum. Dr. Hartley disclaims this way of thinking, and therefore it ought not to be imputed to him. All that he pretends is that, in the human constitution, there is a certain connection between vibrations in the medullary substance of the nerves and brain, and the thoughts of the mind ; so that the last depend entirely upon the first, and every kind of thought in the mind arises in consequence of a corresponding vibration, or vibratiuncle, in the nerves and brain. Our sensations arise from vibrations, and our ideas from vibratiuncles, or miniature vibrations ; and he comprehends, under these two words of *sensations* and *ideas*, all the operations of the mind.

But how can we expect any proof of the connection between vibrations and thought when the existence of such vibrations was never proved ? The proof of their connection cannot be stronger than the proof of their existence ; for, as the author acknowledges that we cannot infer the existence of the thoughts from the existence of the vibrations, it is no less evident that we cannot infer the existence of vibrations from the existence of our thoughts. The

<sup>1</sup> *Principia*, Bk. 3, *Reg.* 1.

existence of both must be known before we can know their connection. As to the existence of our thoughts, we have the evidence of consciousness, a kind of evidence that never was called in question. But as to the existence of vibrations in the medullary substance of the nerves and brain, no proof has yet been brought.

All, therefore, we have to expect from this hypothesis is, that in vibrations, considered abstractly, there should be a variety in kind and degree which tallies so exactly with the varieties of the thoughts they are to account for, as may lead us to suspect some connection between the one and the other. If the divisions and subdivisions of thought be found to run parallel with the divisions and subdivisions of vibrations, this would give that kind of plausibility to the hypothesis of their connection which we commonly expect even in a mere hypothesis ; but we do not find even this.

For, to omit all those thoughts and operations which the author comprehends under the name of *ideas*, and which he thinks are connected with vibrations ; to omit the perception of external objects, which he comprehends under the name of *sensations* ; to omit the sensations, properly so called, which accompany our passions and affections, and to confine ourselves to the sensations which we have by means of our external senses, we can perceive no correspondence between the variety we find in their kinds and degrees and that which may be supposed in vibrations.

We have five senses whose sensations differ totally in kind. By each of these, excepting perhaps that of hearing, we have a variety of sensations which differ specifically, and not in degree only. How many tastes and smells are there which are specifically different, each of them capable of all degrees of strength and weakness ? Heat and cold, roughness and smoothness, hardness and softness, pain and pleasure, are sensations of touch that differ in kind, and each has an endless variety of degrees. Sounds have the qualities of acute and grave, loud and low, with all different degrees of each. The varieties of colour are many more

than we have names to express. How shall we find varieties in vibrations corresponding to all this variety of sensations which we have by our five senses only ?

I know two qualities of vibrations in a uniform elastic medium, and I know no more. They may be quick or slow in various degrees, and they may be strong or weak in various degrees ; but I cannot find any division of our sensations that will make them tally with those divisions of vibrations. If we had no other sensations but those of hearing, the theory would answer well ; for sounds are either acute or grave, which may answer to quick or slow vibrations ; or they are loud or low, which answer to strong or weak vibrations. But then we have no variety of vibrations corresponding to the immense variety of sensations which we have by sight, smell, taste, and touch.

Dr. Hartley has endeavoured to find out other two qualities of vibrations ; to wit, that they may primarily affect one part of the brain or another, and that they may vary in their direction according as they enter by different external nerves ; but these seem to be added to make a number ; for, as far as we know, vibrations in a uniform elastic substance spread over the whole and in all directions. However, that we may be liberal, we shall grant him four different kinds of vibrations, each of them having as many degrees as he pleases. Can he, or any man, reduce all our sensations to four kinds ? We have five senses, and by each of them a variety of sensations, more than sufficient to exhaust all the varieties we are able to conceive in vibrations.

Dr. Hartley, indeed, was sensible of the difficulty of finding vibrations to suit all the variety of our sensations. His extensive knowledge of physiology and pathology could yield him but a feeble aid ; and, therefore, he is often reduced to the necessity of heaping supposition upon supposition, conjecture upon conjecture, to give some credibility to his hypothesis ; and, in seeking out vibrations which may correspond with the sensations of one sense, he seems to forget that those must be omitted which have been appropriated to another.

Philosophers have accounted in some degree for our various sensations of sound by the vibrations of elastic air ; but it is to be observed, *first*, That we know that such vibrations do really exist ; and, *secondly*, That they tally exactly with the most remarkable phenomena of sound. We cannot, indeed, show how any vibration should produce the sensation of sound. This must be resolved into the will of God, or into some cause altogether unknown. But we know that, as the vibration is strong or weak, the sound is loud or low ; we know that, as the vibration is quick or slow, the sound is acute or grave. We can point out that relation of synchronous vibrations which produces harmony or discord, and that relation of successive vibrations which produces melody ; and all this is not conjectured, but proved by a sufficient induction. This account of sounds, therefore, is philosophical : although, perhaps, there may be many things relating to sound that we cannot account for, and of which the causes remain latent. The connections described in this branch of philosophy are the work of God and not the fancy of men.

If anything similar to this could be shown in accounting for all our sensations by vibrations in the medullary substance of the nerves and brain, it would deserve a place in sound philosophy ; but, when we are told of vibrations in a substance which no man could ever prove to have vibrations, or to be capable of them ; when such imaginary vibrations are brought to account for all our sensations, though we can perceive no correspondence in their variety of kind and degree to the variety of sensations — the connections described in such a system are the creatures of human imagination, not the work of God.

The rays of light make an impression upon the optic nerves, but they make none upon the auditory or olfactory. The vibrations of the air make an impression upon the auditory nerves, but none upon the optic or the olfactory. The effluvia of bodies make an impression upon the olfactory nerves, but make none upon the optic or auditory. No man has been able to give a shadow of reason for this. While this is the case, is it not better to confess our ignor-

ance of the nature of those impressions made upon the nerves and brain in perception, than to flatter our pride with the conceit of knowledge which we have not, and to adulterate philosophy with the spurious brood of hypotheses ?

## CHAPTER 4

### FALSE CONCLUSIONS DRAWN FROM THE IMPRESSIONS BEFORE MENTIONED

SOME philosophers among the ancients, as well as among the moderns, imagined that man is *nothing* but a piece of matter, so curiously organised that the impressions of external objects produce in it sensation, perception, remembrance, and all the other operations we are conscious of. This foolish opinion could only take its rise from observing the constant connection which the Author of Nature hath established between certain impressions made upon our senses and our perception of the objects by which the impression is made ; from which they weakly inferred that those impressions were the proper efficient causes of the corresponding perception.

But no reasoning is more fallacious than this — that, because two things are always conjoined, therefore one must be the cause of the other. Day and night have been joined in a constant succession since the beginning of the world ; but who is so foolish as to conclude from this that day is the cause of night, or night the cause of the following day ? There is indeed nothing more ridiculous than to imagine that any motion or modification of matter should produce thought.

If one should tell of a telescope so exactly made as to have the power of seeing ; of a whispering gallery that had the power of hearing ; of a cabinet so nicely framed as to have the power of memory ; or of a machine so delicate as to feel pain when it was touched — such

absurdities are so shocking to common sense that they would not find belief even among savages ; yet it is the same absurdity to think that the impressions of external objects upon the machine of our bodies can be the real efficient cause of thought and perception.

Passing this, therefore, as a notion too absurd to admit of reasoning, another conclusion very generally made by philosophers is that, in perception, an impression is made upon the mind as well as upon the organ, nerves, and brain. Aristotle, as was before observed,<sup>1</sup> thought that the form or image of the object perceived, enters by the organ of sense and strikes upon the mind. Mr. Hume gives the name of impressions to all our perceptions, to all our sensations, and even to the objects which we perceive.<sup>2</sup> Mr. Locke affirms very positively that the ideas of external objects are produced in our minds by impulse, "that being the only way we can conceive bodies to operate in".<sup>3</sup> It ought, however, to be observed, in justice to Mr. Locke, that he retracted this notion in his first letter to the Bishop of Worcester,<sup>4</sup> and promised, in the next edition of his *Essay*, to have that passage rectified ; but, either from

<sup>1</sup> *Int. Powers*, I. 1 (H. p. 225b).

<sup>2</sup> *V. Treatise*, I. 1 and 2. The statement that Hume gave the name "impression" "even to the objects which we perceive" is a misleading over-simplification. It is certainly true that Hume does maintain such a Berkeleian view (cf. *ib.* I. 4. 5, "that table, which just now appears to me, is only a perception, and all its qualities are qualities of a perception"). On the other hand he elsewhere allows the possibility of objects existing independently of the perceptions which we have, although he asserts that it cannot be proved or even shown to be probable (cf. *ib.* I. 4. 2, *ad fin.*). His general uncertainty of mind on the subject is reflected in the obscure, if not meaningless, statement, "we may suppose, but never can conceive, a specific difference betwixt an object and impression" (*ib.* I. 4. 5).

<sup>3</sup> *Essay*, II. 8. 11.

<sup>4</sup> Reid makes two mistakes here. It was in his third, not his first, letter to the Bishop of Worcester that Locke promised to alter the passage in the next edition of his book. In fact he did so, and the passage which Reid quotes is the corrected version, which appears in the 1699 and all subsequent editions. As the original statement was that bodies produce ideas in us "by impulse and nothing else", the change does not seem great, if indeed a change at all. However Locke explains that as he is now convinced by Newton that bodies can operate on each other at a distance "in the gravitation of matter towards matter by ways inconceivable to me", he must admit that it is "too bold a presumption to limit God's power in this point by my narrow conceptions".

forgetfulness in the author or negligence in the printer, the passage remains in all the subsequent editions I have seen.

There is no prejudice more natural to man than to conceive of the mind as having some similitude to body in its operations. Hence men have been prone to imagine that, as bodies are put in motion by some impulse or impression made upon them by contiguous bodies, so the mind is made to think and to perceive by some impression made upon it, or some impulse given to it by contiguous objects. If we have such a notion of the mind as Homer had of his gods — who might be bruised or wounded with swords and spears — we may then understand what is meant by impressions made upon it by a body ; but, if we conceive the mind to be immaterial — of which I think we have very strong proofs — we shall find it difficult to affix a meaning to *impressions made upon it*.

There is a figurative meaning of impressions on the mind which is well authorised, and of which we took notice in the observations made on that word ;<sup>1</sup> but this meaning applies only to objects that are interesting. To say that an object which I see with perfect indifference makes an impression upon my mind is not, as I apprehend, good English. If philosophers mean no more but that I see the object, why should they invent an improper phrase to express what every man knows how to express in plain English ?

But it is evident, from the manner in which this phrase is used by modern philosophers, that they mean, not barely to express by it my perceiving an object, but to explain the manner of perception. They think that the object perceived acts upon the mind in some way similar to that in which one body acts upon another, by making an impression upon it. The impression upon the mind is conceived to be something wherein the mind is altogether passive, and has some effect produced in it by the object. But this is a hypothesis which contradicts the common sense of mankind, and which ought not to be admitted without proof.

<sup>1</sup> *Int. Powers*, I. 1 (H. p. 228b) ; cf. p. 17.

When I look upon the wall of my room, the wall does not act at all, nor is capable of acting ; the perceiving it is an act or operation in me. That this is the common apprehension of mankind with regard to perception is evident from the manner of expressing it in all languages.

The vulgar give themselves no trouble how they perceive objects — they express what they are conscious of, and they express it with propriety ; but philosophers have an avidity to know how we perceive objects ; and, conceiving some similitude between a body that is put in motion and a mind that is made to perceive, they are led to think that, as the body must receive some impulse to make it move, so the mind must receive some impulse or impression to make it perceive. This analogy seems to be confirmed, by observing that we perceive objects only when they make some impression upon the organs of sense, and upon the nerves and brain ; but it ought to be observed that such is the nature of body that it cannot change its state but by some force impressed upon it. This is not the nature of mind. All that we know about it shows it to be in its nature living and active, and to have the power of perception in its constitution, but still within those limits to which it is confined by the laws of nature.

It appears, therefore, that this phrase of the mind's having impressions made upon it by corporeal objects in perception is either a phrase without any distinct meaning, and contrary to the propriety of the English language, or it is grounded upon an hypothesis which is destitute of proof. On that account, though we grant that in perception there is an impression made upon the organ of sense and upon the nerves and brain, we do not admit that the object makes any impression upon the mind.

There is another conclusion drawn from the impressions made upon the brain in perception, which I conceive to have no solid foundation, though it has been adopted very generally by philosophers. It is that, by the impressions made on the brain, images are formed of the object perceived ; and that the mind, being seated in the brain as its chamber of presence, immediately perceives those images

only, and has no perception of the external object but by them. This notion of our perceiving external objects, not immediately, but in certain images or species of them conveyed by the senses, seems to be the most ancient philosophical hypothesis we have on the subject of perception, and to have with small variations retained its authority to this day.

The notions of the ancients were very various with regard to the seat of the soul. Since it has been discovered, by the improvements in anatomy, that the nerves are the instruments of perception and of the sensations accompanying it, and that the nerves ultimately terminate in the brain, it has been the general opinion of philosophers that the brain is the seat of the soul; and that she perceives the images that are brought there, and external things, only by means of them.

Descartes, observing that the pineal gland is the only part of the brain that is single, all the other parts being double, and thinking that the soul must have one seat, was determined by this to make that gland the soul's habitation, to which, by means of the animal spirits, intelligence is brought of all objects that affect the senses.<sup>1</sup>

Others have not thought proper to confine the habitation of the soul to the pineal gland, but to the brain in general, or to some part of it, which they call the *sensorium*. Even the great Newton favoured this opinion, though he proposes it only as a query, with that modesty which distinguished him no less than his great genius. "Is not", says he, "the sensorium of animals the place where the sentient substance is present, and to which the sensible species of things are brought through the nerves and brain,

<sup>1</sup> It is perfectly true that Descartes maintained this view (*v.* Letter to Meyssonier, *Works*, ed. Adam and Tannery, III. 19), but as he was equally emphatic (*a*) that the mind was an unextended *res cogitans* (*Med.* 2), and (*b*) that the mind is no more connected literally with any one part of the body than any other (*v.* *Reply to 6th Objections*, AT VII. 442<sup>18-20</sup>), the statement that the pineal gland was the seat of the soul should probably be interpreted as meaning only that it was that organ without which no sensible experience of any kind would be possible. "It is necessary that it should be the seat of the *sensus communis*, that is to say of thought, and consequently of the soul" (Letter to Mersenne, AT III. 264<sup>24-25</sup>).

that there they may be perceived by the mind present in that place? And is there not an incorporeal, living, intelligent, and omnipresent Being who, in infinite space, as if it were in his sensorium, intimately perceives things themselves, and comprehends them perfectly, as being present to them; of which things, that principle in us, which perceives and thinks, discerns only in its little sensorium the images brought to it through the organs of the senses?"<sup>1</sup>

His great friend Dr. Samuel Clarke adopted the same sentiment with more confidence. In his papers to Leibniz we find the following passages: "Without being present to the images of the things perceived, it (the soul) could not possibly perceive them. A living substance can only there perceive where it is present, either to the things themselves (as the omnipresent God is to the whole universe) or to the images of things (as the soul of man is in its proper sensory). Nothing can any more act, or be acted upon, where it is not present, than it can be where it is not. We are sure the soul cannot perceive what it is not present to, because nothing can act, or be acted upon, where it is not."<sup>2</sup>

Mr. Locke expresses himself so upon this point, that, for the most part one would imagine that he thought that the ideas, or images of things, which he believed to be the immediate objects of perception are impressions upon the mind itself; yet, in some passages, he rather places them in the brain, and makes them to be perceived by the mind there present. "There are some ideas", says he, "which have admittance only through one sense; and, if the organs or the nerves, which are the conduits to convey them from without to their audience in the brain, the mind's presence room, if I may so call it, are so disordered as not to perform their function, they have no postern to be admitted by."<sup>3</sup>

"There seems to be a constant decay of all our ideas, even of those that are struck deepest. The pictures drawn in our minds are laid in fading colours. Whether the temper of the brain makes this difference, that in some it

<sup>1</sup> *Optics*, Qu. 28, 2nd and subsequent eds.

<sup>2</sup> 2nd Reply to Leibniz, 4.

<sup>3</sup> *Essay*, II. 3. 1.

retains the characters drawn on it like marble, in others like freestone, and in others little better than sand, I shall not inquire."<sup>1</sup>

From these passages of Mr. Locke, and others of a like nature, it is plain that he thought that there are images of external objects conveyed to the brain. But whether he thought with Descartes and Newton, that the images in the brain are perceived by the mind there present,<sup>2</sup> or that they are imprinted on the mind itself, is not so evident.

Now, with regard to this hypothesis, there are three things that deserve to be considered, because the hypothesis leans upon them; and, if any one of them fail, it must fall to the ground. The *first* is, That the soul has its seat, or, as Mr. Locke calls it, its presence room in the brain. The *second*, That there are images formed in the brain of all the objects of sense. The *third*, That the mind or soul perceives these images in the brain; and that it perceives not external<sup>3</sup> objects immediately, but only perceives them by means of those images.

As to the *first* point — that the soul has its seat in the brain — this, surely, is not so well established as that we can safely build other principles upon it. There have been various opinions and much disputation about the place of spirits: whether they have a place; and, if they have, how they occupy that place. After men had fought in the dark about those points for ages, the wiser part seem to have left off disputing about them, as matters beyond the reach of the human faculties.

As to the *second* point — that images of all the objects of sense are formed in the brain — we may venture to affirm that there is no proof nor probability of this, with regard to any of the objects of sense; and that, with regard to the greater part of them, it is words without any meaning.

<sup>1</sup> *Ib.* II. 10. 5.

<sup>2</sup> This is a misinterpretation of Descartes, at least in so far as he remained consistent with his view that mind and body are different and independent substances, and consequently that any interaction between them is strictly impossible. The mind has ideas on the occasion of changes in the brain, but it cannot be said to perceive these changes directly (*v. Notae in Programmata*, AT VIII, B 358-9).

We have not the least evidence that the image of any external object is formed in the brain. The brain has been dissected times innumerable by the nicest anatomists ; every part of it examined by the naked eye, and with the help of microscopes ; but no vestige of an image of any external object was ever found. The brain seems to be the most improper substance that can be imagined for receiving or retaining images, being a soft, moist, medullary substance.

But how are these images formed ? or whence do they come ? Says Mr. Locke, the organs of sense and nerves convey them from without. This is just the Aristotelian hypothesis of sensible species which modern philosophers have been at great pains to refute, and which must be acknowledged to be one of the most unintelligible parts of the Peripatetic system. Those who consider species of colour, figure, sound, and smell, coming from the object, and entering by the organs of sense, as a part of the scholastic jargon long ago discarded from sound philosophy, ought to have discarded images in the brain along with them. There never was a shadow of argument brought by any author to show that an image of any external object ever entered by any of the organs of sense.

That external objects make some impression on the organs of sense, and by them on the nerves and brain, is granted ; but that those impressions resemble the objects they are made by, so as that they may be called images of the objects, is most improbable. Every hypothesis that has been contrived, shows that there can be no such resemblance ; for neither the motions of animal spirits, nor the vibrations of elastic chords, or of elastic ether, or of the infinitesimal particles of the nerves, can be supposed to resemble the objects by which they are excited.

The *third* point in this hypothesis is, That the mind perceives the images in the brain, and external objects only by means of them. This is as improbable as that there are such images to be perceived. If our powers of perception be not altogether fallacious, the objects we perceive are not in our brain but without us We are so far from

perceiving images in the brain that we do not perceive our brain at all ; nor would any man ever have known that he had a brain if anatomy had not discovered, by dissection, that the brain is a constituent part of the human body.<sup>1</sup>

To sum up what has been said with regard to the organs of perception, and the impressions made upon our nerves and brain. It is a law of our nature, established by the will of the Supreme Being, that we perceive no external object but by means of the organs given us for that purpose. But these organs do not perceive. The eye is the organ of sight, but it sees not. A telescope is an artificial organ of sight. The eye is a natural organ of sight, but it sees as little as the telescope. We know how the eye forms a picture of the visible object upon the retina ; but how this picture makes us see the object we know not ; and if experience had not informed us that such a picture is necessary to vision, we should never have known it. We can give no reason why the picture on the retina should be followed by vision, while a like picture on any other part of the body produces nothing like vision.

It is likewise a law of our nature that we perceive not external objects unless certain impressions be made by the object upon the organ, and by means of the organ upon the

<sup>1</sup> Reid's argument here is sound although not in the sense which he intends. His belief that on the image-in-the-brain theory anatomy would be impossible looks plausible because it suggests that the *privacy* of the images is incompatible with the *publicity* of the objects examined by anatomy. But they are incompatible only in the sense that if the data of sense really are private we have no right to suppose that there are any public objects represented by them—*i.e.* the theory is up against the general difficulty of any theory of representative perception. It has no special difficulties of its own, as Reid seems to think. The surgeon, operating on someone else, would be having visual and tactual images in his own brain. If he were justified in believing that these images represented the other person's brain (*i.e.* if the general difficulty were waived), he could infer by analogy that similar images could be obtained by a second surgeon operating on himself—*i.e.* he could infer that he himself had a brain. But to infer that I have a brain is not the same as to infer that all my sense-data are images in my brain ; and it is hard to see, even if the latter were true, what evidence we could have for supposing it to be true. We do not know it by introspection, for there is nothing about sense-data as such which implies or even suggests that they occur in the brain ; the most we could learn by anatomy would be that certain stimulations were accompanied by certain reactions in the brain ; we should therefore have to know it *a priori*.

nerves and brain. But of the nature of those impressions we are perfectly ignorant ; and though they are conjoined with perception by the will of our Maker, yet it does not appear that they have any necessary connection with it in their own nature, far less that they can be the proper efficient cause of it. We perceive, because God has given us the power of perceiving, and not because we have impressions from objects. We perceive nothing without those impressions, because our Maker has limited and circumscribed our powers of perception by such laws of nature as to his wisdom seemed meet, and such as suited our rank in his creation.

## CHAPTER 5

### OF PERCEPTION

IN speaking of the impressions made on our organs in perception, we build upon facts borrowed from anatomy and physiology, for which we have the testimony of our senses. But, being now to speak of perception itself, which is solely an act of the mind, we must appeal to another authority. The operations of our minds are known, not by sense, but by consciousness, the authority of which is as certain and as irresistible as that of sense.

In order, however, to our having a distinct notion of any of the operations of our own minds, it is not enough that we be conscious of them ; for all men have this consciousness. It is further necessary that we attend to them while they are exerted, and reflect upon them with care, while they are recent and fresh in our memory. It is necessary that, by employing ourselves frequently in this way, we get the habit of this attention and reflection ; and, therefore, for the proof of facts which I shall have occasion to mention upon this subject, I can only appeal to the reader's own thoughts, whether such facts are not agreeable to what he is conscious of in his own mind.

If, therefore, we attend to that act of our mind which we call the perception of an external object of sense, we shall find in it these three things : *First*, Some conception or notion of the object perceived ; *secondly*, A strong and irresistible conviction and belief of its present existence ; and, *thirdly*, That this conviction and belief are immediate, and not the effect of reasoning.

*First*, It is impossible to perceive an object without having some notion or conception of that which we perceive. We may, indeed, conceive an object which we do not perceive ; but, when we perceive the object, we must have some conception of it at the same time ; and we have commonly a more clear and steady notion of the object while we perceive it than we have from memory or imagination when it is not perceived. Yet, even in perception the notion which our senses give of the object may be more or less clear, more or less distinct, in all possible degrees.

Thus we see more distinctly an object at a small than at a great distance. An object at a great distance is seen more distinctly in a clear than in a foggy day. An object seen indistinctly with the naked eye, on account of its smallness, may be seen distinctly with a microscope. The objects in this room will be seen by a person in the room less and less distinctly as the light of the day fails ; they pass through all the various degrees of distinctness according to the degrees of the light, and, at last, in total darkness they are not seen at all. What has been said of the objects of sight is so easily applied to the objects of the other senses that the application may be left to the reader.

*Secondly*, In perception we not only have a notion more or less distinct of the object perceived, but also an irresistible conviction and belief of its existence. This is always the case when we are certain that we perceive it. There may be a perception so faint and indistinct as to leave us in doubt whether we perceive the object or not. Thus, when a star begins to twinkle as the light of the sun withdraws, one may, for a short time, think he sees it without being certain, until the perception acquire some strength and steadiness. When a ship just begins to appear in the utmost verge

of the horizon, we may at first be dubious whether we perceive it or not ; but when the perception is in any degree clear and steady, there remains no doubt of its reality ; and when the reality of the perception is ascertained, the existence of the object perceived can no longer be doubted.

By the laws of all nations, in the most solemn judicial trials, wherein men's fortunes and lives are at stake, the sentence passes according to the testimony of eye or ear witnesses of good credit. An upright judge will give a fair hearing to every objection that can be made to the integrity of a witness, and allow it to be possible that he may be corrupted ; but no judge will ever suppose that witnesses may be imposed upon by trusting to their eyes and ears. And if a sceptical counsel should plead against the testimony of the witnesses that they had no other evidence for what they declared but the testimony of their eyes and ears, and that we ought not to put so much faith in our senses as to deprive men of life or fortune upon their testimony, surely no upright judge would admit a plea of this kind. I believe no counsel, however sceptical, ever dared to offer such an argument ; and, if it was offered, it would be rejected with disdain.

Can any stronger proof be given that it is the universal judgment of mankind that the evidence of sense is a kind of evidence which we may securely rest upon in the most momentous concerns of mankind ; that it is a kind of evidence against which we ought not to admit any reasoning ; and, therefore, that to reason either for or against it is an insult to common sense ?

The whole conduct of mankind in the daily occurrences of life, as well as the solemn procedure of judicatories in the trial of causes civil and criminal, demonstrates this. I know only of two exceptions that may be offered against this being the universal belief of mankind.

The first exception is that of some lunatics who have been persuaded of things that seem to contradict the clear testimony of their senses. It is said there have been lunatics and hypochondriacal persons who seriously believed themselves to be made of glass, and, in conse-

quence of this, lived in continual terror of having their brittle frame shivered into pieces.

All I have to say to this is, that our minds in our present state are, as well as our bodies, liable to strange disorders ; and, as we do not judge of the natural constitution of the body from the disorders or diseases to which it is subject from accidents, so neither ought we to judge of the natural powers of the mind from its disorders, but from its sound state.

The other exception that may be made to the principle we have laid down is that of some philosophers who have maintained that the testimony of sense is fallacious, and therefore ought never to be trusted. Perhaps it might be a sufficient answer to this to say that there is nothing so absurd which some philosophers have not maintained. It is one thing to profess a doctrine of this kind, another seriously to believe it, and to be governed by it in the conduct of life. It is evident that a man who did not believe his senses could not keep out of harm's way an hour of his life ; yet, in all the history of philosophy, we never read of any sceptic that ever stepped into fire or water because he did not believe his senses, or that showed in the conduct of life less trust in his senses than other men have. This gives us just ground to apprehend that philosophy was never able to conquer that natural belief which men have in their senses ; and that all their subtle reasonings against this belief were never able to persuade themselves.

It appears, therefore, that the clear and distinct testimony of our senses carries irresistible conviction along with it to every man in his right judgment.

I observed, *thirdly*, That this conviction is not only irresistible, but it is immediate ; that is, it is not by a train of reasoning and argumentation that we come to be convinced of the existence of what we perceive ; we ask no argument for the existence of the object but that we perceive it ; perception commands our belief upon its own authority, and disdains to rest its authority upon any reasoning whatsoever.

The conviction of a truth may be irresistible and yet not immediate. Thus, my conviction that the three angles of every plane triangle are equal to two right angles is irresistible, but it is not immediate ; I am convinced of it by demonstrative reasoning. There are other truths in mathematics of which we have not only an irresistible but an immediate conviction. Such are the axioms. Our belief of the axioms in mathematics is not grounded upon argument — arguments are grounded upon them ; but their evidence is discerned immediately by the human understanding.

The account I have given of our perception of external objects is intended as a faithful delineation of what every man, come to years of understanding and capable of giving attention to what passes in his own mind, may feel in himself. In what manner the notion of external objects, and the immediate belief of their existence, is produced by means of our senses, I am not able to show, and I do not pretend to show. If the power of perceiving external objects in certain circumstances be a part of the original constitution of the human mind, all attempts to account for it will be vain. No other account can be given of the constitution of things but the will of him that made them. As we can give no reason why matter is extended and inert, why the mind thinks and is conscious of its thoughts, but the will of him who made both ; so I suspect we can give no other reason why, in certain circumstances, we perceive external objects, and in others do not.

## CHAPTER 6

### WHAT IT IS TO ACCOUNT FOR A PHENOMENON IN NATURE

AN object placed at a proper distance, and in a good light, while the eyes are shut, is not perceived at all ; but no sooner do we open our eyes upon it than we have, as it

were by inspiration, a certain knowledge of its existence, of its colour, figure, and distance. This is a fact which everyone knows. The vulgar are satisfied with knowing the fact, and give themselves no trouble about the cause of it: but a philosopher is impatient to know how this event is produced, to account for it, or assign its cause.

This avidity to know the causes of things is the parent of all philosophy, true and false. Men of speculation place a great part of their happiness in such knowledge. *Felix qui potuit rerum cognoscere causas* has always been a sentiment of human nature. But, as in the pursuit of other kinds of happiness men often mistake the road, so in none have they more frequently done it than in the philosophical pursuit of the causes of things.

It is a dictate of common sense that the causes we assign of appearances ought to be real and not fictions of human imagination. It is likewise self-evident that such causes ought to be adequate to the effects that are conceived to be produced by them.<sup>1</sup>

That those who are less accustomed to inquiries into the causes of natural appearances may the better understand what it is to show the cause of such appearances, or to account for them, I shall borrow a plain instance of a phenomenon or appearance of which a full and satisfactory account has been given. The phenomenon is this: That a stone, or any heavy body, falling from a height, continually increases its velocity as it descends; so that, if it acquire a certain velocity in one second of time, it will have twice that velocity at the end of two seconds, thrice at the end of three seconds, and so on in proportion to the time. This accelerated velocity in a stone falling must have been observed from the beginning of the world; but the first person, as far as we know, who accounted for it in a proper and philosophical manner was the famous Galileo, after innumerable false and fictitious accounts had been given of it.

He observed that bodies once put in motion continue that motion with the same velocity, and in the same direc-

<sup>1</sup> Cf. p. 34, quotation from Newton.

tion, until they be stopped or retarded, or have the direction of their motion altered, by some force impressed upon them. This property of bodies is called their *inertia*, or inactivity ; for it implies no more than that bodies cannot of themselves change their state from rest to motion, or from motion to rest. He observed also that gravity acts constantly and equally upon a body, and therefore will give equal degrees of velocity to a body in equal times. From these principles, which are known from experience to be fixed laws of nature, Galileo showed that heavy bodies must descend with a velocity uniformly accelerated, as by experience they are found to do.

For if the body by its gravitation acquire a certain velocity at the end of one second, it would, though its gravitation should cease that moment, continue to go on with that velocity ; but its gravitation continues, and will in another second give it an additional velocity equal to that which it gave in the first ; so that the whole velocity at the end of two seconds will be twice as great as at the end of one. In like manner, this velocity being continued through the third second, and having the same addition by gravitation as in any of the preceding, the whole velocity at the end of the third second will be thrice as great as at the end of the first, and so on continually.

We may here observe that the causes assigned of this phenomenon are two : *First*, That bodies once put in motion retain their velocity and their direction until it is changed by some force impressed upon them. *Secondly*, That the weight or gravitation of a body is always the same. These are laws of nature confirmed by universal experience, and therefore are not feigned but true causes. Then, they are precisely adequate to the effect ascribed to them ; they must necessarily produce that very motion in descending bodies which we find to take place ; and neither more nor less. The account, therefore, given of this phenomenon is just and philosophical ; no other will ever be required or admitted by those who understand this.

It ought likewise to be observed that the causes assigned of this phenomenon are things of which we can assign no

cause.<sup>1</sup> Why bodies once put in motion continue to move — why bodies constantly gravitate towards the earth with the same force — no man has been able to show : these are facts confirmed by universal experience, and they must no doubt have a cause ; but their cause is unknown, and we call them laws of nature because we know no cause of them but the will of the Supreme Being.

But may we not attempt to find the cause of gravitation, and of other phenomena, which we call laws of nature ? No doubt we may. We know not the limit which has been set to human knowledge, and our knowledge of the works of God can never be carried too far. But, supposing gravitation to be accounted for by an ethereal elastic medium, for instance, this can only be done, *first*, by proving the existence and the elasticity of this medium ; and, *secondly*, by showing that this medium must necessarily produce that gravitation which bodies are known to have. Until this be done, gravitation is not accounted for, nor is its cause known ; and when this is done, the elasticity of this medium will be considered as a law of nature whose cause is unknown. The chain of natural causes has, not unfitly, been compared to a chain hanging down from heaven : a link that is discovered supports the links below it, but it must itself be supported ; and that which supports it must be supported, until we come to the first link, which is supported by the throne of the Almighty. Every natural cause must have a cause, until we ascend to the first cause, which is uncaused, and operates not by necessity but by will.

By what has been said in this chapter, those who are but little acquainted with philosophical inquiries may see what is meant by accounting for a phenomenon, or showing its cause, which ought to be well understood in order to judge of the theories by which philosophers have attempted to account for our perception of external objects by the senses.

<sup>1</sup> *V.* p. 32 n. 1.

## CHAPTER 7

SENTIMENTS OF PHILOSOPHERS ABOUT THE PERCEPTIONS OF EXTERNAL OBJECTS; AND, FIRST, OF THE THEORY OF FATHER MALEBRANCHE<sup>1</sup>

How the correspondence is carried on between the thinking principle within us and the material world without us has always been found a very difficult problem to those philosophers who think themselves obliged to account for every phenomenon in nature. Many philosophers, ancient and modern, have employed their invention to discover how we are made to perceive external objects by our senses ; and there appears to be a very great uniformity in their sentiments in the main, notwithstanding their variations in particular points.

All philosophers, from Plato to Mr. Hume, agree in this, That we do not perceive external objects immediately, and that the immediate object of perception must be some image present to the mind. So far there appears a unanimity rarely to be found among philosophers on such abstruse points.

If it should be asked whether, according to the opinion of philosophers, we perceive the images or ideas only, and infer the existence and qualities of the external object from what we perceive in the image, or whether we really perceive the external object as well as its image — the answer to this question is not quite obvious.

On the one hand, philosophers, if we except Berkeley and Hume, believe the existence of external objects of sense, and call them objects of perception, though not immediate objects. But what they mean by a mediate object of perception I do not find clearly explained : whether they suit their language to popular opinion, and mean that we perceive external objects in that figurative sense in

<sup>1</sup> Chapters 7-15, which expound and comment on the theories of perception of a number of philosophers, follow no strictly chronological order.

which we say that we perceive an absent friend when we look on his picture ; or whether they mean that, really, and without a figure, we perceive both the external object and its idea in the mind. If the last be their meaning, it would follow that, in every instance of perception, there is a double object perceived : that I perceive, for instance, one sun in the heavens and another in my own mind. But I do not find that they affirm this ; and, as it contradicts the experience of all mankind, I will not impute it to them.

It seems, therefore, that their opinion is, That we do not really perceive the external object, but the internal only ; and that, when they speak of perceiving external objects, they mean it only in a popular or in a figurative sense, as above explained. Several reasons lead me to think this to be the opinion of philosophers, beside what is mentioned above. *First*, If we do really perceive the external object itself, there seems to be no necessity, no use, for an image of it. *Secondly*, Since the time of Descartes, philosophers have very generally thought that the existence of external objects of sense requires proof, and can only be proved from the existence of their ideas. *Thirdly*, The way in which philosophers speak of ideas seems to imply that they are the only objects of perception.

Having endeavoured to explain what is common to philosophers in accounting for our perception of external objects, we shall give some detail of their differences.

The ideas by which we perceive external objects are said by some to be the ideas of the Deity ; but it has been more generally thought that every man's ideas are proper to himself, and are either in his mind or in his *sensorium*, where the mind is immediately present. The *first* is the theory of Malebranche ; the *second* we shall call the common theory.

Malebranche, with a very penetrating genius, entered into a more minute examination of the powers of the human mind than anyone before him. He had the advantage of the discoveries made by Descartes, whom he followed without slavish attachment.

He lays it down as a principle admitted by all philosophers, and which could not be called in question, that we do not perceive external objects immediately, but by means of images or ideas of them present to the mind. "I suppose", says he, "that everyone will grant that we perceive not the objects that are without us immediately, and of themselves. We see the sun, the stars, and an infinity of objects without us; and it is not at all likely that the soul sallies out of the body and, as it were, takes a walk through the heavens, to contemplate all those objects. She sees them not, therefore, by themselves; and the immediate object of the mind, when it sees the sun, for example, is not the sun, but something which is intimately united to the soul; and it is that which I call an idea. So that by the word *idea* I understand nothing else here but that which is the immediate object, or nearest to the mind, when we perceive any object. It ought to be carefully observed that, in order to the mind's perceiving any object, it is absolutely necessary that the idea of that object be actually present to it. Of this it is not possible to doubt. . . . The things which the soul perceives are of two kinds. They are either in the soul or they are without the soul. Those that are in the soul are its own thoughts — that is to say, all its different modifications . . . The soul has no need of ideas for perceiving these things. But with regard to things without the soul, we cannot perceive them but by means of ideas." <sup>1</sup>

Having laid this foundation, as a principle common to all philosophers and which admits of no doubt, he proceeds to enumerate all the possible ways by which the ideas of sensible objects may be presented to the mind: Either, *first*, they come from the bodies which we perceive; or, *secondly*, the soul has the power of producing them in itself; or, *thirdly*, they are produced by the Deity, either in our creation, or occasionally, as there is use for them; or, *fourthly*, the soul has in itself virtually and eminently, as the schools speak, all the perfections which it perceives in bodies; or, *fifthly*, the soul is united with a Being

<sup>1</sup> *Recherche de la Vérité*, III. 2. 1.

possessed of all perfection who has in himself the ideas of all created things.

This he takes to be a complete enumeration of all the possible ways in which the ideas of external objects may be presented to our minds. He employs a whole chapter upon each,<sup>1</sup> refuting the four first, and confirming the last by various arguments. The Deity, being always present to our minds in a more intimate manner than any other being, may, upon occasion of the impressions made on our bodies, discover to us, as far as he thinks proper, and according to fixed laws, his own ideas of the object ; and thus we see all things in God, or in the divine ideas.

However visionary this system may appear on a superficial view, yet, when we consider that he agreed with the whole tribe of philosophers in conceiving ideas to be the immediate objects of perception, and that he found insuperable difficulties, and even absurdities, in every other hypothesis concerning them, it will not appear so wonderful that a man of very great genius should fall into this ; and probably it pleased so devout a man the more, that it sets in the most striking light our dependence upon God and his continual presence with us.

He distinguished, more accurately than any philosopher had done before, the objects which we perceive from the sensations in our own minds, which, by the laws of nature, always accompany the perception of the object. As in many things, so particularly in this, he has great merit. For this, I apprehend, is a key that opens the way to a right understanding, both of our external senses and of other powers of the mind. The vulgar confound sensation with other powers of the mind, and with their objects, because the purposes of life do not make a distinction necessary. The confounding of these in common language has led philosophers, in one period, to make those things external which really are sensations in our own minds ; and in another period, running, as is usual, into the contrary extreme, to make everything almost to be a sensation or feeling in our minds.

<sup>1</sup> *Ib.* III. 2. chs. 2-6.

It is obvious that the system of Malebranche leaves no evidence of the existence of a material world, from what we perceive by our senses ; for the divine ideas, which are the objects immediately perceived, were the same before the world was created. Malebranche was too acute not to discern this consequence of his system, and too candid not to acknowledge it. He fairly owns it, and endeavours to make advantage of it, resting the complete evidence we have of the existence of matter upon the authority of revelation.<sup>1</sup> He shows that the arguments brought by Descartes to prove the existence of a material world, though as good as any that reason could furnish, are not perfectly conclusive ;<sup>2</sup> and though he acknowledges with Descartes that we feel a strong propensity to believe the existence of a material world, yet he thinks this is not sufficient, and that to yield to such propensities without evidence is to expose ourselves to perpetual delusion. He thinks, therefore, that the only convincing evidence we have of the existence of a material world is, that we are assured by revelation that God created the heavens and the earth, and that the Word was made flesh. He is sensible of the ridicule to which so strange an opinion may expose him among those who are guided by prejudice ; but, for the sake of truth, he is willing to bear it. But no author, not even Bishop Berkeley, has shown more clearly that, either upon his own system or upon the common principles of philosophers with regard to ideas, we have no evidence left, either from reason or from our senses, of the existence of a material world. It is no more than justice to Father Malebranche to acknowledge that Bishop Berkeley's arguments are to be found in him in their whole force.

<sup>1</sup> *Sixth Dialogue.*

<sup>2</sup> *Sixth Illustration.*

## CHAPTER 8

OF THE COMMON THEORY OF PERCEPTION ; AND  
OF THE SENTIMENTS OF THE PERIPATETICS,  
AND OF DESCARTES

ARISTOTLE seems to have thought that the soul consists of two parts, or rather that we have two souls — the animal and the rational ; or, as he calls them, the soul and the intellect. To the *first* belong the senses, memory, and imagination ; to the *last*, judgment, opinion, belief, and reasoning. The first we have in common with brute animals ; the last is peculiar to man. The animal soul he held to be a certain form of the body which is inseparable from it, and perishes at death.<sup>1</sup> To this soul the senses belong ; and he defines a sense to be that which is capable of receiving the sensible forms or species of objects, without any of the matter of them ; as wax receives the form of the seal without any of the matter of it. The forms of sound, of colour, of taste, and of other sensible qualities, are, in like manner, received by the senses.

It seems to be a necessary consequence of Aristotle's doctrine that bodies are constantly sending forth, in all directions, as many different kinds of forms without matter as they have different sensible qualities ; for the forms of colour must enter by the eye, the forms of sound by the ear, and so of the other senses. This, accordingly, was maintained by the followers of Aristotle, though not, as far as I know, expressly mentioned by himself. They disputed concerning the nature of those forms of species whether they were real beings or nonentities ; and some held them to be of an intermediate nature between the

<sup>1</sup> Aristotle's doctrine gave the human soul not two but three faculties — vegetable, animal, and rational (*De Anima*, 413 a 20 *seq.*, 414 a 28 *seq.*). Also it was the whole soul, not merely the animal soul, that was the form of the body (*ib.* 412 a 17-21), although it is perhaps somewhat difficult to reconcile this doctrine with Aristotle's view that Intellect (*νοῦς*) is independent of the body (*ib.* 429 a 24 *seq.*), and immortal and eternal (*ib.* 430 a 22).

two. The whole doctrine of the Peripatetics and schoolmen concerning forms, substantial and accidental, and concerning the transmission of sensible species from objects of sense to the mind, if it be at all intelligible, is so far above my comprehension that I should perhaps do it injustice by entering into it more minutely. Malebranche, in his *Recherche de la Vérité*, has employed a chapter to show that material objects do not send forth sensible species of their several sensible qualities.<sup>1</sup>

The great revolution which Descartes produced in philosophy was the effect of a superiority of genius aided by the circumstances of the times. Men had, for more than a thousand years, looked up to Aristotle as an oracle in philosophy. His authority was the test of truth. The small remains of the Platonic system were confined to a few mystics whose principles and manner of life drew little attention. The feeble attempts of Ramus, and of some others, to make improvements in the system had little effect. The Peripatetic doctrines were so interwoven with the whole system of scholastic theology that to dissent from Aristotle was to alarm the Church. The most useful and intelligible parts, even of Aristotle's writings, were neglected, and philosophy was become an art of speaking learnedly and disputing subtly, without producing any invention of use in human life. It was fruitful of words, but barren of works, and admirably contrived for drawing a veil over human ignorance, and putting a stop to the progress of knowledge, by filling men with a conceit that they knew everything. It was very fruitful also in controversies; but, for the most part, they were controversies about words, or about things of no moment, or things above the reach of the human faculties. And the issue of them was what might be expected — that the contending parties fought, without gaining or losing an inch of ground, till they were weary of the dispute, or their attention was called off to some other subject.

Such was the philosophy of the schools of Europe during many ages of darkness and barbarism that succeeded the

<sup>1</sup> *Op. cit.* III. 2. 2.

decline of the Roman empire, so that there was great need of a reformation in philosophy as well as in religion. The light began to dawn at last ; a spirit of inquiry sprang up, and men got the courage to doubt of the dogmas of Aristotle as well as of the decrees of Popes. The most important step in the reformation of religion was to destroy the claim of infallibility, which hindered men from using their judgment in matters of religion ; and the most important step in the reformation of philosophy was to destroy the authority of which Aristotle had so long had peaceable possession. The last had been attempted by Lord Bacon and others with no less zeal than the first by Luther and Calvin.

Descartes knew well the defects of the prevailing system, which had begun to lose its authority. His genius enabled him, and his spirit prompted him, to attempt a new one. He had applied much to the mathematical sciences, and had made considerable improvement in them. He wished to introduce that perspicuity and evidence into other branches of philosophy which he found in them.<sup>1</sup>

Being sensible how apt we are to be led astray by prejudices of education, he thought the only way to avoid error was to resolve to doubt of everything, and hold everything to be uncertain, even those things which he had been taught to hold as most certain, until he had such clear and cogent evidence as compelled his assent.

In this state of universal doubt, that which first appeared to him to be clear and certain was his own existence. Of this he was certain, because he was conscious that he thought, that he reasoned, and that he doubted. He used this argument, therefore, to prove his own existence, *Cogito, ergo sum*. This he conceived to be the first of all truths, the foundation-stone upon which the whole fabric of human knowledge is built, and on which it must rest. And as Archimedes thought that if he had one fixed point to rest his engine upon he could move the earth, so Descartes, charmed with the discovery of one certain principle by which he emerged from the state of universal

<sup>1</sup> Cf. *Discourse on Method*, Pts. 1-2.

doubt, believed that this principle alone would be a sufficient foundation on which he might build the whole system of science. He seems, therefore, to have taken no great trouble to examine whether there might not be other first principles which, on account of their own light and evidence, ought to be admitted by every man of sound judgment. The love of simplicity, so natural to the mind of man, led him to apply the whole force of his mind to raise the fabric of knowledge upon this one principle rather than seek a broader foundation.<sup>1</sup>

Accordingly, he does not admit the evidence of sense to be a first principle, as he does that of consciousness. The arguments of the ancient sceptics here occurred to him, that our senses often deceive us, and therefore ought never to be trusted on their own authority: that, in sleep, we often seem to see and hear things which we are convinced to have had no existence. But that which chiefly led Descartes to think that he ought not to trust to his senses without proof of their veracity was that he took it for granted, as all philosophers had done before him, that he did not perceive external objects themselves, but certain images of them in his own mind, called *ideas*. He was certain, by consciousness, that he had the ideas of sun and moon, earth and sea; but how could he be assured that there really existed external objects like to these ideas?

Hitherto he was uncertain of everything but of his own existence, and the existence of the operations and ideas of his own mind. Some of his disciples, it is said, remained at this stage of his system, and got the name of Egoists. They could not find evidence in the subsequent stages of his progress. But Descartes resolved not to stop here; he endeavoured to prove, by a new argument drawn from

<sup>1</sup> Descartes did not claim to found all knowledge on the single principle of the Cogito, but on it and certain other self-evident principles taken in conjunction. The peculiar importance of the Cogito lay in its being the first *existential* principle. This view is most clearly stated in a letter to Clerselier, written in 1646 (AT IV. 442-7), and he adds "it is not a condition that one should require of the first principle that it should be such that all other propositions can be reduced to or proved by it; it is enough that it should serve as a means of finding several others, and that there should be no other on which it depends, nor any other which one can find earlier than it".

his idea of a Deity, the existence of an infinitely perfect Being who made him and all his faculties. From the perfection of this Being he inferred that he could be no deceiver ; and therefore concluded that his senses, and the other faculties he found in himself, are not fallacious, but may be trusted when a proper use is made of them.

He took it for granted, as the old philosophers had done, that what we immediately perceive must be either in the mind itself or in the brain, to which the mind is immediately present.<sup>1</sup> The impressions made upon our organs, nerves, and brain could be nothing, according to his philosophy, but various modifications of extension, figure, and motion. There could be nothing in the brain like sound or colour, taste or smell, heat or cold ; these are sensations in the mind which, by the laws of the union of soul and body, are raised on occasion of certain traces in the brain ; and although he gives the name of ideas to those traces in the brain, he does not think it necessary that they should be perfectly like to the things which they represent, any more than that words or signs should resemble the things they signify. But, says he, that we may follow the received opinion as far as is possible, we may allow a slight resemblance. Thus we know that a print in a book may represent houses, temples, and groves ; and so far is it from being necessary that the print should be perfectly like the thing it represents, that its perfection often requires the contrary : for a circle must often be represented by an ellipse, a square by a rhombus, and so of other things.

The perceptions of sense, he thought, are to be referred solely to the union of soul and body. They commonly exhibit to us only what may hurt or profit our bodies ; and rarely, and by accident only, exhibit things as they are in themselves. It is by observing this that we must learn to throw off the prejudices of sense, and to attend with our intellect to the ideas which are by nature implanted in it. By this means we shall understand that the nature of matter does not consist in those things that affect our senses,

<sup>1</sup> V. p. 75 n. 2. For Descartes's statement of his theory of perception v. *6th Meditation* and *Treatise on Man*, *passim*.

such as colour, or smell, or taste ; but only in this, that it is something extended in length, breadth, and depth.

The writings of Descartes have, in general, a remarkable degree of perspicuity ; and he undoubtedly intended that, in this particular, his philosophy should be a perfect contrast to that of Aristotle ; yet in what he has said, in different parts of his writings, of our perceptions of external objects there seems to be some obscurity, and even inconsistency ; whether owing to his having had different opinions on the subject at different times, or to the difficulty he found in it, I will not pretend to say.

There are two points, in particular, wherein I cannot reconcile him to himself : the *first*, regarding the place of the ideas or images of external objects, which are the immediate objects of perception ; the *second*, with regard to the veracity of our external senses.

As to the *first*, he sometimes places the ideas of material objects in the brain, not only when they are perceived, but when they are remembered or imagined ; and this has always been held to be the Cartesian doctrine ; yet he sometimes says that we are not to conceive the images or traces in the brain to be perceived as if there were eyes in the brain ; these traces are only occasions on which, by the laws of the union of soul and body, ideas are excited in the mind ; and, therefore, it is not necessary that there should be an exact resemblance between the traces and the things represented by them, any more than that words or signs should be exactly like the things signified by them.

These two opinions, I think, cannot be reconciled. For, if the images or traces in the brain are perceived, they must be the objects of perception, and not the occasions of it only. On the other hand, if they are only the occasions of our perceiving, they are not perceived at all. Descartes seems to have hesitated between the two opinions, or to have passed from the one to the other.<sup>1</sup>

<sup>1</sup> This objection rests on a misunderstanding of Descartes's use of the term "idea", which in addition to meaning the object of an act of cognition, also means in certain contexts the physiological condition in the brain which causes, or more strictly accompanies, an idea in the first sense. For Descartes's account of "idea" as a trace in the brain *v. Treatise on Man*, esp. AT XI. pp. 174 *seq.*

The *second* point on which Descartes seems to waver is with regard to the credit that is due to the testimony of our senses.

Sometimes, from the perfection of the Deity, and his being no deceiver, he infers that our senses and our other faculties cannot be fallacious ; and since we seem clearly to perceive that the idea of matter comes to us from things external, which it perfectly resembles, therefore we must conclude that there really exists something extended in length, breadth, and depth, having all the properties which we clearly perceive to belong to an extended thing.

At other times we find Descartes and his followers making frequent complaints, as all the ancient philosophers did, of the fallacies of sense. He warns us to throw off its prejudices, and to attend only with our intellect to the ideas implanted there. By this means we may perceive that the nature of matter does not consist in hardness, colour, weight, or any of those things that affect our senses, but in this only, that it is something extended in length, breadth, and depth. The senses, he says, are only relative to our present state ; they exhibit things only as they tend to profit or to hurt us, and rarely, and by accident only, as they are in themselves.

It was probably owing to an aversion to admit anything into philosophy of which we have not a clear and distinct conception, that Descartes was led to deny that there is any substance of matter distinct from those qualities of it which we perceive. We say that matter is something extended, figured, movable. Extension, figure, mobility, therefore, are not matter, but qualities belonging to this something which we call *matter*. Descartes could not relish this obscure *something* which is supposed to be the subject or *substratum* of those qualities, and, therefore, maintained that extension is the very essence of matter. But, as we must ascribe extension to space as well as to matter, he found himself under a necessity of holding that space and matter are the same thing, and differ only in our way of conceiving them ; so that, wherever there is space there is matter, and no void left in the universe. The necessary

consequence of this is, that the material world has no bounds nor limits. He did not, however, choose to call it infinite, but indefinite.

It was probably owing to the same cause that Descartes made the essence of the soul to consist in thought. He would not allow it to be an unknown something that has the power of thinking ; it cannot, therefore, be without thought ; and, as he conceived that there can be no thought without ideas, the soul must have had ideas in its first formation, which, of consequence, are innate.

The triumph of the Cartesian system over that of Aristotle is one of the most remarkable revolutions in the history of philosophy. The authority of Aristotle was now no more. That reverence for hard words and dark notions, by which men's understanding had been strangled in early years, was turned into contempt, and everything suspected which was not clearly and distinctly understood. This is the spirit of the Cartesian philosophy, and is a more important acquisition to mankind than any of its particular tenets ; and for exerting this spirit so zealously, and spreading it so successfully, Descartes deserves immortal honour.

It is to be observed, however, that Descartes rejected a part only of the ancient theory, concerning the perception of external objects by the senses, and that he adopted the other part. That theory may be divided into two parts : the *first*, That images, species, or forms of external objects, come from the object, and enter by the avenues of the senses to the mind ; the *second* part is, That the external object itself is not perceived, but only the species or image of it in the mind. The first part Descartes and his followers rejected, and refuted by solid arguments ; but the second part neither he nor his followers have thought of calling in question, being persuaded that it is only a representative image in the mind of the external object that we perceive, and not the object itself. And this image, which the Peripatetics called a species, he calls an idea, changing the name only, while he admits the thing.

It seems strange that the great pains which this philo-

sopher took to throw off the prejudices of education, to dismiss all his former opinions, and to assent to nothing till he found evidence that compelled his assent, should not have led him to doubt of this opinion of the ancient philosophy. It is evidently a philosophical opinion ; for the vulgar undoubtedly believe that it is the external object which we immediately perceive, and not a representative image of it only. It is for this reason that they look upon it as perfect lunacy to call in question the existence of external objects.

It seems to be admitted as a first principle, by the learned and the unlearned, that what is really perceived must exist, and that to perceive what does not exist is impossible. So far the unlearned man and the philosopher agree. The unlearned man says : I perceive the external object, and I perceive it to exist. Nothing can be more absurd than to doubt of it. The Peripatetic says : What I perceive is the very identical form of the object, which came immediately from the object, and makes an impression upon my mind as a seal does upon wax ; and, therefore, I can have no doubt of the existence of an object whose form I perceive. But what says the Cartesian ? I perceive not, says he, the external object itself. So far he agrees with the Peripatetic, and differs from the unlearned man. But I perceive an image, or form, or idea, in my own mind or in my brain. I am certain of the existence of the idea because I immediately perceive it. But how this idea is formed, or what it represents, is not self-evident ; and therefore I must find arguments by which, from the existence of the idea which I perceive, I can infer the existence of an external object which it represents.

As I take this to be a just view of the principles of the unlearned man, of the Peripatetic, and of the Cartesian, so I think they all reason consequentially from their several principles : that the Cartesian has strong grounds to doubt of the existence of external objects ; the Peripatetic very little ground of doubt ; and the unlearned man none at all : and that the difference of their situation arises from this — that the unlearned man has no hypothesis ; the Peri-

patetic leans upon an hypothesis ; and the Cartesian upon one half of that hypothesis.

Descartes, according to the spirit of his own philosophy, ought to have doubted of both parts of the Peripatetic hypothesis, or to have given his reasons why he adopted one part, as well as why he rejected the other part ; especially since the unlearned, who have the faculty of perceiving objects by their senses in no less perfection than philosophers, and should, therefore, know, as well as they, what it is they perceive, have been unanimous in this, that the objects they perceive are not ideas in their own minds but things external. It might have been expected that a philosopher who was so cautious as not to take his own existence for granted without proof, would not have taken it for granted without proof that everything he perceived was only ideas in his own mind.

But, if Descartes made a rash step in this, as I apprehend he did, he ought not to bear the blame alone. His successors have still continued in the same track, and, after his example, have adopted one part of the ancient theory — to wit, that the objects we immediately perceive are ideas only. All their systems are built on this foundation.

## CHAPTER 9

### OF THE SENTIMENTS OF MR. LOCKE

THE reputation which Locke's *Essay on Human Understanding* had at home from the beginning, and which it has gradually acquired abroad, is a sufficient testimony of its merit. There is, perhaps, no book of the metaphysical kind that has been so generally read by those who understand the language, or that is more adapted to teach men to think with precision, and to inspire them with that candour and love of truth which is the genuine spirit of philosophy. He gave, I believe, the first example in the

English language of writing on such abstract subjects, with a remarkable degree of simplicity and perspicuity; and in this he has been happily imitated by others that came after him. No author hath more successfully pointed out the danger of ambiguous words, and the importance of having distinct and determinate notions in judging and reasoning. His observations on the various powers of the human understanding, on the use and abuse of words, and on the extent and limits of human knowledge, are drawn from attentive reflection on the operations of his own mind, the true source of all real knowledge on these subjects; and show an uncommon degree of penetration and judgment. But he needs no panegyric of mine, and I mention these things only that, when I have occasion to differ from him, I may not be thought insensible of the merit of an author whom I highly respect, and to whom I owe my first lights in those studies, as well as my attachment to them.

He sets out in his essay with a full conviction, common to him with other philosophers, that ideas in the mind are the objects of all our thoughts in every operation of the understanding. This leads him to use the word *idea* so very frequently, beyond what was usual in the English language, that he thought it necessary, in his introduction, to make this apology: "It being that term", says he, "which, I think, serves best to stand for whatsoever is the object of understanding when a man thinks, I have used it to express whatever is meant by phantasm, notion, species, or whatever it is which the mind can be employed about in thinking; and I could not avoid frequently using it. I presume it will be granted me that there are such ideas in men's minds; every man is conscious of them in himself, and men's words and actions will satisfy him that they are in others."<sup>1</sup>

Speaking of the reality of our knowledge, he says, "It is evident the mind knows not things immediately, but only by the intervention of the ideas it has of them. Our knowledge, therefore, is real only so far as there is a con-

<sup>1</sup> *Essay*, I. 1. 8.

formity between our ideas and the reality of things. But what shall be here the criterion? How shall the mind, when it perceives nothing but its own ideas, know that they agree with things themselves? This, though it seems not to want difficulty, yet, I think, there be two sorts of ideas that we may be assured agree with things.”<sup>1</sup>

We see that Mr. Locke was aware, no less than Descartes, that the doctrine of ideas made it necessary, and at the same time difficult, to prove the existence of a material world without us; because the mind, according to that doctrine, perceives nothing but a world of ideas in itself. Not only Descartes, but Malebranche, Arnauld, and Norris, had perceived this difficulty, and attempted to remove it with little success. Mr. Locke attempts the same thing; but his arguments are feeble. He even seems to be conscious of this; for he concludes his reasoning with this observation: “That we have evidence sufficient to direct us in attaining the good and avoiding the evil, caused by external objects, and that this is the important concern we have in being made acquainted with them.”<sup>2</sup> This, indeed, is saying no more than will be granted by those who deny the existence of a material world.

As there is no material difference between Locke and Descartes with regard to the perception of objects by the senses, there is the less occasion, in this place, to take notice of all their differences in other points. They differed about the origin of our ideas. Descartes thought some of them were innate; the other maintained that there are no innate ideas, and that they are all derived from two sources — to wit, *sensation* and *reflection*; meaning, by sensation, the operations of our external senses; and, by reflection, that attention which we are capable of giving to the operations of our own minds.

They differed with regard to the essence both of matter and of mind: the British philosopher holding that the real essence of both is beyond the reach of human knowledge; the other conceiving that the very essence of mind consists in thought, and that of matter in extension, by which he

<sup>1</sup> *Essay*, IV. 4. 3.

<sup>2</sup> *Id.* IV. 11. 8.

made matter and space not to differ in reality, and no part of space to be void of matter.

Mr. Locke explained, more distinctly than had been done before, the operations of the mind in classing the various objects of thought, and reducing them to genera and species. He was the first, I think, who distinguished in substances what he calls the nominal essence — which is only the notion we form of a genus or species, and which we express by a definition — from the real essence or internal constitution of the thing, which makes it to be what it is. Without this distinction, the subtle disputes which tortured the schoolmen for so many ages, in the controversy between the nominalists and realists, could never be brought to an issue. He shows distinctly how we form abstract and general notions, and the use and necessity of them in reasoning. And as (according to the received principles of philosophers) every notion of our mind must have for its object an idea in the mind itself, he thinks that we form abstract ideas by leaving out of the idea of an individual everything where it differs from other individuals of the same species or genus; and that this power of forming abstract ideas is that which chiefly distinguishes us from brute animals, in whom he could see no evidence of any abstract ideas.

Since the time of Descartes, philosophers have differed much with regard to the share they ascribe to the mind itself, in the fabrication of those representative beings called *ideas*, and the manner in which this work is carried on.

Mr. Locke ascribes to the mind a very considerable hand in forming its own ideas. With regard to our sensations, the mind is passive, “they being produced in us, only by different degrees and modes of motion in our animal spirits, variously agitated by external objects”.<sup>1</sup> These, however, cease to be as soon as they cease to be perceived; but, by the faculties of memory and imagination, “the mind has an ability, when it wills, to revive them again, and, as it were, to paint them anew upon itself, though some with more, some with less difficulty”.<sup>2</sup>

<sup>1</sup> Cf. *ib.* II. 8. 12.

<sup>2</sup> *Ib.* II. 10. 2.

As to the ideas of reflection, he ascribes them to no other cause but to that attention which the mind is capable of giving to its own operations. These, therefore, are formed by the mind itself. He ascribes likewise to the mind the power of compounding its simple ideas into complex ones of various forms ; of repeating them, and adding the repetitions together ; of dividing and classing them ; of comparing them, and, from that comparison, of forming the ideas of their relation ; nay, of forming a general idea of a species or genus, by taking from the idea of an individual everything by which it is distinguished from other individuals of the kind, till at last it becomes an abstract general idea, common to all the individuals of the kind.

These, I think, are the powers which Mr. Locke ascribes to the mind itself in the fabrication of its ideas. Bishop Berkeley, as we shall see afterwards, abridged them considerably, and Mr. Hume much more.<sup>1</sup>

The ideas we have of the various qualities of bodies are not all, as Mr. Locke thinks, of the same kind. Some of them are images or resemblances of what is really in the body ; others are not. There are certain qualities inseparable from matter ; such as extension, solidity, figure, mobility. Our ideas of these are real resemblances of the qualities in the body ; and these he calls primary qualities. But colour, sound, taste, smell, heat, and cold, he calls secondary qualities, and thinks that they are only powers in bodies of producing certain sensations in us ; which sensations have nothing resembling them, though they are commonly thought to be exact resemblances of something in the body. " Thus," says he, " the idea of heat or light, which we receive, by our eye or touch, from the sun, are commonly thought real qualities existing in the sun, and something more than mere powers in it." <sup>2</sup>

The names of primary and secondary qualities were, I believe, first used by Mr. Locke ; but the distinction which they express was well understood by Descartes, and is explained by him in his *Principia*, Pt. I. §§ 69, 70, 71.

<sup>1</sup> *V. infra*, Chapters 10-12.

<sup>2</sup> *Essay*, II. 8. 24.

Although no author has more merit than Mr. Locke in pointing out the ambiguity of words, and resolving, by that means, many knotty questions which had tortured the wits of the schoolmen, yet, I apprehend, he has been sometimes misled by the ambiguity of the word *idea*, which he uses so often almost in every page of his essay.

In the explication given of this word we took notice of two meanings given to it—a popular and a philosophical.<sup>1</sup> In the popular meaning, to have an idea of anything signifies nothing more than to think of it.

But there is another meaning of the word *idea* peculiar to philosophers, and grounded upon a philosophical theory, which the vulgar never think of. Philosophers, ancient and modern, have maintained that the operations of the mind, like the tools of an artificer, can only be employed upon objects that are present in the mind, or in the brain, where the mind is supposed to reside. Therefore, objects that are distant in time or place must have a representative in the mind or in the brain—some image or picture of them which is the object that the mind contemplates. This representative image was, in the old philosophy, called a *species* or *phantasm*. Since the time of Descartes it has more commonly been called an *idea*, and every thought is conceived to have an idea of its object. As this has been a common opinion among philosophers as far back as we can trace philosophy, it is the less to be wondered at that they should be apt to confound the operation of the mind in thinking with the idea or object of thought, which is supposed to be its inseparable concomitant.

If we pay any regard to the common sense of mankind, thought and the object of thought are different things, and ought to be distinguished. It is true, thought cannot be without an object—for every man who thinks must think of something; but the object he thinks of is one thing, his thought of that object is another thing.<sup>2</sup> They are

<sup>1</sup> P. 12: cf. p. 13 n. 1.

<sup>2</sup> Reid elaborates this point more fully, pp. 244 *seq.*, where he argues that, although thought requires an object, that object need not exist. *V.* p. 243 n.

distinguished in all languages, even by the vulgar ; and many things may be affirmed of thought — that is, of the operation of the mind in thinking — which cannot, without error, and even absurdity, be affirmed of the object of that operation.

From this, I think, it is evident that if the word *idea*, in a work where it occurs in every paragraph, is used without any intimation of the ambiguity of the word, sometimes to signify thought or the operation of the mind in thinking, sometimes to signify those internal objects of thought which philosophers suppose, this must occasion confusion in the thoughts both of the author and of the readers. I take this to be the greatest blemish in the *Essay on Human Understanding*. I apprehend this is the true source of several paradoxical opinions in that excellent work which I shall have occasion to take notice of.

Here it is very natural to ask whether it was Mr. Locke's opinion that ideas are the only objects of thought, or whether it is not possible for men to think of things which are not ideas in the mind.

To this question it is not easy to give a direct answer. On the one hand, he says often, in distinct and studied expressions, that the term *idea* stands for whatever is the object of the understanding when a man thinks, or whatever it is which the mind can be employed about in thinking : that the mind perceives nothing but its own ideas : that all knowledge consists in the perception of the agreement or disagreement of our ideas : that we can have no knowledge further than we have ideas. These,<sup>1</sup> and many other expressions of the like import, evidently imply that every object of thought must be an idea, and can be nothing else.

On the other hand, I am persuaded that Mr. Locke would have acknowledged that we may think of Alexander the Great, or of the planet Jupiter, and of numberless things which he would have owned are not ideas in the mind, but objects which exist independent of the mind that thinks of them.

<sup>1</sup> Cf. *Essay*, I. 1. 8, IV. 1. 1-2, 3. 1.

How shall we reconcile the two parts of this apparent contradiction? All I am able to say, upon Mr. Locke's principles, to reconcile them is this, That we cannot think of Alexander, or of the planet Jupiter, unless we have in our minds an idea — that is, an image or picture of those objects. The idea of Alexander is an image, or picture, or representation of that hero in my mind; and this idea is the immediate object of my thought when I think of Alexander. That this was Locke's opinion, and that it has been generally the opinion of philosophers, there can be no doubt.

But, instead of giving light to the question proposed, it seems to involve it in greater darkness.

When I think of Alexander, I am told there is an image or idea of Alexander in my mind which is the immediate object of this thought. The necessary consequence of this seems to be that there are two objects of this thought — the idea, which is in the mind, and the person represented by that idea: the first, the immediate object of the thought; the last, the object of the same thought, but not the immediate object. This is a hard saying; for it makes every thought of things external to have a double object. Every man is conscious of his thoughts, and yet, upon attentive reflection, he perceives no such duplicity in the object he thinks about. Sometimes men see objects double, but they always know when they do so: and I know of no philosopher who has expressly owned this duplicity in the object of thought, though it follows necessarily from maintaining that, in the same thought, there is one object that is immediate and in the mind itself, and another object which is not immediate, and which is not in the mind.

Besides this, it seems very hard, or rather impossible, to understand what is meant by an object of thought that is not an immediate object of thought. A body in motion may move another that was at rest, by the medium of a third body that is interposed. This is easily understood; but we are unable to conceive any medium interposed between a mind and the thought of that mind; and to think of any object by a medium seems to be words without

any meaning. There is a sense in which a thing may be said to be perceived by a medium. Thus any kind of sign may be said to be the medium by which I perceive or understand the thing signified. The sign by custom, or compact, or perhaps by nature, introduces the thought of the thing signified. But here the thing signified, when it is introduced to the thought, is an object of thought no less immediate than the sign was before. And there are here two objects of thought, one succeeding another, which we have shown is not the case with respect to an idea and the object it represents.

I apprehend, therefore, that if philosophers will maintain that ideas in the mind are the only immediate objects of thought, they will be forced to grant that they are the sole objects of thought, and that it is impossible for men to think of anything else. Yet surely Mr. Locke believed that we can think of many things that are not ideas in the mind ; but he seems not to have perceived that the maintaining that ideas in the mind are the only immediate objects of thought, must necessarily draw this consequence along with it.

The consequence, however, was seen by Bishop Berkeley and Mr. Hume,<sup>1</sup> who rather chose to admit the consequence than to give up the principle from which it follows.

Perhaps it was unfortunate for Mr. Locke that he used the word *idea* so very frequently as to make it very difficult to give the attention necessary to put it always to the same meaning. And it appears evident that, in many places, he means nothing more by it but the notion or conception we have of any object of thought ; that is, the act of the mind in conceiving it, and not the object conceived.

In explaining this word, he says that he uses it for whatever is meant by phantasm, notion, species.<sup>2</sup> Here are three synonyms to the word *idea*. The first and last are very proper to express the philosophical meaning of the word, being terms of art in the Peripatetic philosophy, and signifying images of external things in the mind,

<sup>1</sup> *V. Principles*, 18 seq. ; *Treatise*, I. 4. 2.

<sup>2</sup> *Essay*, I. 1. 8.

which, according to that philosophy, are objects of thought. But the word *notion* is a word in common language whose meaning agrees exactly with the popular meaning of the word *idea*, but not with the philosophical.<sup>1</sup>

When these two different meanings of the word *idea* are confounded in a studied explication of it, there is little reason to expect that they should be carefully distinguished in the frequent use of it. There are many passages in the *Essay* in which, to make them intelligible, the word *idea* must be taken in one of those senses, and many others in which it must be taken in the other. It seems probable that the author, not attending to this ambiguity of the word, used it in the one sense or the other, as the subject-matter required; and the far greater part of his readers have done the same.

There is a third sense in which he uses the word not unfrequently to signify objects of thought that are not in the mind, but external. Of this he seems to be sensible, and somewhere makes an apology for it.<sup>2</sup> When he affirms, as he does in innumerable places, that all human knowledge consists in the perception of the agreement or disagreement of our ideas, it is impossible to put a meaning upon this, consistent with his principles, unless he means by ideas every object of human thought, whether mediate or immediate; everything, in a word, that can be signified by the subject or predicate of a proposition.

Thus, we see that the word *idea* has three different meanings in the *Essay*; and the author seems to have used it sometimes in one, sometimes in another, without being aware of any change in the meaning. The reader slides easily into the same fallacy, that meaning occurring

<sup>1</sup> "Notion" was also a philosophical term, currently used as equivalent to "general idea" or "meaning" (cf. Sergeant, *Solid Philosophy*). By Berkeley it was put to a special use, to indicate anything that could not be an idea — i.e. minds, which could not be ideas or be known by ideas, because they are active and ideas passive, and relations, which are not objects discovered in experience at all, but are superimposed on what is given in experience by the activity of the mind (v. *Principles*, 27, 89, 135-42). For an account of the change in Berkeley's theory of notions v. G. A. Johnston, *The Development of Berkeley's Philosophy*, pp. 161 seq.

<sup>2</sup> *Essay*, II. 8. 8, 31. 2.

most readily to his mind which gives the best sense to what he reads. I have met with persons professing no slight acquaintance with the *Essay on Human Understanding* who maintained that the word *idea*, wherever it occurs, means nothing more than thought; and that, where he speaks of ideas as images in the mind, and as objects of thought, he is not to be understood as speaking properly, but figuratively or analogically. And, indeed, I apprehend that it would be no small advantage to many passages in the book if they could admit of this interpretation.

It is not the fault of this philosopher alone to have given too little attention to the distinction between the operations of the mind and the objects of those operations. Although this distinction be familiar to the vulgar, and found in the structure of all languages, philosophers, when they speak of ideas, often confound the two together; and their theory concerning ideas has led them to do so; for ideas, being supposed to be a shadowy kind of beings intermediate between the thought and the object of thought, sometimes seem to coalesce with the thought, sometimes with the object of thought, and sometimes to have a distinct existence of their own.

However improbable it may appear that philosophers who have taken pains to study the operations of their own minds should express them less properly and less distinctly than the vulgar, it seems really to be the case; and the only account that can be given of this strange phenomenon, I take to be this: that the vulgar seek no theory to account for the operations of their minds; they know that they see, and hear, and remember, and imagine; and those who think distinctly will express these operations distinctly, as their consciousness represents them to the mind; but philosophers think they ought to know not only that there are such operations, but how they are performed; how they see, and hear, and remember, and imagine; and, having invented a theory to explain these operations, by ideas or images in the mind, they suit their expressions to their theory; and, as a false comment throws a cloud

upon the text, so a false theory darkens the phenomena which it attempts to explain.

We shall examine this theory afterwards.<sup>1</sup> Here I would only observe that, if it is not true, it may be expected that it should lead ingenious men who adopt it to confound the operations of the mind with their objects, and with one another, even where the common language of the unlearned clearly distinguishes them. One that trusts to a false guide is in greater danger of being led astray than he who trusts his own eyes, though he should be but indifferently acquainted with the road.

## CHAPTER 10

### OF THE SENTIMENTS OF BISHOP BERKELEY

GEORGE BERKELEY, afterwards Bishop of Cloyne, published his *New Theory of Vision* in 1709, his *Treatise concerning the Principles of Human Knowledge* in 1710, and his *Dialogues between Hylas and Philonous* in 1713, being then a Fellow of Trinity College, Dublin. He is acknowledged universally to have great merit, as an excellent writer, and a very acute and clear reasoner on the most abstract subjects, not to speak of his virtues as a man, which were very conspicuous : yet the doctrine chiefly held forth in the treatises above mentioned, especially in the two last, has generally been thought so very absurd that few can be brought to think that he either believed it himself or that he seriously meant to persuade others of its truth.

He maintains, and thinks he has demonstrated, by a variety of arguments grounded on principles of philosophy universally received, that there is no such thing as matter in the universe ; that sun and moon, earth and sea, our own bodies, and those of our friends, are nothing but ideas

<sup>1</sup> Pp. 134 *seq.*

in the minds of those who think of them, and that they have no existence when they are not the objects of thought; that all that is in the universe may be reduced to two categories — to wit, minds, and ideas in the mind.

But, however absurd this doctrine might appear to the unlearned, who consider the existence of the objects of sense as the most evident of all truths, and what no man in his senses can doubt, the philosophers who had been accustomed to consider ideas as the immediate objects of all thought had no title to view this doctrine of Berkeley in so unfavourable a light.

They were taught by Descartes, and by all that came after him, that the existence of the objects of sense is not self-evident, but requires to be proved by arguments; and although Descartes, and many others, had laboured to find arguments for this purpose, there did not appear to be that force and clearness in them which might have been expected in a matter of such importance. Mr. Norris had declared that, after all the arguments that had been offered, the existence of an external world is only probable, but by no means certain.<sup>1</sup> Malebranche thought it rested upon the authority of revelation, and that the arguments drawn from reason were not perfectly conclusive.<sup>2</sup> Others thought that the argument from revelation was a mere sophism, because revelation comes to us by our senses, and must rest upon their authority.

Thus we see that the new philosophy had been making gradual approaches towards Berkeley's opinion; and, whatever others might do, the philosophers had no title to look upon it as absurd, or unworthy of a fair examination. Several authors attempted to answer his arguments, but with little success, and others acknowledged that they could neither answer them nor assent to them. It is probable the Bishop made but few converts to his doctrine; but it is certain he made some; and that he himself continued, to the end of his life, firmly persuaded, not only of

<sup>1</sup> J. Norris, *Essay towards the Theory of the Ideal or Intelligible World*, Pt. I. ch. 4.

<sup>2</sup> *Sixth Illustration*.

its truth, but of its great importance for the improvement of human knowledge, and especially for the defence of religion. *Dial. Pref.* : " If the principles which I here endeavour to propagate, are admitted for true, the consequences which I think evidently flow from thence are, that atheism and scepticism will be utterly destroyed, many intricate points made plain, great difficulties solved, several useless parts of science retrenched, speculation referred to practice, and men reduced from paradoxes to common sense ".

In the *Theory of Vision* he goes no further than to assert that the objects of sight are nothing but ideas in the mind, granting, or at least not denying, that there is a tangible world, which is really external, and which exists whether we perceive it or not. Whether the reason of this was that his system had not, at that time, wholly opened to his own mind, or whether he thought it prudent to let it enter into the minds of his readers by degrees, I cannot say. I think he insinuates the last as the reason in the *Principles of Human Knowledge*.

In the new philosophy the pillars by which the existence of a material world was supported were so feeble that it did not require the force of a Samson to bring them down ; and in this we have not so much reason to admire the strength of Berkeley's genius as his boldness in publishing to the world an opinion which the unlearned would be apt to interpret as the sign of a crazy intellect. A man who was firmly persuaded of the doctrine universally received by philosophers concerning ideas, if he could but take courage to call in question the existence of a material world, would easily find unanswerable arguments in that doctrine. " Some truths there are," says Berkeley, " so near and obvious to the mind, that a man need only open his eyes to see them. Such ", he adds, " I take this important one to be, that all the choir of heaven, and furniture of the earth — in a word, all those bodies which compose the mighty frame of the world — have not any subsistence without a mind " (*Princ.* § 6).

The principle from which this important conclusion is

obviously deduced, is laid down in the first sentence of his principles of knowledge, as evident; and, indeed, it has always been acknowledged by philosophers. "It is evident", says he, "to anyone who takes a survey of the objects of human knowledge, that they are either ideas actually imprinted on the senses, or else such as are perceived, by attending to the passions and operations of the mind; or, lastly, ideas formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the foresaid ways."

This is the foundation on which the whole system rests. If this be true, then, indeed, the existence of a material world must be a dream that has imposed upon all mankind *from the beginning of the world*.

The foundation on which such a fabric rests ought to be very solid and well established; yet Berkeley says nothing more for it than that it is evident. If he means that it is self-evident, this indeed might be a good reason for not offering any direct argument in proof of it. But I apprehend this cannot justly be said. Self-evident propositions are those which appear evident to every man of sound understanding who apprehends the meaning of them distinctly, and attends to them without prejudice.<sup>1</sup> Can this be said of this proposition, That all the objects of our knowledge are ideas in our own minds? I believe that, to any man uninstructed in philosophy, this proposition will appear very improbable, if not absurd. However scanty his knowledge may be, he considers the sun and moon, the earth and sea, as objects of it; and it will be difficult to persuade him that those objects of his knowledge are ideas in his own mind, and have no existence when he does not think of them. If I may presume to speak my own sentiments, I once believed this doctrine

<sup>1</sup> The definition which Reid gives here of self-evident propositions, when taken with the fuller account in Essay VI, Chapters 4-6, makes it clear that a self-evident proposition was not a necessary truth (cf. p. 373) but a proposition which to common sense was obviously true — i.e. although it was logically possible for it to be false, nobody could seriously bring himself to disbelieve it. *V.* p. 25 n.

of ideas so firmly as to embrace the whole of Berkeley's system in consequence of it; till, finding other consequences to follow from it, which gave me more uneasiness than the want of a material world, it came into my mind, more than forty years ago, to put the question, What evidence have I for this doctrine, that all the objects of my knowledge are ideas in my own mind? From that time to the present I have been candidly and impartially, as I think, seeking for the evidence of this principle, but can find none, excepting the authority of philosophers.<sup>1</sup>

We shall have occasion to examine its evidence afterwards.<sup>2</sup> I would at present only observe that all the arguments brought by Berkeley against the existence of a material world are grounded upon it, and that he has not attempted to give any evidence for it, but takes it for granted, as other philosophers had done before him.

But, supposing this principle to be true, Berkeley's system is impregnable. No demonstration can be more evident than his reasoning from it. Whatever is perceived is an idea, and an idea can only exist in a mind. It has no existence when it is not perceived; nor can there be anything like an idea, but an idea.

So sensible he was that it required no laborious reasoning to deduce his system from the principle laid down, that he was afraid of being thought needlessly prolix in handling the subject, and makes an apology for it (*Princ.* § 22). "To what purpose is it", says he, "to dilate upon that which may be demonstrated, with the utmost evidence, in a line or two, to anyone who is capable of the least reflection?" But, though his demonstration might have been

<sup>1</sup> It was the publication in 1739 of Hume's *Treatise on Human Nature* that first set Reid questioning Berkeley's principles. The result of this questioning was the composition of Reid's *Inquiry into the Human Mind*, published in 1763, and intended as a counterblast to Hume. "The ingenious author [Hume] of that treatise upon the principles of Locke — who was no sceptic — hath built a system of scepticism, which leaves no ground to believe any one thing rather than its contrary. His reasoning appeared to me to be just; there was, therefore, a necessity to call in question the principles upon which it was founded, or to admit the conclusion" (from the Dedication to the *Inquiry*).

<sup>2</sup> Pp. 134 *seq.*

comprehended in a line or two, he very prudently thought that an opinion which the world would be apt to look upon as a monster of absurdity would not be able to make its way at once, even by the force of a naked demonstration. He observes, justly (*Dial.* 2), "That, though a demonstration be never so well grounded and fairly proposed, yet if there is, withal, a strain of prejudice, or a wrong bias on the understanding, can it be expected to perceive clearly, and adhere firmly to the truth? No; there is need of time and pains; the attention must be awakened and detained by a frequent repetition of the same thing, placed often in the same, often in different lights."

It was, therefore, necessary to dwell upon it, and turn it on all sides, till it became familiar; to consider all its consequences, and to obviate every prejudice and prepossession that might hinder its admittance. It was even a matter of some difficulty to fit it to common language, so far as to enable men to speak and reason about it intelligibly. Those who have entered seriously into Berkeley's system have found, after all the assistance which his writings give, that time and practice are necessary to acquire the habit of speaking and thinking distinctly upon it.

Berkeley foresaw the opposition that would be made to his system from two different quarters: *first*, from the philosophers; and, *secondly*, from the vulgar, who are led by the plain dictates of nature. The first he had the courage to oppose openly and avowedly; the second he dreaded much more, and, therefore, takes a great deal of pains, and, I think, uses some art, to court into his party. This is particularly observable in his *Dialogues*.

He is fond to take part with the vulgar against the philosophers, and to vindicate common sense against their innovations. What pity is it that he did not carry this suspicion of the doctrine of philosophers so far as to doubt of that philosophical tenet on which his whole system is built — to wit, that the things immediately perceived by the senses are ideas which exist only in the mind!

After all, it seems no easy matter to make the vulgar opinion and that of Berkeley to meet. And, to accomplish

this, he seems to me to draw each out of its line towards the other, not without some straining.

The vulgar opinion he reduces to this, that the very things which we perceive by our senses do really exist. This he grants ; for these things, says he, are ideas in our minds, or complexions of ideas, to which we give one name and consider as one thing ; these are the immediate objects of sense, and these do really exist. As to the notion that those things have an absolute external existence, independent of being perceived by any mind, he thinks that this is no notion of the vulgar, but a refinement of philosophers ; and that the notion of material substance, as a *substratum*, or support of that collection of sensible qualities to which we give the name of an apple or a melon, is likewise an invention of philosophers, and is not found with the vulgar till they are instructed by philosophers. The substance not being an object of sense, the vulgar never think of it ; or, if they are taught the use of the word, they mean no more by it but that collection of sensible qualities which they, from finding them conjoined in nature, have been accustomed to call by one name and to consider as one thing.

Thus he draws the vulgar opinion near to his own ; and, that he may meet it half-way, he acknowledges that material things have a real existence out of the mind of this or that person ; but the question, says he, between the materialist and me, is, whether they have an absolute existence distinct from their being perceived by God, and exterior to all minds. This, indeed, he says, some heathens and philosophers have affirmed ; but whoever entertains notions of the Deity, suitable to the Holy Scripture, will be of another opinion.

But here an objection occurs which it required all his ingenuity to answer. It is this : The ideas in my mind cannot be the same with the ideas of any other mind ; therefore, if the objects I perceive be only ideas, it is impossible that the objects I perceive can exist anywhere, when I do not perceive them ; and it is impossible that two or more minds can perceive the same object.

To this Berkeley answers that this objection presses no less the opinion of the materialist philosopher than his. But the difficulty is to make his opinion coincide with the notions of the vulgar, who are firmly persuaded that the very identical objects which they perceive, continue to exist when they do not perceive them ; and who are no less firmly persuaded that, when ten men look at the sun or the moon, they all see the same individual object.

To reconcile this repugnancy, he observes (*Dial.* 3) — “ That, if the term *same* be taken in the vulgar acceptation, it is certain (and not at all repugnant to the principles I maintain) that different persons may perceive the same thing ; or the same thing or idea exist in different minds. Words are of arbitrary imposition ; and, since men are used to apply the word *same*, where no distinction or variety is perceived, and I do not pretend to alter their perceptions, it follows that, as men have said before, *several saw the same thing*, so they may, upon like occasions, still continue to use the same phrase, without any deviation, either from propriety of language or the truth of things ; but, if the term *same* be used in the acceptation of philosophers, who pretend to an abstracted notion of identity, then, according to their sundry definitions of this notion (for it is not yet agreed wherein that philosophic identity consists), it may or may not be possible for divers persons to perceive the same thing ; but whether philosophers shall think fit to call a thing the *same* or no is, I conceive, of small importance. Men may dispute about identity and diversity, without any real difference in their thoughts and opinions, abstracted from names.”

Upon the whole, I apprehend that Berkeley has carried this attempt to reconcile his system to the vulgar opinion further than reason supports him ; and he was no doubt tempted to do so from a just apprehension that, in a controversy of this kind, the common sense of mankind is the most formidable antagonist.

Berkeley has employed much pains and ingenuity to show that his system, if received and believed, would not be attended with those bad consequences in the conduct

of life, which superficial thinkers may be apt to impute to it. His system does not take away or make any alteration upon our pleasures or our pains : our sensations, whether agreeable or disagreeable, are the same upon his system as upon any other. These are real things, and the only things that interest us. They are produced in us according to certain laws of nature by which our conduct will be directed in attaining the one and avoiding the other, and it is of no moment to us whether they are produced immediately by the operation of some powerful intelligent being upon our minds, or by the mediation of some inanimate being which we call *matter*.

The evidence of an all-governing mind, so far from being weakened, seems to appear even in a more striking light upon his hypothesis than upon the common one. The powers which inanimate matter is supposed to possess, have always been the stronghold of atheists, to which they had recourse in defence of their system. This fortress of atheism must be most effectually overturned if there is no such things as matter in the universe. In all this the Bishop reasons justly and acutely. But there is one uncomfortable consequence of his system which he seems not to have attended to, and from which it will be found difficult, if at all possible, to guard it.

The consequence I mean is this — that, although it leaves us sufficient evidence of a supreme intelligent mind, it seems to take away all the evidence we have of other intelligent beings like ourselves. What I call a father, a brother, or a friend, is only a parcel of ideas in my own mind ; and, being ideas in my mind, they cannot possibly have that relation to another mind which they have to mine, any more than the pain felt by me can be the individual pain felt by another. I can find no principle in Berkeley's system which affords me even probable ground to conclude that there are other intelligent beings, like myself, in the relations of father, brother, friend, or fellow-citizen.<sup>1</sup> I

<sup>1</sup> Berkeley thought he had proved adequately the existence of other finite minds by a form of analogical argument — that I am aware of certain ideas which I did not produce myself, but like those which I do produce ;

am left alone, as the only creature of God in the universe, in that forlorn state of *egoism* into which it is said some of the disciples of Descartes were brought by his philosophy.

## CHAPTER II

### BISHOP BERKELEY'S SENTIMENTS OF THE NATURE OF IDEAS

I PASS over the sentiments of Bishop Berkeley, with respect to abstract ideas and with respect to space and time, as things which may more properly be considered in another place.<sup>1</sup> But I must take notice of one part of his system wherein he seems to have deviated from the common opinion about ideas.

Though he sets out in his principles of knowledge by telling us that it is evident the objects of human knowledge are ideas, and builds his whole system upon this principle, yet, in the progress of it, he finds that there are certain objects of human knowledge that are not ideas, but things which have a permanent existence. The objects of knowledge, of which we have no ideas, are our own minds, and their various operations, other finite minds, and the Supreme Mind. The reason why there can be no ideas of spirits and their operations, the author informs us, is this, That ideas are passive, inert, unthinking beings; they cannot, therefore, be the image or likeness of things that have thought, and will, and active power; we have notions

from them, and the apparent purposiveness which they exhibit, I can argue to the existence of other finite agents like myself (*Principles*, 145). Whether any form of analogical argument for the existence of other persons is sound may be doubted. And in Berkeley's case there is the special difficulty, which Reid rightly picks on here, that he is not entitled to argue from the occurrence of certain ideas to the existence of other finite agents, while admitting that the vast majority of ideas are produced by God (*ib.* 146), unless he has independent evidence that God did not also produce the first class of ideas as well.

<sup>1</sup> Pp. 297-305; *Int. Powers*, II. 19 (H. pp. 324-6).

of minds, and of their operations, but not ideas. We know what we mean by thinking, willing, and perceiving; we can reason about beings endowed with those powers, but we have no ideas of them. A spirit or mind is the only substance or support wherein the unthinking beings or ideas can exist; but that this substance which supports or perceives ideas should itself be an idea, or like an idea, is evidently absurd.

He observes, further (*Princ.* § 142), that "all relations including an act of the mind, we cannot properly be said to have an idea, but rather a notion, of the relations or habitudes between things. But if, in the modern way, the word idea is extended to spirits, and relations, and acts, this is, after all, an affair of verbal concern; yet it conduces to clearness and propriety, that we distinguish things very different by different names."

This is an important part of Berkeley's system, and deserves attention. We are led by it to divide the objects of human knowledge into two kinds. The first is ideas, which we have by our five senses; they have no existence when they are not perceived, and exist only in the minds of those who perceive them.<sup>1</sup> The second kind of objects comprehends spirits, their acts, and the relations and habitudes of things. Of these we have notions, but no ideas. No idea can represent them, or have any similitude to them: yet we understand what they mean, and we can speak with understanding, and reason about them, without ideas.

This account of ideas is very different from that which Locke has given. In his system we have no knowledge

<sup>1</sup> "Exist only the minds of those who perceive them" is a somewhat misleading statement of Berkeley's *esse est percipi* principle. It suggests that an object which I am perceiving cannot exist unless (or exists only as long as) I perceive it. Perhaps Berkeley, to be consistent, should have held this view; in fact he thought that the object would exist as long as *some* mind perceived it. Consequently physical objects had continued existence as perceived (or willed) by God, undisturbed by the intermittent character of human perception. That at least was his usual view, and should be distinguished from the phenomenalist suggestion which he makes in *Principles* 3, that a categorical statement asserting the continued existence of a physical object is equivalent to a series of hypothetical statements about possible sense-data.

where we have no ideas. Every thought must have an idea for its immediate object. In Berkeley's, the most important objects are known without ideas. In Locke's system there are two sources of our ideas, sensation and reflection. In Berkeley's, sensation is the only source, because of the objects of reflection there can be no ideas.<sup>1</sup> We know them without ideas. Locke divides our ideas into those of substances, modes, and relations. In Berkeley's system there are no ideas of substances or of relations, but notions only. And even in the class of modes the operations of our own minds are things of which we have distinct notions, but no ideas.

If there be so many things that may be apprehended and known without ideas, this very naturally suggests a scruple with regard to those that are left: for it may be said, If we can apprehend and reason about the world of spirits without ideas, is it not possible that we may apprehend and reason about a material world without ideas? If consciousness and reflection furnish us with notions of spirits and of their attributes without ideas, may not our senses furnish us with notions of bodies and their attributes without ideas?

Berkeley foresaw this objection to his system, and puts it in the mouth of Hylas in the following words (*Dial.* 3): Hylas — "If you can conceive the mind of God without having an idea of it, why may not I be allowed to conceive the existence of matter notwithstanding that I have no idea of it?" The answer of Philonous is: "You neither perceive matter objectively, as you do an inactive being

<sup>1</sup> *Prima facie* this seems untrue, in view of Berkeley's inclusion (*Principles*, 1) among the objects of human knowledge of ideas formed by the help of memory and imagination. But such ideas, Berkeley and Locke agree (cf. *Essay*, II. 10. 2), are resuscitated ideas of sensation. The operations of the mind themselves (*i.e.* remembering, imagining, willing, etc.) are, according to Locke, known by ideas of reflection (*ib.* II. 1 and 6). But, as Reid rightly points out, Berkeley would not admit such ideas, on the ground that the mind being active cannot be known by means of ideas which are passive. Although *Principles*, 1 may be ambiguous on this point (cf. Johnston, *Development of Berkeley's Philosophy*, pp. 142-7), § 27 is not: "so far as I can see, the words *will*, *soul*, *spirit*, do not stand for different ideas, or, in truth, for any idea at all, but for something which is very different from ideas". He adds at the end of this section that this something is a "notion". Cf. p. 109 n. 1.

or idea, nor know it, as you do yourself, by a reflex act, neither do you immediately apprehend it by similitude of the one or the other, nor yet collect it by reasoning from that which you know immediately ; all which makes the case of matter widely different from that of the Deity ”:

Though Hylas declares himself satisfied with this answer, I confess I am not : because, if I may trust the faculties that God has given me, I do perceive matter objectively — that is, something which is extended and solid, which may be measured and weighed, is the immediate object of my touch and sight.<sup>1</sup> And this object I take to be matter, and not an idea. And, though I have been taught by philosophers that what I immediately touch is an idea, and not matter, yet I have never been able to discover this by the most accurate attention to my own perceptions.

It were to be wished that this ingenious author had explained what he means by ideas as distinguished from notions. The word notion, being a word in common language, is well understood. All men mean by it the conception, the apprehension, or thought which we have of any object of thought.<sup>2</sup> A notion, therefore, is an act of the mind conceiving or thinking of some object. The object of thought may be either something that is in the mind or something that is not in the mind. It may be something that has no existence or something that did, or does, or shall exist. But the notion which I have of that object is an act of my mind which really exists while I think of the object, but has no existence when I do not think of it. The word idea, in popular language, has precisely the same meaning as the word notion. But philosophers have another meaning to the word idea; and what that meaning is, I think, is very difficult to say.

The whole of Bishop Berkeley's system depends upon the distinction between notions and ideas ; and, therefore, it is worth while to find, if we are able, what those things are which he calls ideas as distinguished from notions.

<sup>1</sup> In what sense he holds this Reid explains in Chapters 17-18.

<sup>2</sup> *V.* p. 109 n. 1.

For this purpose we may observe that he takes notice of two kinds of ideas — the ideas of sense and the ideas of imagination. "The ideas imprinted on the senses by the Author of Nature", he says, "are called real things; and those excited in the imagination, being less regular, vivid, and constant, are more properly termed ideas, or images of things, which they copy and represent. But then our sensations, be they never so vivid and distinct, are nevertheless ideas; that is, they exist in the mind, or are perceived by it as truly as the ideas of its own framing. The ideas of sense are allowed to have more reality in them — that is, to be more strong, orderly, and coherent — than the creatures of the mind. They are also less dependent on the spirit, or thinking substance which perceives them, in that they are excited by the will of another and more powerful spirit; yet still they are ideas; and certainly no idea, whether faint or strong, can exist otherwise than in a mind perceiving it" (*Princ.* § 33).

From this passage we see that by the ideas of sense the author means sensations; and this,<sup>1</sup> indeed, is evident from many other passages. This, therefore, appears certain — that by the ideas of sense the author meant the sensations we have by means of our senses. I have endeavoured to explain the meaning of the word *sensation* (*Essay* I. ch. 1), and refer to the explication there given of it, which appears to me to be perfectly agreeable to the sense in which Bishop Berkeley uses it.

As there can be no notion or thought but in a thinking being, so there can be no sensation but in a sentient being. It is the act or feeling of a sentient being; its very essence consists in its being felt. Nothing can resemble a sensation but a similar sensation in the same or in some other mind. To think that any quality in a thing

<sup>1</sup> It is quite true that Berkeley talks of ideas of sense as sensations. But Reid's criticisms depend on the doubtful assumption that Berkeley consistently distinguished sensation from perception in the way that Reid did (*v. esp. Principles*, 5, 18, 25). Again, Reid's criticism of Locke in the next paragraph wrongly presupposes that Locke was distinguishing between sensation and perception when he said that primary qualities resembled the ideas of sensation corresponding to them (*Essay*, II. 8. 15).

that is inanimate can resemble a sensation is a great absurdity. In all this I cannot but agree perfectly with Bishop Berkeley, and I think his notions of sensation much more distinct and accurate than Locke's, who thought that the primary qualities of body are resemblances of our sensations, but that the secondary are not.

That we have many sensations by means of our external senses there can be no doubt, and, if he is pleased to call those ideas, there ought to be no dispute about the meaning of a word. But, says Bishop Berkeley, by our senses we have the knowledge *only* of our sensations or ideas, call them which you will. I allow him to call them which he will; but I would have the word *only* in this sentence<sup>1</sup> to be well weighed, because a great deal depends upon it.

For if it be true that by our senses we have the knowledge of our sensations only, then his system must be admitted, and the existence of a material world must be given up as 'a dream. No demonstration can be more invincible than this. If we have any knowledge of a material world, it must be by the senses: but, by the senses, we have no knowledge but of our sensations only; and our sensations have no resemblance of anything that can be in a material world. The only proposition in this demonstration which admits of doubt is that, by our senses, we have the knowledge of our sensations only, and of nothing else. If there are objects of the senses which are not sensations, his arguments do not touch them: they may be things which do not exist in the mind, as all sensations do; they may be things of which, by our senses, we have notions, though no ideas: just as, by consciousness and reflection, we have notions of spirits and of their operations, without ideas or sensations.

Shall we say, then, that by our senses we have the knowledge of our sensations only, and that they give us no notion of anything but of our sensations? Perhaps this has been the doctrine of philosophers, and not of Bishop Berkeley alone, otherwise he would have supported it by arguments. Mr. Locke calls all the notions we have

<sup>1</sup> *Principles*, 18.

by our senses, ideas of sensation ; and in this has been very generally followed. Hence it seems a very natural inference that ideas of sensation are sensations. But philosophers may err : let us hear the dictates of common sense upon this point.

Suppose I am pricked with a pin, I ask, Is the pain I feel, a sensation ? Undoubtedly it is. There can be nothing that resembles pain in any inanimatè being. But I ask again, Is the pin a sensation ? To this question I find myself under a necessity of answering that the pin is not a sensation, nor can have the least resemblance to any sensation. The pin has length and thickness, and figure and weight. A sensation can have none of those qualities. I am not more certain that the pain I feel is a sensation than that the pin is not a sensation ; yet the pin is an object of sense, and I am as certain that I perceive its figure and hardness by my senses as that I feel pain when pricked by it.

Having said so much of the ideas of sense in Berkeley's system, we are next to consider the account he gives of the ideas of imagination. Of these he says (*Princ.* § 28) : " I find I can excite ideas in my mind at pleasure, and vary and shift the scene as oft as I think fit. It is no more than willing ; and straightway this or that idea arises in my fancy ; and by the same power it is obliterated, and makes way for another. This making and unmaking of ideas doth very properly denominate the mind active. Thus much is certain, and grounded on experience. Our sensations ", he says, " are called real things ; the ideas of imagination are more properly termed ideas, or images of things ",<sup>1</sup> that is, as I apprehend, they are the images of our sensations. It might surely be expected that we should be well acquainted with the ideas of imagination, as they are of our making ; yet, after all the Bishop has said about them, I am at a loss to know what they are.

I would observe, in the *first* place, with regard to these ideas of imagination — that they are not sensations ; for surely sensation is the work of the senses, and not of

<sup>1</sup> *Principles*, 33.

imagination ; and, though pain be a sensation, the thought of pain, when I am not pained, is no sensation.

I observe, in the *second* place — that I can find no distinction between ideas of imagination and notions, which the author says are not ideas. I can easily distinguish between a notion and a sensation. It is one thing to say, I have the sensation of pain. It is another thing to say, I have a notion of pain. The last expression signifies no more than that I understand what is meant by the word *pain*. The first signifies that I really feel pain. But I can find no distinction between the notion of pain and the imagination of it, or indeed between the notion of anything else and the imagination of it. I can, therefore, give no account of the distinction which Berkeley makes between ideas of imagination and notions, which, he says, are not ideas. They seem to me perfectly to coincide.<sup>1</sup>

He seems, indeed, to say that the ideas of imagination differ not in kind from those of the senses, but only in the degree of their regularity, vivacity, and constancy. "They are", says he, "less regular, vivid, and constant." This doctrine was afterwards greedily embraced by Mr. Hume, and makes a main pillar of his system; but it cannot be reconciled to common sense, to which Bishop Berkeley professes a great regard. For, according to this doctrine, if we compare the state of a man racked with the gout with his state when, being at perfect ease, he relates what he has suffered, the difference of these two states is only this — that, in the last, the pain is less regular, vivid, and constant, than in the first. We cannot possibly assent to this. Every man knows that he can relate the pain he suffered, not only without pain, but with pleasure ; and that to suffer pain, and to think of it, are things which

<sup>1</sup> The distinction is that commonly drawn between ideas of imagination and ideas of intelligence, or images and concepts, which Reid professes himself unable to make. His own highly original account of imagination and conception in the fourth essay is obscure, mainly because having said that an image of a thing "is no more than the act or operation of the mind in conceiving it" (p. 233), he later makes imagination one *species* of conception, "to wit, the conception of visible objects", and finally he seems to come perilously near to drawing precisely the distinction which he is here denying (pp. 239 *seq.*, 300) *V* p. 233 n.

totally differ in kind and not in degree only.

We see, therefore, upon the whole that, according to this system, of the most important objects of knowledge — that is, of spirits, of their operations, and of the relations of things — we have no ideas at all ; we have notions of them, but not ideas ; the ideas we have are those of sense and those of imagination. The first are the sensations we have by means of our senses, whose existence no man can deny, because he is conscious of them ; and whose nature hath been explained by this author with great accuracy. As to the ideas of imagination, he hath left us much in the dark. He makes them images of our sensations ; though, according to his own doctrine, nothing can resemble a sensation but a sensation. He seems to think that they differ from sensations only in the degree of their regularity, vivacity, and constancy. But this cannot be reconciled to the experience of mankind ; and, besides this mark, which cannot be admitted, he hath given us no other mark by which they may be distinguished from notions. Nay, it may be observed that the very reason he gives why we can have no ideas of the acts of the mind about its ideas, nor of the relations of things, is applicable to what he calls ideas of imagination. *Princ.* § 142 : “ We may not, I think, strictly be said to have an idea of an active being, or of an action, although we may be said to have a notion of them. I have some knowledge or notion of my mind, and its acts about ideas, inasmuch as I know or understand what is meant by these words. It is also to be remarked that all relations including an act of the mind, we cannot so properly be said to have an idea, but rather a notion, of the relations and habitudes between things.” From this it follows that our imaginations are not properly ideas, but notions, because they include an act of the mind. For he tells us, in a passage already quoted, that they are creatures of the mind, of its own framing, and that it makes and unmakes them as it thinks fit, and from this is properly denominated active. If it be a good reason why we have not ideas, but notions only, of relations, because they include an act of the mind, the same reason

must lead us to conclude that our imaginations are notions and not ideas, since they are made and unmade by the mind as it thinks fit: and, from this, it is properly denominated active.

When so much has been written, and so many disputes raised, about ideas, it were desirable that we knew what they are, and to what category or class of beings they belong. In this we might expect satisfaction in the writings of Bishop Berkeley, if anywhere, considering his known accuracy and precision in the use of words; and it is for this reason that I have taken so much pains to find out what he took them to be.

After all, if I understand what he calls the ideas of sense, they are the sensations which we have by means of our five senses; but they are, he says, less properly termed ideas.

I understand, likewise, what he calls notions; but they, says he, are very different from ideas, though, in the modern way, often called by that name.

The ideas of imagination remain, which are most properly termed ideas, as he says; and, with regard to these, I am still very much in the dark. When I imagine a lion or an elephant, the lion or elephant is the object imagined. The act of the mind, in conceiving that object, is the notion, the conception, or imagination of the object. If besides the object, and the act of the mind about it, there be something called the idea of the object, I know not what it is.

In sensation, properly so called, I can distinguish two things — the mind, or sentient being, and the sensation. Whether the last is to be called a feeling or an operation, I dispute not; but it has no object distinct from the sensation itself. If in sensation there be a third thing, called an idea, I know not what it is.

In perception, in remembrance, and in conception, or imagination, I distinguish three things — the mind that operates, the operation of the mind, and the object of that operation. That the object perceived is one thing, and the perception of that object another, I am as certain as I can

be of anything. The same may be said of conception, of remembrance, of love and hatred, of desire and aversion. In all these the act of the mind about its object is one thing, the object is another thing. There must be an object, real or imaginary, distinct from the operation of the mind about it. Now, if in these operations the idea be a fourth thing different from the three I have mentioned, I know not what it is, nor have been able to learn from all that has been written about ideas. And if the doctrine of philosophers about ideas confounds any two of these things which I have mentioned as distinct — if, for example, it confounds the object perceived with the perception of that object, and represents them as one and the same thing — such doctrine is altogether repugnant to all that I am able to discover of the operations of my own mind ; and it is repugnant to the common sense of mankind, expressed in the structure of all languages.

## CHAPTER 12

### OF THE SENTIMENTS OF MR. HUME

Two volumes of the *Treatise of Human Nature* were published in 1739, and the third in 1740. The doctrine contained in this *Treatise* was published anew in a more popular form in Mr. Hume's *Philosophical Essays*, of which there have been various editions. What other authors, from the time of Descartes, had called *ideas*, this author distinguishes into two kinds — to wit, *impressions* and *ideas* ; comprehending under the first, all our sensations, passions, and emotions ; and under the last, the faint images of these, when we remember or imagine them.<sup>1</sup>

He sets out with this as a principle that needed no proof, and of which therefore he offers none — that all the

<sup>1</sup> *Treatise*, I. I. 1.

perceptions of the human mind resolve themselves into these two kinds, *impressions* and *ideas*.

As this proposition is the foundation upon which the whole of Mr. Hume's system rests, and from which it is raised with great acuteness indeed, and ingenuity, it were to be wished that he had told us upon what authority this fundamental proposition rests. But we are left to guess whether it is held forth as a first principle which has its evidence in itself, or whether it is to be received upon the authority of philosophers.

Mr. Locke had taught us that all the immediate objects of human knowledge are ideas in the mind. Bishop Berkeley, proceeding upon this foundation, demonstrated, very easily, that there is no material world. And he thought that, for the purposes both of philosophy and religion, we should find no loss, but great benefit, in the want of it. But the Bishop, as became his order, was unwilling to give up the world of spirits. He saw very well that ideas are as unfit to represent spirits as they are to represent bodies. Perhaps he saw that, if we perceive only the ideas of spirits, we shall find the same difficulty in inferring their real existence from the existence of their ideas, as we find in inferring the existence of matter from the idea of it ; and, therefore, while he gives up the material world in favour of the system of ideas, he gives up one-half of that system in favour of the world of spirits ; and maintains that we can, without ideas, think, and speak, and reason intelligibly about spirits and what belongs to them.

Mr. Hume shows no such partiality in favour of the world of spirits. He adopts the theory of ideas in its full extent ; and, in consequence, shows that there is neither matter nor mind in the universe ; nothing but impressions and ideas. What we call a *body* is only a bundle of sensations, and what we call the *mind* is only a bundle of thoughts, passions, and emotions, without any subject.<sup>1</sup>

Some ages hence it will perhaps be looked upon as a curious anecdote that two philosophers of the eighteenth

<sup>1</sup> *Ib.* I. 4. 2 and 6.

century, of very distinguished rank, were led, by a philosophical hypothesis, one, to disbelieve the existence of matter, and the other, to disbelieve the existence both of matter and of mind. Such an anecdote may not be uninteresting if it prove a warning to philosophers to beware of hypotheses, especially when they lead to conclusions which contradict the principles upon which all men of common sense must act in common life.

It is pleasant to observe that while philosophers, for more than a century, have been labouring, by means of ideas, to explain perception and the other operations of the mind, those ideas have by degrees usurped the place of perception, object, and even of the mind itself, and have supplanted those very things they were brought to explain. Descartes reduced all the operations of the understanding to perception ; and what can be more natural to those who believe that they are only different modes of perceiving ideas in our own minds ? Locke confounds ideas sometimes with the perception of an external object, sometimes with the external object itself. In Berkeley's system the idea is the only object, and yet is often confounded with the perception of it. But in Hume's the idea or the impression, which is only a more lively idea, is mind, perception, and object, all in one : so that by the term perception, in Mr. Hume's system, we must understand the mind itself, all its operations, both of understanding and will, and all the objects of these operations. Perception taken in this sense he divides into our more lively perceptions, which he calls *impressions*, and the less lively, which he calls *ideas*. To prevent repetition, I must here refer the reader to some remarks made upon this division — *Essay*, I. ch. 1 — in the explication there given of the words *perceive*, *object*, *impression*.

Mr. Hume adopts Locke's account of the origin of our ideas, and from that principle infers that we have no idea of substance, corporeal or spiritual, no idea of power, no other idea of a cause, but that it is something antecedent, and constantly conjoined to that which we call its effect ; and, in a word, that we can have no idea of anything but

our sensations, and the operations of mind we are conscious of.

This author leaves no power to the mind in framing its ideas and impressions ; and no wonder, since he holds that we have no idea of power, and the mind is nothing but that succession of impressions and ideas of which we are intimately conscious.

He thinks, therefore, that our impressions arise from unknown causes, and that the impressions are the causes of their corresponding ideas. By this he means no more but that they always go before the ideas ; for this is all that is necessary to constitute the relation of cause and effect.

As to the order and succession of our ideas, he holds it to be determined by three laws of attraction or association, which he takes to be original properties of the ideas, by which they attract, as it were, or associate themselves with other ideas which either resemble them, or which have been contiguous to them in time and place, or to which they have the relations of cause and effect.

We may here observe, by the way, that the last of these three laws seems to be included in the second, since causation, according to him, implies no more than contiguity in time and place.<sup>1</sup>

It is not my design at present to show how Mr. Hume, upon the principles he has borrowed from Locke and Berkeley, has, with great acuteness, reared a system of absolute scepticism which leaves no rational ground to

<sup>1</sup> This passage might be quoted as an illustration of Reid's ignorance of the views of the man whom he was most concerned to refute (cf. p. 143 n. 1), as Hume certainly allowed that we could observe events contiguous in time and place without thinking of them as causally related (*Treatise*, I. 3. 2) ; for the latter the further condition of expectation due to past observation must be fulfilled (*ib.* I. 3. 14). But Reid may not be ignorant here ; whether he held Hume to be attempting an *analysis* of cause, or to be asking under what conditions we should think of a pair of events as causally related, he might here be referring simply to the objective factors in a causal situation : a use of the word " cause " which Hume himself sanctions in the first of his two alternative definitions. " We may define a cause to be ' an object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects that resemble the latter ' " (*ibid.*).

believe any one proposition rather than its contrary, my intention in this place being only to give a detail of the sentiments of philosophers concerning ideas since they became an object of speculation, and concerning the manner of our perceiving external objects by their means.

[CHAPTER 13. OF THE SENTIMENTS OF  
ANTHONY ARNAULD]

CHAPTER 14

REFLECTIONS ON THE COMMON THEORY  
OF IDEAS

AFTER so long a detail of the sentiments of philosophers, ancient and modern, concerning ideas, it may seem presumptuous to call in question their existence. But no philosophical opinion, however ancient, however generally received, ought to rest upon authority. There is no presumption in requiring evidence for it, or in regulating our belief by the evidence we can find.

To prevent mistakes, the reader must again be reminded that if by ideas are meant only the acts or operations of our minds in perceiving, remembering, or imagining objects, I am far from calling in question the existence of those acts ; we are conscious of them every day and every hour of life ; and I believe no man of a sound mind ever doubted of the real existence of the operations of mind, of which he is conscious. Nor is it to be doubted that, by the faculties which God has given us, we can conceive things that are absent as well as perceive those that are within the reach of our senses ; and that such conceptions may be more or less distinct, and more or less lively and strong. We have

reason to ascribe to the all-knowing and all-perfect Being distinct conceptions of all things existent and possible, and of all their relations ; and if these conceptions are called his eternal ideas, there ought to be no dispute among philosophers about a word. The ideas, of whose existence I require the proof, are not the operations of any mind, but supposed objects of those operations. They are not perception, remembrance, or conception, but things that are said to be perceived, or remembered, or imagined.

Nor do I dispute the existence of what the vulgar call the objects of perception. These, by all who acknowledge their existence, are called real things, not ideas. But philosophers maintain that, besides these, there are immediate objects of perception in the mind itself : that, for instance, we do not see the sun immediately, but an idea ; or, as Mr. Hume calls it, an impression in our own minds. This idea is said to be the image, the resemblance, the representative of the sun, if there be a sun. It is from the existence of the idea that we must infer the existence of the sun. But the idea, being immediately perceived, there can be no doubt, as philosophers think, of its existence.

In like manner, when I remember, or when I imagine anything, all men acknowledge that there must be something that is remembered or that is imagined ; that is, some object of those operations. The object remembered must be something that did exist in time past : the object imagined may be something that never existed. But, say the philosophers, besides these objects which all men acknowledge, there is a more immediate object which really exists in the mind at the same time we remember or imagine. This object is an idea or image of the thing remembered or imagined.

The *first* reflection I would make on this philosophical opinion is, that it is directly contrary to the universal sense of men who have not been instructed in philosophy. When we see the sun or moon, we have no doubt that the very objects which we immediately see are very far distant from us, and from one another. We have not the least doubt that this is the sun and moon which God created

some thousands of years ago, and which have continued to perform their revolutions in the heavens ever since. But how are we astonished when the philosopher informs us that we are mistaken in all this ; that the sun and moon which we see are not, as we imagine, many miles distant from us, and from each other, but they are in our own mind ; that they had no existence before we saw them, and will have none when we cease to perceive and to think of them ; because the objects we perceive are only ideas in our own mind, which can have no existence a moment longer than we think of them !

If a plain man, uninstructed in philosophy, has faith to receive these mysteries, how great must be his astonishment ! He is brought into a new world where everything he sees, tastes, or touches, is an idea — a fleeting kind of being which he can conjure into existence, or can annihilate in the twinkling of an eye.

After his mind is somewhat composed, it will be natural for him to ask his philosophical instructor, Pray, sir, are there then no substantial and permanent beings called the sun and moon, which continue to exist whether we think of them or not ?

Here the philosophers differ. Mr. Locke, and those that were before him, will answer to this question that it is very true there are substantial and permanent beings called the sun and moon ; but they never appear to us in their own person, but by their representatives, the ideas in our own minds, and we know nothing of them but what we can gather from those ideas.

Bishop Berkeley and Mr. Hume would give a different answer to the question proposed. They would assure the querist that it is a vulgar error, a mere prejudice of the ignorant and unlearned, to think that there are any permanent and substantial beings called the sun and moon ; that the heavenly bodies, our own bodies, and all bodies whatsoever, are nothing but ideas in our minds ; and that there can be nothing like the ideas of one mind, but the ideas of another mind. There is nothing in nature but minds and ideas, says the Bishop ; — nay, says Mr. Hume,

there is nothing in nature but ideas only ; for what we call a mind is nothing but a train of ideas connected by certain relations between themselves.

In this representation of the theory of ideas there is nothing exaggerated or misrepresented, as far as I am able to judge ; and surely nothing further is necessary to show that, to the uninstructed in philosophy, it must appear extravagant and visionary, and most contrary to the dictates of common understanding.

There is the less need of any further proof of this, that it is very amply acknowledged by Mr. Hume in his *Essay on the Academical or Sceptical Philosophy*.<sup>1</sup>

It is therefore acknowledged by this philosopher to be a natural instinct or prepossession, a universal and primary opinion of all men, a primary instinct of nature, that the objects which we immediately perceive by our senses are not images in our minds, but external objects, and that their existence is independent of us and our perception.

In this acknowledgment Mr. Hume indeed seems to me more generous, and even more ingenuous, than Bishop Berkeley, who would persuade us that his opinion does not oppose the vulgar opinion, but only that of the philosophers ; and that the external existence of a material world is a philosophical hypothesis, and not the natural dictate of our perceptive powers.

A *second* reflection upon this subject is — that the authors who have treated of ideas have generally taken their existence for granted, as a thing that could not be called in question ; and such arguments as they have mentioned incidentally, in order to prove it, seem too weak to support the conclusion.

Mr. Locke, in the Introduction to his *Essay*, tells us that he uses the word idea to signify whatever is the

<sup>1</sup> *Enquiry concerning Human Understanding*, 12. 1 : " It seems evident that . . . men I . . . always suppose the very images, presented by the senses, to be the external objects, and never entertain any suspicion, that the one are nothing but representations of the other. . . . But this universal and primary notion of all men is soon destroyed by the slightest philosophy, which teaches us, that nothing can ever be present to the mind but an image or perception."

immediate object of thought ; and then adds, " I presume it will be easily granted me that there are such ideas in men's minds ; everyone is conscious of them in himself ; and men's words and actions will satisfy him that they are in others ".<sup>1</sup> I am indeed conscious of perceiving, remembering, imagining ; but that the objects of these operations are images in my mind, I am not conscious. I am satisfied, by men's words and actions, that they often perceive the same objects which I perceive, which could not be if those objects were ideas in their own minds.

Mr. Norris is the only author I have met with who professedly puts the question whether material things can be perceived by us immediately. He has offered four arguments to show that they cannot.<sup>2</sup> *First*, " Material objects are without the mind, and therefore there can be no union between the object and the percipient ". *Answer*, This argument is lame, until it is shown to be necessary that in perception there should be a union between the object and the percipient. *Second*, " Material objects are disproportioned to the mind, and removed from it by the whole diameter of Being ". This argument I cannot answer, because I do not understand it. *Third*, " Because, if material objects were immediate objects of perception, there could be no physical science — things necessary and immutable being the only object of science ". *Answer*, Although things necessary and immutable be not the immediate objects of perception, they may be immediate objects of other powers of the mind. *Fourth*, " If material things were perceived by themselves, they would be a true light to our minds, as being the intelligible form of our understandings, and consequently perfective of them, and indeed superior to them ". If I comprehend anything of this mysterious argument, it follows from it that the Deity perceives nothing at all, because nothing can be superior to his understanding or perfective of it.

There is an argument which is hinted at by Malebranche; and by several other authors, which deserves to

<sup>1</sup> *Essay*, I. i. 8.

<sup>2</sup> *Essay towards the Theory of the Ideal or Intelligible World*, Pt. II. ch. 6.

be more seriously considered. As I find it most clearly expressed and most fully urged by Dr. Samuel Clarke, I shall give it in his words, in his second reply to Leibniz, § 4: "The soul, without being present to the images of the things perceived, could not possibly perceive them. A living substance can only there perceive, where it is present, either to the things themselves (as the omnipresent God is to the whole universe) or to the images of things, as the soul is in its proper *sensorium*."

Sir Isaac Newton expresses the same sentiment, but with his usual reserve, in a query only.<sup>1</sup>

The ingenious Dr. Porterfield, in his *Essay concerning the Motions of our Eyes*, adopts this opinion with more confidence. His words are: "How body acts upon mind, or mind upon body, I know not; but this I am very certain of, that nothing can act, or be acted upon, where it is not; and therefore our mind can never perceive anything but its own proper modifications, and the various states of the *sensorium*, to which it is present: so that it is not the external sun and moon which are in the heavens, which our mind perceives, but only their image or representation impressed upon the *sensorium*. How the soul of a seeing man sees these images, or how it receives those ideas, from such agitations in the *sensorium*, I know not; but I am sure it can never perceive the external bodies themselves, to which it is not present."<sup>2</sup>

These, indeed, are great authorities: but in matters of philosophy we must not be guided by authority, but by reason. Dr. Clarke, in the place cited, mentions slightly, as the reason of his opinion, that "nothing can any more act, or be acted upon when it is not present, that it can be where it is not". And again, in his third reply to Leibniz, § 11: "We are sure the soul cannot perceive what it is not present to, because nothing can act, or be acted upon, where it is not". The same reason we see is urged by Dr. Porterfield.

That nothing can act immediately where it is not, I

<sup>1</sup> *Optics*, Qu. 28, 2nd and subsequent eds.

<sup>2</sup> Cf. his *Treatise on the Eye*, III. 2. 7.

think must be admitted: for I agree with Sir Isaac Newton, that power without substance is inconceivable.<sup>1</sup> It is a consequence of this, that nothing can be acted upon immediately where the agent is not present: let this, therefore, be granted. To make the reasoning conclusive, it is further necessary that, when we perceive objects, either they act upon us or we act upon them. This does not appear self-evident, nor have I ever met with any proof of it. I shall briefly offer the reasons why I think it ought not to be admitted.

When we say that one being acts upon another, we mean that some power or force is exerted by the agent which produces, or has a tendency to produce, a change in the thing acted upon. If this be the meaning of the phrase, as I conceive it is, there appears no reason for asserting that, in perception, either the object acts upon the mind or the mind upon the object.

An object, in being perceived, does not act at all. I perceive the walls of the room where I sit; but they are perfectly inactive, and therefore act not upon the mind. To be perceived is what logicians call an external denomination which implies neither action nor quality in the object perceived.<sup>2</sup> Nor could men ever have gone into this notion that perception is owing to some action of the object upon the mind, were it not that we are so prone to form our notions of the mind from some similitude we conceive between it and body. Thought in the mind is conceived to have some analogy to motion in a body: and as a body is put in motion by being acted upon by some other body, so we are apt to think the mind is made to perceive by some impulse it receives from the object. But reasonings drawn from such analogies ought never to be trusted. They are, indeed, the cause of most of our errors

<sup>1</sup> *Principia*, Bk. 3, Scholium Generale, *ad fin.*

<sup>2</sup> By agreeing on p. 141 that perception requires "some impression made upon the organ of sense by the object, or by something coming from the object", Reid is agreeing that causal relations in the material world involve spatial contiguity. What he is here denying is that there is any sense in requiring such a condition of causal relations between the material and the mental worlds, or within the mental world.

with regard to the mind. And we might as well conclude that minds may be measured by feet and inches, or weighed by ounces and drachms, because bodies have those properties.

I see as little reason, in the second place, to believe that in perception the mind acts upon the object. To perceive an object is one thing, to act upon it is another ; nor is the last at all included in the first. To say that I act upon the wall by looking at it is an abuse of language, and has no meaning. Logicians distinguish two kinds of operations of mind : the first kind produces no effect without the mind ; the last does. The first they call *immanent acts*, the second *transitive*. All intellectual operations belong to the first class ; they produce no effect upon any external object. But, without having recourse to logical distinctions, every man of common sense knows that to think of an object, and to act upon it, are very different things.

As we have, therefore, no evidence that in perception the mind acts upon the object, or the object upon the mind, but strong reasons to the contrary, Dr. Clarke's argument against our perceiving external objects immediately falls to the ground.

This notion that, in perception, the object must be contiguous to the percipient seems, with many other prejudices, to be borrowed from analogy. In all the external senses there must, as has been before observed, be some impression made upon the organ of sense by the object, or by something coming from the object. An impression supposes contiguity. Hence we are led by analogy to conceive something similar in the operations of the mind.

When we lay aside those analogies and reflect attentively upon our perception of the object of sense, we must acknowledge that, though we are conscious of perceiving objects, we are altogether ignorant how it is brought about, and know as little how we perceive objects as how we were made. And, if we should admit an image in the mind, or contiguous to it, we know as little how perception may be

produced by this image as by the most distant object. Why, therefore, should we be led, by a theory which is neither grounded on evidence nor, if admitted, can explain any one phenomenon of perception, to reject the natural and immediate dictates of those perceptive powers to which, in the conduct of life, we find a necessity of yielding implicit submission ?

There remains only one other argument that I have been able to find urged against our perceiving external objects immediately. It is proposed by Mr. Hume, who, in the essay already quoted,<sup>1</sup> after acknowledging that it is a universal and primary opinion of all men that we perceive external objects immediately, subjoins what follows :

“ But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but an image or perception ; and that the senses are only the inlets through which these images are received, without being ever able to produce any immediate intercourse between the mind and the object. The table, which we see, seems to diminish as we remove further from it : but the real table, which exists independent of us, suffers no alteration. It was, therefore, nothing but its image which was present to the mind. These are the obvious dictates of reason ; and no man who reflects ever doubted that the existences which we consider, when we say *this house* and *that tree*, are nothing but perceptions in the mind, and fleeting copies and representations of other existences, which remain uniform and independent. So far, then, we are necessitated, by reasoning, to depart from the primary instincts of nature, and to embrace a new system with regard to the evidence of our senses.”

We have here a remarkable conflict between two contradictory opinions, wherein all mankind are engaged. On the one side stand all the vulgar, who are unpractised in philosophical researches, and guided by the uncorrupted primary instincts of nature. On the other side stand all

<sup>1</sup> *V.* p. 137.

the philosophers, ancient and modern; every man, without exception, who reflects. In this division, to my great humiliation, I find myself classed with the vulgar.

The passage now quoted is all I have found in Mr. Hume's writings upon this point : <sup>1</sup> and, indeed, there is more reasoning in it than I have found in any other author. I shall, therefore, examine it minutely.

*First*, He tells us that "this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but an image or perception".

The phrase of being present to the mind has some obscurity, but I conceive he means being an immediate object of thought; an immediate object, for instance, of perception, of memory, or of imagination. If this be the meaning (and it is the only pertinent one I can think of), there is no more in this passage but an assertion of the proposition to be proved, and an assertion that philosophy teaches it. If this be so, I beg leave to dissent from philosophy till she gives me reason for what she teaches. For, though common sense and my external senses demand my assent to their dictates upon their own authority, yet philosophy is not entitled to this privilege. But, that I may not dissent from so grave a personage without giving a reason, I give this as the reason of my dissent: I see the sun when he shines; I remember the battle of Culloden; and neither of these objects is an image or perception.

He tells us, in the next place, "That the senses are only the inlets, through which these images are received".

<sup>1</sup> Reid's self-confessed ignorance of the discussion of the relation between objects and perceptions given by Hume in *Treatise* I. 4. 2 taken by itself seems to support Professor Kemp Smith's view that all he attended to in the *Treatise* was the first twenty pages, although the fact that he here quotes from Hume's *Enquiry* argues against Professor Kemp Smith's statement that "what Reid seems constantly to have in mind when he thought of Hume was the teaching of the first twenty pages of Book I of the *Treatise*" (Aristotelian Society, Supplementary Volume, 1939, p. xvii). *V. Introd.* p. xiii. It should be noted that this quotation from the *Enquiry* misleadingly suggests that Hume held a Lockean representative theory of perception, whereas he argues in the paragraphs immediately following this passage that this "philosophical" theory of perception has no evidence in its favour and cannot be justified by reason.

I know that Aristotle and the schoolmen taught that images or species flow from objects, and are let in by the senses, and strike upon the mind ; but this has been so effectually refuted by Descartes, by Malebranche, and many others, that nobody now pretends to defend it. Reasonable men consider it as one of the most unintelligible and unmeaning parts of the ancient system. To what cause is it owing that modern philosophers are so prone to fall back into this hypothesis, as if they really believed it ? For of this proneness I could give many instances besides this of Mr. Hume ; and I take the cause to be that images in the mind, and images let in by the senses, are so nearly allied, and so strictly connected, that they must stand or fall together. The old system consistently maintained both : but the new system has rejected the doctrine of images let in by the senses, holding, nevertheless, that there are images in the mind ; and, having made this unnatural divorce of two doctrines which ought not to be put asunder, that which they have retained often leads them back involuntarily to that which they have rejected.

Mr. Hume surely did not seriously believe that an image of sound is let in by the ear, an image of smell by the nose, an image of hardness and softness, of solidity and resistance, by the touch. For besides the absurdity of the thing, which has often been shown, Mr. Hume and all modern philosophers maintain that the images which are the immediate objects of perception have no existence when they are not perceived ; whereas if they were let in by the senses, they must be, before they are perceived, and have a separate existence.

He tells us, further, that philosophy teaches that the senses are unable to produce any immediate intercourse between the mind and the object. Here I still require the reasons that philosophy gives for this ; for, to my apprehension, I immediately perceive external objects, and this I conceive is the immediate intercourse here meant.

Hitherto I see nothing that can be called an argument. Perhaps it was intended only for illustration. The argument, the only argument, follows :

The table which we see, seems to diminish as we remove farther from it ; but the real table, which exists independent of us, suffers no alteration. It was, therefore, nothing but its image which was presented to the mind. These are the obvious dictates of reason.

Let us suppose, for a moment, that it is the real table we see : Must not this real table seem to diminish as we remove farther from it ? It is demonstrable that it must. How then can this apparent diminution be an argument that it is not the real table ? When that which must happen to the real table, as we remove farther from it, does actually happen to the table we see, it is absurd to conclude from this, that it is not the real table we see. It is evident, therefore, that this ingenious author has imposed upon himself by confounding real magnitude with apparent magnitude, and that his argument is a mere sophism.

I observed that Mr. Hume's argument not only has no strength to support his conclusion, but that it leads to the contrary conclusion — to wit, that it is the real table we see ; for this plain reason, that the table we see has precisely that apparent magnitude which it is demonstrable the real table must have when placed at that distance.

This argument is made much stronger by considering that the real table may be placed successively at a thousand different distances, and, in every distance, in a thousand different positions ; and it can be determined demonstratively, by the rules of geometry and perspective, what must be its apparent magnitude and apparent figure in each of those distances and positions. Let the table be placed successively in as many of those different distances and different positions as you will, or in them all ; open your eyes and you shall see a table precisely of that apparent magnitude, and that apparent figure, which the real table must have in that distance and in that position. Is not this a strong argument that it is the real table you see ?

In a word, the appearance of a visible object is infinitely diversified according to its distance and position. The

visible appearances are innumerable when we confine ourselves to one object, and they are multiplied according to the variety of objects. Those appearances have been matter of speculation to ingenious men at least since the time of Euclid. They have accounted for all this variety, on the supposition that the objects we see are external and not in the mind itself. The rules they have demonstrated about the various projections of the sphere, about the appearances of the planets in their progressions, stations, and retrogradations, and all the rules of perspective, are built on the supposition that the objects of sight are external. They can each of them be tried in thousands of instances. In many arts and professions innumerable trials are daily made ; nor were they ever found to fail in a single instance. Shall we say that a false supposition, invented by the rude vulgar, has been so lucky in solving an infinite number of phenomena of nature ? This, surely, would be a greater prodigy than philosophy ever exhibited : add to this, that, upon the contrary hypothesis — to wit, that the objects of sight are internal — no account can be given of any one of those appearances, nor any physical cause assigned why a visible object should, in any one case, have one apparent figure and magnitude rather than another.

Thus, I have considered every argument I have found advanced to prove the existence of ideas, or images of external things, in the mind ; and, if no better arguments can be found, I cannot help thinking that the whole history of philosophy has never furnished an instance of an opinion so unanimously entertained by philosophers upon so slight grounds.

A *third* reflection I would make upon this subject is, that philosophers, notwithstanding their unanimity as to the existence of ideas, hardly agree in any one thing else concerning them. If ideas be not a mere fiction, they must be, of all objects of human knowledge, the things we have best access to know, and to be acquainted with ; yet there is nothing about which men differ so much.

Some have held them to be self-existent, others to be in

the Divine mind, others in our own minds, and others in the brain or *sensorium*. I considered the hypothesis of images in the brain, in the fourth chapter of this essay. As to images in the mind, if anything more is meant by the image of an object in the mind than the thought of that object, I know not what it means. The distinct conception of an object may, in a metaphorical or analogical sense, be called an *image* of it in the mind. But this image is only the conception of the object, and not the object conceived. It is an act of the mind, and not the object of that act.<sup>1</sup>

Some philosophers will have our ideas, or a part of them, to be innate ; others will have them all to be adventitious : some derive them from the senses alone ; others from sensation and reflection : some think they are fabricated by the mind itself ; others that they are produced by external objects ; others that they are the immediate operation of the Deity ; others say that impressions are the causes of ideas, and that the causes of impressions are unknown : some think that we have ideas only of material objects, but none of minds, of their operations, or of the relations of things ; others will have the immediate object of every thought to be an idea : some think we have abstract ideas, and that by this chiefly we are distinguished from the brutes ; others maintain an abstract idea to be an absurdity, and that there can be no such thing : with some they are the immediate objects of thought, with others the only objects.

A *fourth* reflection is, that ideas do not make any of the operations of the mind to be better understood, although it was probably with that view that they have been first invented, and afterwards so generally received.

We are at a loss to know how we perceive distant objects ; how we remember things past ; how we imagine things that have no existence. Ideas in the mind seem to account for all these operations : they are all by the means of ideas reduced to one operation — to a kind of feeling,

<sup>1</sup> *V.* p. 233 and n.

or immediate perception of things present and in contact with the percipient ; and feeling is an operation so familiar that we think it needs no explication, but may serve to explain other operations.

But this feeling, or immediate perception, is as difficult to be comprehended as the things which we pretend to explain by it. Two things may be in contact without any feeling or perception ; there must therefore be in the percipient a power to feel or to perceive. How this power is produced, and how it operates, is quite beyond the reach of our knowledge. As little can we know whether this power must be limited to things present, and in contact with us. Nor can any man pretend to prove that the Being who gave us the power to perceive things present may not give us the power to perceive things that are distant, to remember things past, and to conceive things that never existed.

Some philosophers have endeavoured to make all our senses to be only different modifications of touch ; a theory which serves only to confound things that are different, and to perplex and darken things that are clear. The theory of ideas resembles this, by reducing all the operations of the human understanding to the perception of ideas in our own minds. This power of perceiving ideas is as inexplicable as any of the powers explained by it ; and the contiguity of the object contributes nothing at all to make it better understood ; because there appears no connection between contiguity and perception, but what is grounded on prejudices drawn from some imagined similitude between mind and body, and from the supposition that, in perception, the object acts upon the mind, or the mind upon the object. We have seen how this theory has led philosophers to confound those operations of mind which experience teaches all men to be different, and teaches them to distinguish in common language ; and that it has led them to invent a language inconsistent with the principles upon which all language is grounded.

After this long account of the theories advanced by

philosophers,<sup>1</sup> to account for our perception of external objects, I hope it will appear that neither Aristotle's theory of sensible species, nor Malebranche's of our seeing things in God, nor the common theory of our perceiving ideas in our own minds, nor Leibniz's theory of monads and a pre-established harmony, give any satisfying account of this power of the mind, or make it more intelligible than it is without their aid. They are conjectures, and, if they were true, would solve no difficulty but raise many new ones. It is, therefore, more agreeable to good sense and to sound philosophy, to rest satisfied with what our consciousness and attentive reflection discover to us of the nature of perception, than, by inventing hypotheses, to attempt to explain things which are above the reach of human understanding. I believe no man is able to explain how we perceive external objects any more than how we are conscious of those that are internal. Perception, consciousness, memory, and imagination, are all original and simple powers of the mind and parts of its constitution. For this reason, though I have endeavoured to show that the theories of philosophers on this subject are ill grounded and insufficient, I do not attempt to substitute any other theory in their place.

Every man feels that perception gives him an invincible belief of the existence of that which he perceives; and that this belief is not the effect of reasoning, but the immediate consequence of perception. When philosophers have wearied themselves and their readers with their speculations upon this subject, they can neither strengthen this belief nor weaken it; nor can they show how it is produced. It puts the philosopher and the peasant upon a level, and neither of them can give any other reason for believing his senses than that he finds it impossible for him to do otherwise.

<sup>1</sup> This and the next paragraph conclude Chapter 15, "An Account of the System of Leibniz", the rest of which has been omitted, because it consists of a very summary exposition and criticism of Leibniz's central metaphysical doctrine, which would hardly be intelligible to any reader who was not already well acquainted with Leibniz; and anyone who was would not gain anything from Reid's account.

## CHAPTER 16

### OF SENSATION

HAVING finished what I intend with regard to that act of mind which we call the perception of an external object, I proceed to consider another, which, by our constitution, is conjoined with perception, and not with perception only, but with many other acts of our minds ; and that is sensation. To prevent repetition, I must refer the reader to the explication of this word given in Essay I. Chapter 1.

Almost all our perceptions have corresponding sensations which constantly accompany them and, on that account, are very apt to be confounded with them. Neither ought we to expect that the sensation, and its corresponding perception, should be distinguished in common language, because the purposes of common life do not require it. Language is made to serve the purposes of ordinary conversation, and we have no reason to expect that it should make distinctions that are not of common use. Hence it happens that a quality perceived, and the sensation corresponding to that perception, often go under the same name.

This makes the names of most of our sensations ambiguous, and this ambiguity hath very much perplexed philosophers. It will be necessary to give some instances to illustrate the distinction between our sensations and the objects of perception.

When I smell a rose there is in this operation both sensation and perception. The agreeable odour I feel, considered by itself without relation to any external object, is merely a sensation. It affects the mind in a certain way ; and this affection of the mind may be conceived without a thought of the rose or any other object. This sensation can be nothing else than it is felt to be. Its very essence consists in being felt ; and, when it is not felt, it is not. There is no difference between the sensation and the

feeling of it — they are one and the same thing. It is for this reason that we before<sup>1</sup> observed that, in sensation, there is no object distinct from that act of the mind by which it is felt — and this holds true with regard to all sensations.

Let us next attend to the perception which we have in smelling a rose. Perception has always an external object; and the object of my perception, in this case, is that quality in the rose which I discern by the sense of smell. Observing that the agreeable sensation is raised when the rose is near, and ceases when it is removed, I am led, by my nature, to conclude some quality to be in the rose, which is the cause of this sensation. This quality in the rose is the object perceived; and that act of my mind by which I have the conviction and belief of this quality is what in this case I call perception.<sup>2</sup>

But it is here to be observed that the sensation I feel, and the quality in the rose which I perceive, are both called by the same name. The smell of a rose is the name given to both: so that this name hath two meanings; and the distinguishing its different meanings removes all perplexity, and enables us to give clear and distinct answers to questions about which philosophers have held much dispute.

Thus, if it is asked whether the smell be in the rose or in the mind that feels it, the answer is obvious: That there are two different things signified by the smell of a rose; one of which is in the mind, and can be in nothing but in

<sup>1</sup> P. 125.

<sup>2</sup> Despite its brevity, this is perhaps Reid's clearest statement in the whole work of his theory of perception. Perceiving a quality = believing the cause of a sensation to be such and such; that is to say, perception is not in any sense an immediate apprehension of any object, although the sensation about which it is a belief is an immediate apprehension. But to describe it as such may be misleading, because whereas I may distinguish between perception and its object, no such distinction is possible in the case of sensation (p. 125). This causal theory of perception appears *prima facie* to be open to precisely the objections which, Reid urged, made Locke's theory unpalatable (pp. 100 *seq.*). But Reid's most detailed defence of it, to be found in the *Inquiry* (V. 7), argues that the properties which we conceive as essential to the existence of a material object (extension, figure, and motion) are not sensations and do not in the least resemble sensations: he seems to be adumbrating a view on Kantian lines, that extension, figure, and motion are necessary categories of perceptual experience. *V.* Introd. p. xviii.

a sentient being ; the other is truly and properly in the rose. The sensation which I feel is in my mind. The mind is the sentient being ; and, as the rose is insentient, there can be no sensation nor anything resembling sensation in it. But this sensation in my mind is occasioned by a certain quality in the rose which is called by the same name with the sensation, not on account of any similitude, but because of their constant concomitancy.

All the names we have for smells, tastes, sounds, and for the various degrees of heat and cold, have a like ambiguity, and what has been said of the smell of a rose may be applied to them. They signify both a sensation and a quality perceived by means of that sensation. The first is the sign, the last the thing signified. As both are conjoined by nature, and as the purposes of common life do not require them to be disjoined in our thoughts, they are both expressed by the same name : and this ambiguity is to be found in all languages, because the reason of it extends to all.

The same ambiguity is found in the names of such diseases as are indicated by a particular painful sensation, such as the toothache, the headache. The toothache signifies a painful sensation which can only be in a sentient being ; but it signifies also a disorder in the body which has no similitude to a sensation, but is naturally connected with it.

Pressing my hand with force against the table, I feel pain, and I feel the table to be hard. The pain is a sensation of the mind, and there is nothing that resembles it in the table. The hardness is in the table, nor is there anything resembling it in the mind. Feeling is applied to both, but in a different sense ; being a word common to the act of sensation, and to that of perceiving by the sense of touch.

I touch the table gently with my hand and I feel it to be smooth, hard, and cold. These are qualities of the table perceived by touch ; but I perceive them by means of a sensation which indicates them. This sensation not being painful, I commonly give no attention to it. It

carries my thought immediately to the thing signified by it, and is itself forgot, as if it had never been. But, by repeating it, and turning my attention to it, and abstracting my thought from the thing signified by it, I find it to be merely a sensation, and that it has no similitude to the hardness, smoothness, or coldness of the table which are signified by it.

It is indeed difficult, at first, to disjoin things in our attention which have always been conjoined, and to make that an object of reflection which never was so before ; but some pains and practice will overcome this difficulty in those who have got the habit of reflecting on the operations of their own minds.

Although the present subject leads us only to consider the sensations which we have by means of our external senses, yet it will serve to illustrate what has been said, and, I apprehend, is of importance in itself, to observe that many operations of mind to which we give one name, and which we always consider as one thing, are complex in their nature, and made up of several more simple ingredients ; and of these ingredients sensation very often makes one. Of this we shall give some instances.

The appetite of hunger includes an uneasy sensation and a desire of food. Sensation and desire are different acts of mind. The last, from its nature, must have an object ; the first has no object. These two ingredients may always be separated in thought — perhaps they sometimes are, in reality ; but hunger includes both.

Benevolence towards our fellow-creatures includes an agreeable feeling ; but it includes also a desire of the happiness of others. The ancients commonly called it desire. Many moderns choose rather to call it a feeling. Both are right : and they only err who exclude either of the ingredients.

An uneasy feeling, and a desire, are in like manner the ingredients of malevolent affections such as malice, envy, revenge. The passion of fear includes an uneasy sensation or feeling, and an opinion of danger ; and hope is made up of the contrary ingredients.

A small degree of reflection may satisfy us that the number and variety of our sensations and feelings is prodigious ; for, to omit all those which accompany our appetites, passions, and affections, our moral sentiments and sentiments of taste, even our external senses, furnish a great variety of sensations, differing in kind, and almost in every kind an endless variety of degrees. Every variety we discern, with regard to taste, smell, sound, colour, heat, and cold, and in the tangible qualities of bodies, is indicated by a sensation corresponding to it.

The most general and the most important division of our sensations and feelings is into the agreeable, the disagreeable, and the indifferent. Everything we call pleasure, happiness, or enjoyment, on the one hand ; and, on the other, everything we call misery, pain, or uneasiness, is sensation or feeling ; for no man can for the present be more happy or more miserable than he feels himself to be.<sup>1</sup> He cannot be deceived with regard to the enjoyment or suffering of the present moment.

But I apprehend that, besides the sensations that are either agreeable or disagreeable, there is still a greater number that are indifferent. To these we give so little attention that they have no name, and are immediately forgot, as if they had never been ; and it requires attention to the operations of our minds to be convinced of their existence.

The sensations that are indifferent are far from being useless. They serve as signs to distinguish things that differ, and the information we have concerning things external comes by their means. Thus, if a man had no ear to receive pleasure from the harmony or melody of

<sup>1</sup> There is either inconsistency or looseness of language here. In this sentence Reid argues that pleasure and pain are themselves sensations, because they resemble his earlier examples in being acts of apprehension, in which no distinction between act and object is possible, and are therefore indubitable (cf. p. 19). Yet in the opening sentences of this and the following paragraph he speaks as if pleasure and pain were not sensations but qualities of sensations. He may mean that the usual division of sensations is into those that are accompanied by the further sensations of pleasure, those accompanied by the further sensation of pain, and those accompanied by neither

sounds, he would still find the sense of hearing of great utility. Though sounds give him neither pleasure nor pain of themselves, they would give him much useful information ; and the like may be said of the sensations we have by all the other senses.

I shall conclude this chapter by observing that as the confounding of our sensations with that perception of external objects which is constantly conjoined with them has been the occasion of most of the errors and false theories of philosophers with regard to the senses, so the distinguishing of these operations seems to me to be the key that leads to a right understanding of both.

Sensation, taken by itself, implies neither the conception nor belief of any external object. It supposes a sentient being, and a certain manner in which that being is affected ; but it supposes no more. Perception implies an immediate conviction and belief of something external — something different both from the mind that perceives and from the act of perception. Things so different in their nature ought to be distinguished ; but, by our constitution, they are always united. Every different perception is conjoined with a sensation that is proper to it. The one is the sign, the other the thing signified. They coalesce in our imagination. They are signified by one name, and are considered as one simple operation. The purposes of life do not require them to be distinguished.

It is the philosopher alone who has occasion to distinguish them, when he would analyse the operation compounded of them. But he has no suspicion that there is any composition in it ; and to discover this requires a degree of reflection which has been too little practised even by philosophers.

But let us attend to the consequence of this discovery. Philosophers, as well as the vulgar, had been accustomed to comprehend both sensation and perception under one name, and to consider them as one uncompounded operation. Philosophers, even more than the vulgar, gave the name of sensation to the whole operation of the senses ; and all the notions we have of material things were called

ideas of sensation. This led Bishop Berkeley to take one ingredient of a complex operation for the whole ; and, having clearly discovered the nature of sensation, taking it for granted that all that the senses present to the mind is sensation, which can have no resemblance to anything material, he concluded that there is no material world.

If the senses furnished us with no materials of thought but sensations, his conclusion must be just ; for no sensation can give us the conception of material things, far less any argument to prove their existence. But, if it is true that by our senses we have not only a variety of sensations, but likewise a conception and an immediate natural conviction of external objects, he reasons from a false supposition, and his arguments fall to the ground.

## CHAPTER 17

### OF THE OBJECTS OF PERCEPTION ; AND, FIRST, OF PRIMARY AND SECONDARY QUALITIES

THE objects of perception are the various qualities of bodies. Intending to treat of these only in general, and chiefly with a view to explain the notions which our senses give us of them, I begin with the distinction between primary and secondary qualities. These were distinguished very early. The Peripatetic system confounded them, and left no difference. The distinction was again revived by Descartes and Locke, and a second time abolished by Berkeley and Hume. If the real foundation of this distinction can be pointed out, it will enable us to account for the various revolutions in the sentiments of philosophers concerning it.

Everyone knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity, were by Mr. Locke called *primary qualities of body* ; and that sound, colour, taste, smell, and heat or cold, were called *secondary*

*qualities.*<sup>1</sup> Is there a just foundation for this distinction ? Is there anything common to the primary which belongs not to the secondary ? And what is it ?

I answer, that there appears to me to be a real foundation for the distinction ; and it is this — that our senses give us a direct and a distinct notion of the primary qualities and inform us what they are in themselves. But of the secondary qualities, our senses give us only a relative and obscure notion. They inform us only that they are qualities that affect us in a certain manner — that is, produce in us a certain sensation ; but as to what they are in themselves, our senses leave us in the dark.

Every man capable of reflection may easily satisfy himself that he has a perfectly clear and distinct notion of extension, divisibility, figure, and motion. The solidity of a body means no more but that it excludes other bodies from occupying the same place at the same time. Hardness, softness, and fluidity are different degrees of cohesion in the parts of a body. It is fluid when it has no sensible cohesion ; soft, when the cohesion is weak ; and hard, when it is strong. Of the cause of this cohesion we are ignorant, but the thing itself we understand perfectly, being immediately informed of it by the sense of touch. It is evident, therefore, that of the primary qualities we have a clear and distinct notion ; we know what they are, though we may be ignorant of their causes.

I observed, further, that the notion we have of primary qualities is direct, and not relative only. A relative notion of a thing is, strictly speaking, no notion of the thing at all, but only of some relation which it bears to something else.

Thus, gravity sometimes signifies the tendency of bodies towards the earth ; sometimes it signifies the cause of that tendency. When it means the first, I have a direct and distinct notion of gravity ; I see it, and feel it, and know perfectly what it is ; but this tendency must have a cause. We give the same name to the cause ; and that cause has been an object of thought and of speculation. Now, what notion have we of this cause when we think and reason

<sup>1</sup> *Essay*, II. 8.

about it ? It is evident we think of it as an unknown cause, of a known effect. This is a relative notion ; and it must be obscure, because it gives us no conception of what the thing is, but of what relation it bears to something else. Every relation which a thing unknown bears to something that is known, may give a relative notion of it ; and there are many objects of thought and of discourse of which our faculties can give no better than a relative notion.

Having premised these things to explain what is meant by a relative notion, it is evident that our notion of primary qualities is not of this kind ; we know what they are, and not barely what relation they bear to something else.

It is otherwise with secondary qualities. If you ask me what is that quality or modification in a rose which I call its smell, I am at a loss to answer directly. Upon reflection, I find that I have a distinct notion of the sensation which it produces in my mind. But there can be nothing like to this sensation in the rose, because it is insentient. The quality in the rose is something which occasions the sensation in me ; but what that something is, I know not. My senses give me no information upon this point. The only notion, therefore, my senses give is this — that smell in the rose is an unknown quality or modification which is the cause or occasion of a sensation which I know well. The relation which this unknown quality bears to the sensation with which nature hath connected it, is all I learn from the sense of smelling ; but this is evidently a relative notion. The same reasoning will apply to every secondary quality.

Thus, I think it appears that there is a real foundation for the distinction of primary from secondary qualities ; and that they are distinguished by this — that of the primary we have by our senses a direct and distinct notion ; but of the secondary only a relative notion which must, because it is only relative, be obscure ; they are conceived only as the unknown causes or occasions of certain sensations with which we are well acquainted.

The account I have given of this distinction is founded upon no hypothesis. Whether our notions of primary

qualities are direct and distinct, those of the secondary relative and obscure, is a matter of fact of which every man may have certain knowledge by attentive reflection upon them. To this reflection I appeal, as the proper test of what has been advanced, and proceed to make some reflections on this subject.

1. The primary qualities are neither sensations nor are they resemblances of sensations. This appears to me self-evident. I have a clear and distinct notion of each of the primary qualities. I have a clear and distinct notion of sensation. I can compare the one with the other ; and, when I do so, I am not able to discern a resembling feature. Sensation is the act or the feeling (I dispute not which) of a sentient being. Figure, divisibility, solidity, are neither acts nor feelings. Sensation supposes a sentient being as its subject, for a sensation that is not felt by some sentient being is an absurdity. Figure and divisibility supposes a subject that is figured and divisible, but not a subject that is sentient.

2. We have no reason to think that any of the secondary qualities resemble any sensation. The absurdity of this notion has been clearly shown by Descartes, Locke, and many modern philosophers. It was a tenet of the ancient philosophy, and is still by many imputed to the vulgar, but only as a vulgar error. It is too evident to need proof that the vibrations of a sounding body do not resemble the sensation of sound, nor the effluvia of an odorous body the sensation of smell.

3. The distinctness of our notions of primary qualities prevents all questions and disputes about their nature. There are no different opinions about the nature of extension, figure, or motion, or the nature of any primary quality. Their nature is manifest to our senses, and cannot be unknown to any man, or mistaken by him, though their causes may admit of dispute.

The primary qualities are the object of the mathematical sciences ; and the distinctness of our notions of them enables us to reason demonstratively about them to a great extent. Their various modifications are precisely

defined in the imagination, and thereby capable of being compared, and their relations determined with precision and certainty.

It is not so with secondary qualities. Their nature not being manifest to the sense may be a subject of dispute. Our feeling informs us that the fire is hot ; but it does not inform us what that heat of the fire is. But does it not appear a contradiction to say we know that the fire is hot, but we know not what that heat is ? I answer, there is the same appearance of contradiction in many things that must be granted. We know that wine has an inebriating quality, but we know not what that quality is. It is true, indeed, that if we had not some notion of what is meant by the heat of fire, and by an inebriating quality, we could affirm nothing of either with understanding. We have a notion of both ; but it is only a relative notion. We know that they are the causes of certain known effects.

4. The nature of secondary qualities is a proper subject of philosophical disquisition, and in this philosophy has made some progress. It has been discovered that the sensation of smell is occasioned by the effluvia of bodies ; that of sound by their vibration. The disposition of bodies to reflect a particular kind of light occasions the sensation of colour. Very curious discoveries have been made of the nature of heat, and an ample field of discovery in these subjects remains.

5. We may see why the sensations belonging to secondary qualities are an object of our attention, while those which belong to the primary are not.

The first are not only signs of the object perceived, but they bear a capital part in the notion we form of it. We conceive it only as that which occasions such a sensation, and therefore cannot reflect upon it without thinking of the sensation which it occasions : we have no other mark whereby to distinguish it. The thought of a secondary quality, therefore, always carries us back to the sensation which it produces. We give the same name to both, and are apt to confound them together.

But, having a clear and distinct conception of primary

qualities, we have no need, when we think of them, to recall their sensations. When a primary quality is perceived, the sensation immediately leads our thought to the quality signified by it, and is itself forgot. We have no occasion afterwards to reflect upon it ; and so we come to be as little acquainted with it as if we had never felt it. This is the case with the sensations of all primary qualities, when they are not so painful or pleasant as to draw our attention.

We are now to consider the opinions both of the vulgar and of philosophers upon this subject. As to the former, it is not to be expected that they should make distinctions which have no connection with the common affairs of life ; they do not, therefore, distinguish the primary from the secondary qualities, but speak of both as being equally qualities of the external object. Of the primary qualities they have a distinct notion, as they are immediately and distinctly perceived by the senses ; of the secondary, their notions, as I apprehend, are confused and indistinct rather than erroneous. A secondary quality is the unknown cause or occasion of a well-known effect ; and the same name is common to the cause and the effect. Now, to distinguish clearly the different ingredients of a complex notion and, at the same time, the different meanings of an ambiguous word, is the work of a philosopher, and is not to be expected of the vulgar, when their occasions do not require it.

I grant, therefore, that the notion which the vulgar have of secondary qualities is indistinct and inaccurate. But there seems to be a contradiction between the vulgar and the philosopher upon this subject, and each charges the other with a gross absurdity. The vulgar say that fire is hot, and snow cold, and sugar sweet ; and that to deny this is a gross absurdity, and contradicts the testimony of our senses. The philosopher says that heat, and cold, and sweetness are nothing but sensations in our minds ; and it is absurd to conceive that these sensations are in the fire, or in the snow, or in the sugar.

I believe this contradiction, between the vulgar and the philosopher, is more apparent than real, and that it is owing to an abuse of language on the part of the philo-

sopher and to indistinct notions on the part of the vulgar. The philosopher says there is no heat in the fire, meaning that the fire has not the sensation of heat. His meaning is just ; and the vulgar will agree with him, as soon as they understand his meaning. But his language is improper, for there is really a quality in the fire of which the proper name is heat, and the name of heat is given to this quality, both by philosophers and by the vulgar, much more frequently than to the sensation of heat. This speech of the philosopher, therefore, is meant by him in one sense ; it is taken by the vulgar in another sense. In the sense in which they take it, it is indeed absurd, and so they hold it to be. In the sense in which he means it, it is true ; and the vulgar, as soon as they are made to understand that sense, will acknowledge it to be true. They know, as well as the philosopher, that the fire does not feel heat : and this is all that he means by saying there is no heat in the fire.

By this account, the senses are acquitted of putting any fallacy upon us ; the sensation is real, and no fallacy ; the quality in the body, which is the cause or occasion of this sensation, is likewise real, though the nature of it is not manifest to our senses. If we impose upon ourselves, by confounding the sensation with the quality that occasions it, this is owing to rash judgment or weak understanding, but not to any false testimony of our senses.

This account of secondary qualities I take to be very just, and if Mr. Locke had stopped here he would have left the matter very clear. But he thought it necessary to introduce the theory of ideas to explain the distinction between primary and secondary qualities, and by that means, as I think, perplexed and darkened it.

*First*, taking it for granted that, by the ideas of primary and secondary qualities, he means the sensations they excite in us, I observe that it appears strange that a sensation should be the idea of a quality in body to which it is acknowledged to bear no resemblance. If the sensation of sound be the idea of that vibration of the sounding body which occasions it, a surfeit may, for the same reason, be the idea of a feast.

A *second* observation is that, when Mr. Locke affirms that the ideas of primary qualities — that is, the sensations they raise in us — are resemblances of those qualities, he seems neither to have given due attention to those sensations, nor to the nature of sensation in general.

Let a man press his hand against a hard body, and let him attend to the sensation he feels, excluding from his thought everything external, even the body that is the cause of his feeling. This abstraction, indeed, is difficult, and seems to have been little if at all practised. But it is not impossible, and it is evidently the only way to understand the nature of the sensation. A due attention to this sensation will satisfy him that it is no more like hardness in a body than the sensation of sound is like vibration in the sounding body.

I know of no ideas but my conceptions, and my idea of hardness in a body is the conception of such a cohesion of its parts as requires great force to displace them. I have both the conception and belief of this quality in the body, at the same time that I have the sensation of pain, by pressing my hand against it. The sensation and perception are closely conjoined by my constitution; but I am sure they have no similitude; I know no reason why the one should be called the idea of the other, which does not lead us to call every natural effect the idea of its cause.

Neither did Mr. Locke give due attention to the nature of sensation in general, when he affirmed that the ideas of primary qualities — that is, the sensations excited by them — are resemblances of those qualities.<sup>1</sup>

That there can be nothing like sensation in an insentient being, or like thought in an unthinking being, is self-evident, and has been shown, to the conviction of all men that think, by Bishop Berkeley; yet this was unknown to Mr. Locke. It is a humbling consideration that, in subjects of this kind, self-evident truths may be hid from the eyes of the most ingenious men. But we have, withal, this consolation that, when once discovered, they shine by their own light: and that light can no more be put out.

<sup>1</sup> *V.* p. 124 n.

Upon the whole, Mr. Locke, in making secondary qualities to be powers in bodies to excite certain sensations in us, has given a just and distinct analysis of what our senses discover concerning them ; but, in applying the theory of ideas to them and to the primary qualities, he has been led to say things that darken the subject and that will not bear examination.

Bishop Berkeley having adopted the sentiments common to philosophers, concerning the ideas we have by our senses — to wit, that they are all sensations — saw more clearly the necessary consequence of this doctrine, which is that there is no material world — no qualities primary or secondary — and, consequently, no foundation for any distinction between them. He exposed the absurdity of a resemblance between our sensations and any quality, primary or secondary, of a substance that is supposed to be insentient. Indeed, if it is granted that the senses have no other office but to furnish us with sensations, it will be found impossible to make any distinction between primary and secondary qualities, or even to maintain the existence of a material world.

From the account I have given of the various revolutions in the opinions of philosophers about primary and secondary qualities, I think it appears that all the darkness and intricacy that thinking men have found in this subject, and the errors they have fallen into, have been owing to the difficulty of distinguishing clearly sensation from perception — what we feel from what we perceive.

The external senses have a double province — to make us feel and to make us perceive. They furnish us with a variety of sensations, some pleasant, others painful, and others indifferent ; at the same time, they give us a conception and an invincible belief of the existence of external objects. This conception of external objects is the work of nature. The belief of their existence, which our senses give, is the work of nature ; so likewise is the sensation that accompanies it. This conception and belief which nature produces by means of the senses, we call *perception*. The feeling which goes along with the perception, we call

*sensation.* The perception and its corresponding sensation are produced at the same time. In our experience we never find them disjoined. Hence we are led to consider them as one thing, to give them one name, and to confound their different attributes. It becomes very difficult to separate them in thought, to attend to each by itself, and to attribute nothing to it which belongs to the other.

## CHAPTER 18

## OF OTHER OBJECTS OF PERCEPTION

BESIDES primary and secondary qualities of bodies, there are many other immediate objects of perception. Without pretending to a complete enumeration, I think they mostly fall under one or other of the following classes. *1st*, Certain states or conditions of our own bodies. *2nd*, Mechanical powers or forces. *3rd*, Chemical powers. *4th*, Medical powers or virtues. *5th*, Vegetable and animal powers.<sup>1</sup>

That we perceive certain disorders in our own bodies by means of uneasy sensations, which nature hath conjoined with them, will not be disputed. Of this kind are toothache, headache, gout, and every distemper and hurt which we feel. The notions which our sense gives of these, have a strong analogy to our notions of secondary qualities. Both are similarly compounded, and may be similarly resolved, and they give light to each other.

In the toothache, for instance, there is, *first*, a painful feeling; and, *secondly*, a conception and belief of some disorder in the tooth which is believed to be the cause of the uneasy feeling. The first of these is a sensation, the

<sup>1</sup> Reid's sketchy discussion of the four powers has had to be omitted from this edition. The two instances which he discusses in most detail are inertia and gravitation, which, he holds, we perceive, although we do not know what forces they really are. This view is quite consistent with his general doctrine of perception as a belief about the unsensed properties of material objects.

second is perception ; for it includes a conception and belief of an external object. But these two things, though of different natures, are so constantly conjoined in our experience and in our imagination that we consider them as one. We give the same name to both ; for the toothache is the proper name of the pain we feel, and it is the proper name of the disorder in the tooth which causes that pain. If it should be made a question whether the toothache be in the mind that feels it, or in the tooth that is affected, much might be said on both sides, while it is not observed that the word has two meanings. But a little reflection satisfies us that the pain is in the mind, and the disorder in the tooth. If some philosopher should pretend to have made the discovery that the toothache, the gout, the headache, are only sensations in the mind, and that it is a vulgar error to conceive that they are distempers of the body, he might defend his system in the same manner as those who affirm that there is no sound, nor colour, nor taste in bodies, defend that paradox. But both these systems, like most paradoxes, will be found to be only an abuse of words.

We say that we *feel* the toothache, not that we perceive it. On the other hand, we say that we *perceive* the colour of a body, not that we feel it. Can any reason be given for this difference of phraseology ? In answer to this question I apprehend that, both when we feel the toothache and when we see a coloured body, there is sensation and perception conjoined. But, in the toothache, the sensation being very painful, engrosses the attention ; and therefore we speak of it as if it were felt only, and not perceived : whereas, in seeing a coloured body, the sensation is indifferent and draws no attention. The quality in the body, which we call its colour, is the only object of attention ; and therefore we speak of it as if it were perceived and not felt. Though all philosophers agree that in seeing colour there is sensation, it is not easy to persuade the vulgar that in seeing a coloured body, when the light is not too strong nor the eye inflamed, they have any sensation or feeling at all.

There are some sensations which, though they are very often felt, are never attended to nor reflected upon. We have no conception of them ; and, therefore, in language there is neither any name for them nor any form of speech that supposes their existence. Such are the sensations of colour and of all primary qualities ; and, therefore, those qualities are said to be perceived, but not to be felt. Taste and smell, and heat and cold, have sensations that are often agreeable or disagreeable, in such a degree as to draw our attention ; and they are sometimes said to be felt, and sometimes to be perceived. When disorders of the body occasion very acute pain, the uneasy sensation engrosses the attention and they are said to be felt, not to be perceived.

There is another question relating to phraseology which this subject suggests. A man says he feels pain in such a particular part of his body ; in his toe, for instance. Now, reason assures us that pain, being a sensation, can only be in the sentient being, as its subject — that is, in the mind. And though philosophers have disputed much about the place of the mind, yet none of them ever placed it in the toe. What shall we say, then, in this case ? Do our senses really deceive us, and make us believe a thing which our reason determines to be impossible ? I answer, *first*, That, when a man says he has pain in his toe, he is perfectly understood, both by himself and those who hear him. This is all that he intends. He really feels what he and all men call a pain in the toe, and there is no deception in the matter. Whether, therefore, there be any impropriety in the phrase or not, is of no consequence in common life. It answers all the ends of speech, both to the speaker and the hearers.

In all languages there are phrases which have a distinct meaning ; while, at the same time, there may be something in the structure of them that disagrees with the analogy of grammar or with the principles of philosophy. And the reason is, because language is not made either by grammarians or philosophers. Thus, we speak of feeling pain as if pain was something distinct from the feeling of it.

We speak of pain coming and going, and removing from one place to another. Such phrases are meant by those who use them in a sense that is neither obscure nor false. But the philosopher puts them into his alembic, reduces them to their first principles, draws out of them a sense that was never meant, and so imagines that he has discovered an error of the vulgar.

I observe, *secondly*, That, when we consider the sensation of pain by itself, without any respect to its cause, we cannot say with propriety that the toe is either the place or the subject of it. But it ought to be remembered that, when we speak of pain in the toe, the sensation is combined in our thought with the cause of it, which really is in the toe. The cause and the effect are combined in one complex notion, and the same name serves for both. It is the business of the philosopher to analyse this complex notion, and to give different names to its different ingredients. He gives the name of *pain* to the sensation only, and the name of *disorder* to the unknown cause of it. Then it is evident that the disorder only is in the toe, and that it would be an error to think that the pain is in it. But we ought not to ascribe this error to the vulgar, who never made the distinction, and who, under the name of pain, comprehend both the sensation and its cause.

Cases sometimes happen which give occasion even to the vulgar to distinguish the painful sensation from the disorder which is the cause of it. A man who has had his leg cut off, many years after feels pain in a toe of that leg. The toe has now no existence ; and he perceives easily, that the toe can neither be the place nor the subject of the pain which he feels ; yet it is the same feeling he used to have from a hurt in the toe ; and, if he did not know that his leg was cut off, it would give him the same immediate conviction of some hurt or disorder in the toe.

The same phenomenon may lead the philosopher, in all cases, to distinguish sensation from perception. We say that the man had a deceitful feeling, when he felt a pain in his toe after the leg was cut off ; and we have a true meaning in saying so. But, if we will speak accurately,

our sensations cannot be deceitful ; they must be what we feel them to be, and can be nothing else. Where, then, lies the deceit ? I answer, it lies not in the sensation, which is real, but in the seeming perception he had of a disorder in his toe. This perception, which nature had conjoined with the sensation, was, in this instance, fallacious.

The same reasoning may be applied to every phenomenon that can, with propriety, be called a deception of sense. As when one who has the jaundice sees a body yellow, which is really white ; or when a man sees an object double, because his eyes are not both directed to it : in these, and other like cases, the sensations we have are real, and the deception is only in the perception which nature has annexed to them.

Nature has connected our perception of external objects with certain sensations. If the sensation is produced, the corresponding perception follows even when there is no object, and in that case is apt to deceive us. In like manner, nature has connected our sensations with certain impressions that are made upon the nerves and brain ; and when the impression is made, from whatever cause, the corresponding sensation and perception immediately follow. Thus, in the man who feels pain in his toe after the leg is cut off, the nerve that went to the toe, part of which was cut off with the leg, had the same impression made upon the remaining part, which, in the natural state of his body, was caused by a hurt in the toe : and immediately this impression is followed by the sensation and perception which nature connected with it.

In like manner, if the same impressions which are made at present upon my optic nerves by the objects before me could be made in the dark, I apprehend that I should have the same sensations and see the same objects which I now see. The impressions and sensations would in such a case be real, and the perception only fallacious.

## CHAPTER 19

## OF MATTER AND OF SPACE

THE objects of sense we have hitherto considered are qualities. But qualities must have a subject. We give the names of *matter*, *material substance*, and *body*, to the subject of sensible qualities ; and it may be asked what this *matter* is.

I perceive in a billiard ball figure, colour, and motion ; but the ball is not figure, nor is it colour, nor motion, nor all these taken together ; it is something that has figure, and colour, and motion. This is a dictate of nature, and the belief of all mankind.

As to the nature of this something, I am afraid we can give little account of it, but that it has the qualities which our senses discover.

But how do we know that they are qualities, and cannot exist without a subject ? I confess I cannot explain how we know that they cannot exist without a subject any more than I can explain how we know that they exist. We have the information of nature for their existence ; and I think we have the information of nature that they are qualities.

The belief that figure, motion, and colour are qualities, and require a subject, must either be a judgment of nature, or it must be discovered by reason, or it must be a prejudice that has no just foundation. There are philosophers who maintain that it is a mere prejudice ; that a body is nothing but a collection of what we call sensible qualities, and that they neither have nor need any subject. This is the opinion of Bishop Berkeley and Mr. Hume, and they were led to it by finding that they had not in their minds any idea of substance. It could neither be an idea of sensation nor of reflection.

But to me nothing seems more absurd than that there should be extension without anything extended, or motion without anything moved ; yet I cannot give reasons for

my opinion, because it seems to me self-evident, and an immediate dictate of my nature.

And that it is the belief of all mankind appears in the structure of all languages in which we find adjective nouns used to express sensible qualities. It is well known that every adjective in language must belong to some substantive expressed or understood — that is, every quality must belong to some subject.

Sensible qualities make so great a part of the furniture of our minds, their kinds are so many and their number so great, that if prejudice, and not nature, teach us to ascribe them all to a subject, it must have a great work to perform, which cannot be accomplished in a short time nor carried on to the same pitch in every individual. We should find not individuals only, but nations and ages, differing from each other in the progress which this prejudice had made in their sentiments ; but we find no such difference among men. What one man accounts a quality, all men do, and ever did.

It seems, therefore, to be a judgment of nature that the things immediately perceived are qualities which must belong to a subject ; and all the information that our senses give us about this subject is, that it is that to which such qualities belong. From this it is evident that our notion of body or matter, as distinguished from its qualities, is a relative notion ; and I am afraid it must always be obscure until men have other faculties.

The philosopher, in this, seems to have no advantage above the vulgar ; for, as they perceive colour, and figure, and motion by their senses as well as he does, and both are equally certain that there is a subject of those qualities, so the notions which both have of this subject are equally obscure. When the philosopher calls it a *substratum*, and a subject of inhesion, those learned words convey no meaning but what every man understands and expresses by saying, in common language, that it is a thing extended, and solid, and movable.

The relation which sensible qualities bear to their subject — that is, to body — is not, however, so dark but that it

is easily distinguished from all other relations. Every man can distinguish it from the relation of an effect to its cause, of a mean to its end, or of a sign to the thing signified by it.

I think it requires some ripeness of understanding to distinguish the qualities of a body from the body. Perhaps this distinction is not made by brutes, nor by infants ; and if anyone thinks that this distinction is not made by our senses, but by some other power of the mind, I will not dispute this point, provided it be granted that men, when their faculties are ripe, have a natural conviction that sensible qualities cannot exist by themselves without some subject to which they belong.

I think, indeed, that some of the determinations we form concerning matter cannot be deduced solely from the testimony of sense, but must be referred to some other source.

There seems to be nothing more evident than that all bodies must consist of parts ; and that every part of a body is a body, and a distinct being, which may exist without the other parts ; and yet I apprehend this conclusion is not deduced solely from the testimony of sense : for, besides that it is a necessary truth and, therefore, no object of sense, there is a limit beyond which we cannot perceive any division of a body. The parts become too small to be perceived by our senses ; but we cannot believe that it becomes then incapable of being farther divided, or that such divisions would make it not to be a body.

We carry on the division and subdivision in our thought far beyond the reach of our senses, and we can find no end to it : nay, I think we plainly discern that there can be no limit beyond which the division cannot be carried.

For, if there be any limit to this division, one of two things must necessarily happen : either we have come by division to a body which is extended, but has no parts, and is absolutely indivisible, or this body is divisible, but as soon as it is divided it becomes no body. Both these positions seem to me absurd, and one or the other is the necessary consequence of supposing a limit to the divisibility of matter.

On the other hand, if it is admitted that the divisibility

of matter has no limit, it will follow that no body can be called one individual substance. You may as well call it two, or twenty, or two hundred. For, when it is divided into parts, every part is a being or substance distinct from all the other parts, and was so even before the division. Any one part may continue to exist though all the other parts were annihilated.

There is, indeed, a principle long received as an axiom in metaphysics, which I cannot reconcile to the divisibility of matter ; it is, that every being is one, *omne ens est unum*. By which, I suppose, is meant that everything that exists must either be one indivisible being or composed of a determinate number of indivisible beings. Thus, an army may be divided into regiments, a regiment into companies, and a company into men. But here the division has its limit ; for you cannot divide a man without destroying him, because he is an individual ; and everything, according to this axiom, must be an individual, or made up of individuals.

That this axiom will hold with regard to an army, and with regard to many other things, must be granted ; but I require the evidence of its being applicable to all beings whatsoever.

Leibniz, conceiving that all beings must have this metaphysical unity, was by this led to maintain that matter, and indeed the whole universe, is made up of monads — that is, simple and indivisible substances.

Perhaps the same apprehension might lead Boscovich into his hypothesis, which seems much more ingenious — to wit, that matter is composed of a definite number of mathematical points endowed with certain powers of attraction and repulsion.<sup>1</sup>

The divisibility of matter without any limit seems to me more tenable than either of these hypotheses ; nor do I lay much stress upon the metaphysical axiom, considering its origin. Metaphysicians thought proper to make the attributes common to all beings the subject of a science.

<sup>1</sup> R. J. Boscovich, *Theoria Philosophiæ Naturalis Redacta ad Unicam Legem Virium in Natura Existentium* (Vienna, 1758).

It must be a matter of some difficulty to find out such attributes ; and, after racking their invention, they have specified three — to wit, Unity, Verity, and Goodness ; and these, I suppose, have been invented to make a number, rather than from any clear evidence of their being universal.

There are other determinations concerning matter which, I think, are not solely founded upon the testimony of sense ; such as, that it is impossible that two bodies should occupy the same place at the same time ; or that the same body should be in different places at the same time ; or that a body can be moved from one place to another without passing through the intermediate places, either in a straight course or by some circuit. These appear to be necessary truths, and therefore cannot be conclusions of our senses ; for our senses testify only what is, and not what must necessarily be.

We are next to consider our notion of Space. It may be observed that, although space be not perceived by any of our senses when all matter is removed, yet, when we perceive any of the primary qualities, space presents itself as a necessary concomitant ; for there can neither be extension nor motion, nor figure nor division, nor cohesion of parts, without space.

There are only two of our senses by which the notion of space enters into the mind — to wit, touch and sight. If we suppose a man to have neither of these senses, I do not see how he could ever have any conception of space. Supposing him to have both, until he sees or feels other objects, he can have no notion of space. It has neither colour nor figure to make it an object of sight : it has no tangible quality to make it an object of touch. But other objects of sight and touch carry the notion of space along with them ; and not the notion only, but the belief of it ; for a body could not exist if there was no space to contain it. It could not move if there was no space. Its situation, its distance, and every relation it has to other bodies, suppose space.

But, though the notion of space seems not to enter, at first, into the mind until it is introduced by the proper

objects of sense, yet, being once introduced, it remains in our conception and belief, though the objects which introduced it be removed. We see no absurdity in supposing a body to be annihilated ; but the space that contained it remains ; and to suppose that annihilated, seems to be absurd. It is so much allied to nothing or emptiness, that it seems incapable of annihilation or of creation.

Space not only retains a firm hold of our belief, even when we suppose all the objects that introduced it to be annihilated, but it swells to immensity. We can set no limits to it, either of extent or of duration. Hence we call it immense, eternal, immovable, and indestructible. But it is only an immense, eternal, immovable, and indestructible void or emptiness. Perhaps we may apply to it what the Peripatetics said of their first matter, that, whatever it is, it is potentially only, not actually.

When we consider parts of space that have measure and figure, there is nothing we understand better, nothing about which we can reason so clearly and to so great extent. Extension and figure are circumscribed parts of space and are the object of geometry, a science in which human reason has the most ample field, and can go deeper and with more certainty than in any other. But when we attempt to comprehend the whole of space and to trace it to its origin, we lose ourselves in the search. The profound speculations of ingenious men upon this subject differ so widely as may lead us to suspect that the line of human understanding is too short to reach the bottom of it.

## CHAPTER 20

### OF THE EVIDENCE OF SENSE, AND OF BELIEF IN GENERAL

THE intention of nature in the powers which we call the external senses is evident. They are intended to give us

that information of external objects which the Supreme Being saw to be proper for us in our present state ; and they give to all mankind the information necessary for life, without reasoning, without any art or investigation on our part.

The most uninstructed peasant has as distinct a conception and as firm a belief of the immediate objects of his senses as the greatest philosopher ; and with this he rests satisfied, giving himself no concern how he came by this conception and belief. But the philosopher is impatient to know how his conception of external objects, and his belief of their existence, is produced. This, I am afraid, is hid in impenetrable darkness. But where there is no knowledge there is the more room for conjecture, and of this philosophers have always been very liberal.

The dark cave and shadows of Plato, the species of Aristotle, the films of Epicurus, and the ideas and impressions of modern philosophers, are the productions of human fancy, successively invented to satisfy the eager desire of knowing how we perceive external objects ; but they are all deficient in the two essential characters of a true and philosophical account of the phenomenon : for we neither have any evidence of their existence, nor, if they did exist, can it be shown how they would produce perception.

It was before observed <sup>1</sup> that there are two ingredients in this operation of perception : *first*, the conception or notion of the object ; and, *secondly*, the belief of its present existence. Both are unaccountable.

That we can assign no adequate cause of our first conceptions of things, I think, is now acknowledged by the most enlightened philosophers. We know that such is our constitution that in certain circumstances we have certain conceptions ; but how they are produced we know no more than how we ourselves were produced.

When we have got the conception of external objects by our senses, we can analyse them in our thought into their simple ingredients ; and we can compound those in-

<sup>1</sup> P. 79.

redients into various new forms which the senses never presented. But it is beyond the power of human imagination to form any conception whose simple ingredients have not been furnished by nature in a manner unaccountable to our understanding.

We have an immediate conception of the operations of our minds, joined with a belief of their existence ; and this we call consciousness. But this is only giving a name to this source of our knowledge. It is not a discovery of its cause. In like manner we have, by our external senses, a conception of external objects, joined with a belief of their existence ; and this we call perception. But this is only giving a name to another source of our knowledge without discovering its cause.

We know that when certain impressions are made upon our organs, nerves, and brain, certain corresponding sensations are felt, and certain objects are both conceived and believed to exist. But in this train of operations nature works in the dark. We can neither discover the cause of any one of them, nor any necessary connection of one with another ; and whether they are connected by any necessary tie, or only conjoined in our constitution by the will of heaven, we know not.

That any kind of impression upon a body should be the efficient cause of sensation appears very absurd. Nor can we perceive any necessary connection between sensation and the conception and belief of an external object. For anything we can discover, we might have been so framed as to have all the sensations we now have by our senses, without any impressions upon our organs, and without any conception of any external object. For anything we know, we might have been so made as to perceive external objects, without any impressions on bodily organs, and without any of those sensations which invariably accompany perception in our present frame.

If our conception of external objects be unaccountable, the conviction and belief of their existence, which we get by our senses, is no less so.

Belief, assent, conviction, are words which I do not

think admit of logical definition, because the operation of mind signified by them is perfectly simple and of its own kind. Nor do they need to be defined, because they are common words and well understood.

Belief must have an object. For he that believes must believe something ; and that which he believes, is called the object of his belief. Of this object of his belief he must have some conception, clear or obscure ; for, although there may be the most clear and distinct conception of an object without any belief of its existence, there can be no belief without conception.

Belief is always expressed in language by a proposition, wherein something is affirmed or denied. This is the form of speech which in all languages is appropriated to that purpose, and without belief there could be neither affirmation nor denial, nor should we have any form of words to express either. Belief admits of all degrees, from the slightest suspicion to the fullest assurance. These things are so evident to every man that reflects, that it would be abusing the reader's patience to dwell upon them.

I proceed to observe that there are many operations of mind in which, when we analyse them as far as we are able, we find belief to be an essential ingredient. A man cannot be conscious of his own thoughts, without believing that he thinks. He cannot perceive an object of sense, without believing that it exists. He cannot distinctly remember a past event, without believing that it did exist. Belief therefore is an ingredient in consciousness, in perception, and in remembrance.

We give the name of evidence to whatever is a ground of belief. To believe without evidence is a weakness which every man is concerned to avoid, and which every man wishes to avoid. Nor is it in a man's power to believe anything longer than he thinks he has evidence.

What this evidence is, is more easily felt than described. Those who never reflected upon its nature feel its influence in governing their belief. It is the business of the logician to explain its nature, and to distinguish its various kinds and degrees ; but every man of understanding can judge

of it, and commonly judges right, when the evidence is fairly laid before him and his mind is free from prejudice. A man who knows nothing of the theory of vision may have a good eye, and a man who never speculated about evidence in the abstract may have a good judgment.

The common occasions of life lead us to distinguish evidence into different kinds, to which we give names that are well understood ; such as the evidence of sense, the evidence of memory, the evidence of consciousness, the evidence of testimony, the evidence of axioms, the evidence of reasoning. All men of common understanding agree that each of these kinds of evidence may afford just ground of belief, and they agree very generally in the circumstances that strengthen or weaken them.

Philosophers have endeavoured, by analysing the different sorts of evidence, to find out some common nature wherein they all agree, and thereby to reduce them all to one. This was the aim of the schoolmen in their intricate disputes about the criterion of truth. Descartes placed this criterion of truth in clear and distinct perception, and laid it down as a maxim that whatever we clearly and distinctly perceive to be true, is true ; but it is difficult to know what he understands by clear and distinct perception in this maxim. Mr. Locke placed it in a perception of the agreement or disagreement of our ideas, which perception is immediate in intuitive knowledge, and by the intervention of other ideas in reasoning.

I confess that although I have, as I think, a distinct notion of the different kinds of evidence above-mentioned, and perhaps of some others which it is unnecessary here to enumerate, yet I am not able to find any common nature to which they may all be reduced. They seem to me to agree only in this, that they are all fitted by nature to produce belief in the human mind, some of them in the highest degree, which we call certainty, others in various degrees according to circumstances.

I shall take it for granted that the evidence of sense, when the proper circumstances concur, is good evidence, and a just ground of belief. My intention in this place is

only to compare it with the other kinds that have been mentioned, that we may judge whether it be reducible to any of them, or of a nature peculiar to itself.

*First*, It seems to be quite different from the evidence of reasoning. All good evidence is commonly called reasonable evidence, and very justly, because it ought to govern our belief as reasonable creatures. And according to this meaning, I think the evidence of sense no less reasonable than that of demonstration. If nature give us information of things that concern us, by other means than by reasoning, reason itself will direct us to receive that information with thankfulness, and to make the best use of it.

But when we speak of the evidence of reasoning as a particular kind of evidence, it means the evidence of propositions that are inferred by reasoning from propositions already known and believed. Thus, the evidence of the fifth proposition of the first book of Euclid's *Elements* consists in this, That it is shown to be the necessary consequence of the axioms, and of the preceding propositions. In all reasoning there must be one or more premises, and a conclusion drawn from them. And the premises are called the reason why we must believe the conclusion which we see to follow from them.

That the evidence of sense is of a different kind needs little proof. No man seeks a reason for believing what he sees or feels ; and, if he did, it would be difficult to find one. But, though he can give no reason for believing his senses, his belief remains as firm as if it were grounded on demonstration.

Many eminent philosophers, thinking it unreasonable to believe when they could not show a reason, have laboured to furnish us with reasons for believing our senses ; but their reasons are very insufficient, and will not bear examination. Other philosophers have shown very clearly the fallacy of these reasons, and have, as they imagine, discovered invincible reasons against this belief ; but they have never been able either to shake it in themselves or to convince others. The statesman continues to plod, the soldier to fight, and the merchant to export and import,

without being in the least moved by the demonstrations that have been offered of the non-existence of those things about which they are so seriously employed. And a man may as soon, by reasoning, pull the moon out of her orbit as destroy the belief of the objects of sense.

Shall we say, then, that the evidence of sense is the same with that of axioms, or self-evident truths ? I answer, *First*, That all modern philosophers seem to agree that the existence of the objects of sense is not self-evident, because some of them have endeavoured to prove it by subtle reasoning, others to refute it. Neither of these can consider it as self-evident.

*Secondly*, I would observe that the word *axiom* is taken by philosophers in such a sense as that the existence of the objects of sense cannot, with propriety, be called an axiom. They give the name of axiom only to self-evident truths, that are necessary, and are not limited to time and place, but must be true at all times and in all places. The truths attested by our senses are not of this kind ; they are contingent, and limited to time and place.

*Thirdly*, If the word axiom be put to signify every truth which is known immediately, without being deduced from any antecedent truth, then the existence of the objects of sense may be called an axiom ; for my senses give me as immediate conviction of what they testify, as my understanding gives of what is commonly called an axiom.

There is, no doubt, an analogy between the evidence of sense and the evidence of testimony. Hence we find, in all languages, the analogical expressions of the *testimony of sense*, of giving *credit* to our senses, and the like. But there is a real difference between the two as well as a similitude. In believing upon testimony we rely upon the authority of a person who testifies ; but we have no such authority for believing our senses.

Shall we say, then, that this belief is the inspiration of the Almighty ? I think this may be said in a good sense ; for I take it to be the immediate effect of our constitution, which is the work of the Almighty. But if inspiration be

understood to imply a persuasion of its coming from God, our belief of the objects of sense is not inspiration ; for a man would believe his senses though he had no notion of a Deity. He who is persuaded that he is the workmanship of God, and that it is a part of his constitution to believe his senses, may think that a good reason to confirm his belief. But he had the belief before he could give this or any other reason for it.

If we compare the evidence of sense with that of memory, we find a great resemblance, but still some difference. I remember distinctly to have dined yesterday with such a company. What is the meaning of this ? It is that I have a distinct conception and firm belief of this past event ; not by reasoning, not by testimony, but immediately from my constitution. And I give the name of memory to that part of my constitution by which I have this kind of conviction of past events.

I see a chair on my right hand. What is the meaning of this ? It is, that I have, by my constitution, a distinct conception and firm belief of the present existence of the chair in such a place and in such a position ; and I give the name of seeing to that part of my constitution by which I have this immediate conviction. The two operations agree in the immediate conviction which they give. They agree in this also, that the things believed are not necessary, but contingent, and limited to time and place. But they differ in two respects ; *first*, That memory has something for its object that did exist in time past ; but the object of sight, and of all the senses, must be something which exists at present. And, *secondly*, That I see by my eyes, and only when they are directed to the object, and when it is illuminated. But my memory is not limited by any bodily organ that I know, nor by light and darkness, though it has its limitations of another kind.

These differences are obvious to all men, and very reasonably lead them to consider seeing and remembering as operations specifically different. But the nature of the evidence they give has a great resemblance. A like difference and a like resemblance there is between the evidence

of sense and that of consciousness, which I leave the reader to trace.

As to the opinion that evidence consists in a perception of the agreement or disagreement of ideas, we may have occasion to consider it more particularly in another place.<sup>1</sup> Here I only observe that, when taken in the most favourable sense, it may be applied with propriety to the evidence of reasoning, and to the evidence of some axioms. But I cannot see how, in any sense, it can be applied to the evidence of consciousness, to the evidence of memory, or to that of the senses.

When I compare the different kinds of evidence above-mentioned, I confess, after all, that the evidence of reasoning, and that of some necessary and self-evident truths, seems to be the least mysterious and the most perfectly comprehended; and therefore I do not think it strange that philosophers should have endeavoured to reduce all kinds of evidence to these.

When I see a proposition to be self-evident and necessary, and that the subject is plainly included in the predicate, there seems to be nothing more that I can desire in order to understand why I believe it. And when I see a consequence that necessarily follows from one or more self-evident propositions, I want nothing more with regard to my belief of that consequence. The light of truth so fills my mind in these cases that I can neither conceive nor desire anything more satisfying.

On the other hand, when I remember distinctly a past event, or see an object before my eyes, this commands my belief no less than an axiom. But when, as a philosopher, I reflect upon this belief, and want to trace it to its origin, I am not able to resolve it into necessary and self-evident axioms, or conclusions that are necessarily consequent upon them. I seem to want that evidence which I can best comprehend, and which gives perfect satisfaction to an inquisitive mind; yet it is ridiculous to doubt; and I find it is not in my power. An attempt to throw off this belief is like an attempt to fly, equally ridiculous and impracticable.

<sup>1</sup> Pp. 342 *seq.*

To a philosopher who has been accustomed to think that the treasure of his knowledge is the acquisition of that reasoning power of which he boasts, it is no doubt humiliating to find that his reason can lay no claim to the greater part of it.

By his reason he can discover certain abstract and necessary relations of things ; but his knowledge of what really exists, or did exist, comes by another channel, which is open to those who cannot reason. He is led to it in the dark, and knows not how he came by it.

It is no wonder that the pride of philosophy should lead some to invent vain theories in order to account for this knowledge ; and others, who see this to be impracticable, to spurn at a knowledge they cannot account for, and vainly attempt to throw it off as a reproach to their understanding. But the wise and the humble will receive it as the gift of Heaven, and endeavour to make the best use of it.

#### [CHAPTER 21. OF THE IMPROVEMENT OF THE SENSES]

### CHAPTER 22

#### OF THE FALLACY OF THE SENSES

COMPLAINTS of the fallacy of the senses have been very common in ancient and in modern times, especially among the philosophers. And, if we should take for granted all that they have said on this subject, the natural conclusion from it might seem to be that the senses are given to us by some malignant demon on purpose to delude us, rather

than that they are formed by the wise and beneficent Author of Nature, to give us true information of things necessary to our preservation and happiness.

The whole sect of atomists among the ancients, led by Democritus, and afterwards by Epicurus, maintained that all the qualities of bodies which the moderns call secondary qualities — to wit, smell, taste, sound, colour, heat, and cold — are mere illusions of sense, and have no real existence. Plato maintained that we can attain no real knowledge of material things, and that eternal and immutable ideas are the only objects of real knowledge. The academics and sceptics anxiously sought for arguments to prove the fallaciousness of our senses, in order to support their favourite doctrine that even in things that seem most evident we ought to withhold assent.

Among the Peripatetics we find frequent complaints that the senses often deceive us, and that their testimony is to be suspected, when it is not confirmed by reason, by which the errors of sense may be corrected. This complaint they supported by many commonplace instances : such as, the crooked appearance of an oar in water ; objects being magnified, and their distance mistaken, in a fog ; the sun and moon appearing about a foot or two in diameter, while they are really thousands of miles ; a square tower being taken at a distance to be round. These, and many similar appearances, they thought to be sufficiently accounted for from the fallacy of the senses : and thus the fallacy of the senses was used as a decent cover to conceal their ignorance of the real causes of such phenomena, and served the same purpose as their occult qualities and substantial forms

Descartes and his followers joined in the same complaint. Antony le Grand, a philosopher of that sect, in the first chapter of his *Logic* expresses the sentiments of the sect as follows : “ Since all our senses are fallacious, and we are frequently deceived by them, common reason advises that we should not put too much trust in them, nay, that we should suspect falsehood in everything they represent ; for it is imprudence and temerity to trust to those who have

but once deceived us ; and, if they err at any time, they may be believed always to err. They are given by nature for this purpose only to warn us of what is useful and what is hurtful to us. The order of nature is perverted when we put them to any other use, and apply them for the knowledge of truth."

When we consider that the active part of mankind, in all ages from the beginning of the world, have rested their most important concerns upon the testimony of sense, it will be very difficult to reconcile their conduct with the speculative opinion so generally entertained of the fallaciousness of the senses. And it seems to be a very unfavourable account of the workmanship of the Supreme Being, to think that he has given us one faculty to deceive us — to wit, our senses ; and another faculty — to wit, our reason — to detect the fallacy.

It deserves, therefore, to be considered, whether the fallaciousness of our senses be not a common error, which men have been led into from a desire to conceal their ignorance, or to apologise for their mistakes.

There are two powers which we owe to our external senses — sensation, and the perception of external objects.

It is impossible that there can be any fallacy in sensation : for we are conscious of all our sensations, and they can neither be any other in their nature, nor greater or less in their degree than we feel them. It is impossible that a man should be in pain when he does not feel pain ; and when he feels pain, it is impossible that his pain should not be real, and in its degree what it is felt to be ; and the same thing may be said of every sensation whatsoever. An agreeable or an uneasy sensation may be forgot when it is past, but when it is present it can be nothing but what we feel.

If, therefore, there be any fallacy in our senses, it must be in the perception of external objects, which we shall next consider.

And here I grant that we can conceive powers of perceiving external objects more perfect than ours, which, possibly, beings of a higher order may enjoy. We can

perceive external objects only by means of bodily organs ; and these are liable to various disorders which sometimes affect our powers of perception. The nerves and brain, which are interior organs of perception, are likewise liable to disorders, as every part of the human frame is.

The appearances commonly imputed to the fallacy of the senses are many and of different kinds, but I think they may be reduced to the four following classes.

*First*, Many things called deceptions of the senses are only conclusions rashly drawn from the testimony of the senses. In these cases the testimony of the senses is true, but we rashly draw a conclusion from it, which does not necessarily follow. We are disposed to impute our errors rather to false information than to inconclusive reasoning, and to blame our senses for the wrong conclusions we draw from their testimony.<sup>1</sup>

Thus, when a man has taken a counterfeit guinea for a true one, he says his senses deceived him ; but he lays the blame where it ought not to be laid : for we may ask him, Did your senses give a false testimony of the colour, or of the figure, or of the impression ? No. But this is all that they testified, and this they testified truly : From these premises you concluded that it was a true guinea, but this conclusion does not follow ; you erred, therefore, not by relying upon the testimony of sense, but by judging rashly from its testimony. Not only are your senses innocent of this error, but it is only by their information that it can be discovered. If you consult them properly, they will inform you that what you took for a guinea is base metal, or is deficient in weight, and this can only be known by the testimony of sense.

I remember to have met with a man who thought the argument used by Protestants against the Popish doctrine of transubstantiation, from the testimony of our senses, in-

<sup>1</sup> It should be noted that, given Reid's definition of perception (*v.* p. 151 n. 2), the false conclusion which we draw from the testimony of the senses is not the cause (or the effect) of fallacious perception, it *is* fallacious perception. Secondly, Reid is supposing that sensations provide testimony only in the sense that we interpret them as symptoms of qualities in objects ; in themselves, *qua* sensations, they cannot refer or provide testimony.

conclusive ; because, said he, instances may be given where several of our senses may deceive us : How do we know, then, that there may not be cases wherein they all deceive us, and no sense is left to detect the fallacy ? I begged of him to know an instance wherein several of our senses deceive us. I take, said he, a piece of soft turf ; I cut it into the shape of an apple ; with the essence of apples, I give it the smell of an apple ; and with paint, I can give it the skin and colour of an apple. Here then is a body which, if you judge by your eye, by your touch, or by your smell, is an apple.

To this I would answer that no one of our senses deceives us in this case. My sight and touch testify that it has the shape and colour of an apple : this is true. The sense of smelling testifies that it has the smell of an apple : this is likewise true, and is no deception. Where then lies the deception ? It is evident it lies in this — that because this body has some qualities belonging to an apple I conclude that it is an apple. This is a fallacy, not of the senses, but of inconclusive reasoning.

*Secondly*, Another class of errors imputed to the fallacy of the senses are those which we are liable to in our acquired perceptions. Acquired perception is not properly the testimony of those senses which God hath given us, but a conclusion drawn from what the senses testify.<sup>1</sup> In our past experience we have found certain things conjoined with what our senses testify. We are led by our constitution to expect this conjunction in time to come ;

<sup>1</sup> The distinction between original and acquired perception (discussed fully in the preceding chapter, omitted from this edition) is illustrated by the example of the sphere in the following paragraph. What I see is a "circular form, having the light and colour distributed in a certain way over it". From this I at first conclude that the object is a two-dimensional figure : this conclusion is the original perception. When I touch the object, I find it to be spherical and not circular. And in the future when I have sensations similar to the original one, I proceed at once to the belief that the object is a sphere ; and this is the acquired perception. "That these [perceptions of three dimensions, of being spherical, of being of a certain linear magnitude, and a certain distance from the eye] are not original perceptions of sight, but acquired by experience, is sufficiently evident from the principles of optics, and from the art of painters, in painting objects of three dimensions upon a plane which has only two" (*Int. Powers*, II. 21. H. p. 332).

and when we have often found it in our experience to happen, we acquire a firm belief that the things which we have found thus conjoined are connected in nature, and that one is a sign of the other. The appearance of the sign immediately produces the belief of its usual attendant, and we think we perceive the one as well as the other.

Whether this acquired perception is to be resolved into some process of reasoning of which we have lost the remembrance, as some philosophers think, or whether it results from some part of our constitution distinct from reason, as I rather believe, does not concern the present subject. If the first of these opinions be true, the errors of acquired perception will fall under the first class before mentioned. If not, it makes a distinct class by itself. But whether the one or the other be true, it must be observed that the errors of acquired perception are not properly fallacies of our senses.

Thus, when a globe is set before me, I perceive by my eyes that it has three dimensions and a spherical figure. To say that this is not perception would be to reject the authority of custom in the use of words, which no wise man will do : but that it is not the testimony of my sense of seeing, every philosopher knows. I see only a circular form, having the light and colour distributed in a certain way over it. But, being accustomed to observe this distribution of light and colour only in a spherical body, I immediately, from what I see, believe the object to be spherical, and say that I see or perceive it to be spherical. When a painter, by an exact imitation of that distribution of light and colour which I have been accustomed to see only in a real sphere, deceives me, so as to make me take that to be a real sphere which is only a painted one, the testimony of my eye is true — the colour and visible figure of the object is truly what I see it to be : the error lies in the conclusion drawn from what I see — to wit, that the object has three dimensions and a spherical figure. The conclusion is false in this case ; but, whatever be the origin of this conclusion, it is not properly the testimony of sense.

To this class we must refer the judgments we are apt to form of the distance and magnitude of the heavenly bodies, and of terrestrial objects seen on high. The mistakes we make of the magnitude and distance of objects seen through optical glasses, or through an atmosphere uncommonly clear or uncommonly foggy, belong likewise to this class.

The errors we are led into in acquired perception are very rarely hurtful to us in the conduct of life ; they are gradually corrected by a more enlarged experience, and a more perfect knowledge of the laws of nature : and the general laws of our constitution, by which we are sometimes led into them, are of the greatest utility.

We come into the world ignorant of everything, and by our ignorance exposed to many dangers and to many mistakes. The regular train of causes and effects which divine wisdom has established, and which directs every step of our conduct in advanced life, is unknown until it is gradually discovered by experience.

A third class of errors, ascribed to the fallacy of the senses, proceeds from ignorance of the laws of nature.

The laws of nature (I mean not moral but physical laws) are learned either from our own experience or the experience of others who have had occasion to observe the course of nature.

Ignorance of those laws, or inattention to them, is apt to occasion false judgments with regard to the objects of sense, especially those of hearing and of sight ; which false judgments are often, without good reason, called fallacies of sense.

Sounds affect the ear differently, according as the sounding body is before or behind us, on the right hand or on the left, near or at a great distance. We learn, by the manner in which the sound affects the ear, on what hand we are to look for the sounding body ; and in most cases we judge right. But we are sometimes deceived by echoes, or by whispering galleries, or speaking trumpets, which return the sound, or alter its direction, or convey it to a distance without diminution.

It is indeed a wonderful instance of the accuracy as well as of the truth of our senses, in things that are of real use in life, that we are able to distinguish all our acquaintance by their countenance, by their voice, and by their handwriting, when, at the same time, we are often unable to say by what minute difference the distinction is made ; and that we are so very rarely deceived in matters of this kind, when we give proper attention to the informations of sense.

However, if any case should happen in which sounds produced by different causes are not distinguishable by the ear, this may prove that our senses are imperfect, but not that they are fallacious. The ear may not be able to draw the just conclusion, but it is only our ignorance of the laws of sound that leads us to a wrong conclusion.

Deceptions of sight, arising from ignorance of the laws of nature, are more numerous and more remarkable than those of hearing.

The rays of light, which are the means of seeing, pass in right lines from the object to the eye, when they meet with no obstruction ; and we are by nature led to conceive the visible object to be in the direction of the rays that come to the eye. But the rays may be reflected, refracted, or inflected in their passage from the object to the eye, according to certain fixed laws of nature, by which means their direction may be changed, and consequently the apparent place, figure, or magnitude of the object.

Thus, a child seeing himself in a mirror thinks he sees another child behind the mirror that imitates all his motions. But even a child soon gets the better of this deception and knows that he sees himself only.

All the deceptions made by telescopes, microscopes, camera obscuras, magic lanterns, are of the same kind, though not so familiar to the vulgar. The ignorant may be deceived by them ; but to those who are acquainted with the principles of optics they give just and true information, and the laws of nature by which they are produced are of infinite benefit to mankind.

There remains another class of errors, commonly called

deceptions of sense, and the only one, as I apprehend, to which that name can be given with propriety : I mean such as proceed from some disorder or preternatural state either of the external organ or of the nerves and brain, which are internal organs of perception.

In a delirium or in madness, perception, memory, imagination, and our reasoning powers are strangely disordered and confounded. There are likewise disorders which affect some of our senses, while others are sound. Thus, a man may feel pain in his toes after the leg is cut off. He may feel a little ball double by crossing his fingers. He may see an object double by not directing both eyes properly to it. By pressing the ball of his eye, he may see colours that are not real. By the jaundice in his eyes he may mistake colours. These are more properly deceptions of sense than any of the classes before mentioned.<sup>1</sup>

We must acknowledge it to be the lot of human nature that all the human faculties are liable, by accidental causes, to be hurt and unfitted for their natural functions, either wholly or in part : but as this imperfection is common to them all, it gives no just ground for accounting any of them fallacious.

Upon the whole it seems to have been a common error of philosophers to account the senses fallacious. And to this error they have added another — that one use of reason is to detect the fallacies of sense.

It appears, I think, from what has been said that there is no more reason to account our senses fallacious than our reason, our memory, or any other faculty of judging which nature hath given us. They are all limited and imperfect,

<sup>1</sup> Why Reid admitted this is not clear. It is true that the false conclusions which we draw in these cases are partly due to our sensations being abnormal, but they must also be partly due to our ignorance that they are abnormal. In principle then they are similar to the second class, where our mistake lies in supposing that sensations of a certain type (*e.g.* visual sensations of a circular patch, having a certain distribution of colour) are to be taken as signs of one object only, whereas, in fact, some must be taken as signs of circular, and others of spherical objects. Similarly when disordered, we might have sensations precisely like others which we have (or could have) when not disordered ; our mistake will be to refer the first to the same objects as the second.

but wisely suited to the present condition of man. We are liable to error and wrong judgment in the use of them all, but as little in the informations of sense as in the deductions of reasoning. And the errors we fall into with regard to objects of sense are not corrected by reason, but by more accurate attention to the informations we may receive by our senses themselves.

Perhaps the pride of philosophers may have given occasion to this error. Reason is the faculty wherein they assume a superiority to the unlearned. The informations of sense are common to the philosopher and to the most illiterate: they put all men upon a level, and therefore are apt to be undervalued. We must, however, be beholden to the informations of sense for the greatest and most interesting part of our knowledge. The wisdom of nature has made the most useful things most common, and they ought not to be despised on that account. Nature likewise forces our belief in those informations, and all the attempts of philosophy to weaken it are fruitless and vain.

I add only one observation to what has been said upon this subject. It is, that there seems to be a contradiction between what philosophers teach concerning ideas and their doctrine of the fallaciousness of the senses. We are taught that the office of the senses is only to give us the ideas of external objects. If this be so, there can be no fallacy in the senses. Ideas can neither be true nor false. If the senses testify nothing, they cannot give false testimony. If they are not judging faculties, no judgment can be imputed to them, whether false or true. There is, therefore, a contradiction between the common doctrine concerning ideas and that of the fallaciousness of the senses. Both may be false, as I believe they are, but both cannot be true.

## ESSAY III

### OF MEMORY

#### CHAPTER I

#### THINGS OBVIOUS AND CERTAIN WITH REGARD TO MEMORY

IN the gradual progress of man from infancy to maturity there is a certain order in which his faculties are unfolded, and this seems to be the best order we can follow in treating of them.

The external senses appear first ; memory soon follows — which we are now to consider.

It is by memory that we have an immediate knowledge of things past. The senses give us information of things only as they exist in the present moment ; and this information, if it were not preserved by memory, would vanish instantly and leave us as ignorant as if it had never been.

Memory must have an object. Every man who remembers must remember something, and that which he remembers is called the object of his remembrance. In this, memory agrees with perception but differs from sensation, which has no object but the feeling itself.<sup>1</sup>

Every man can distinguish the thing remembered from the remembrance of it. We may remember anything which we have seen, or heard, or known, or done, or suffered ; but the remembrance of it is a particular act of the mind which now exists, and of which we are conscious. To confound these two is an absurdity which a thinking man could not be led into but by some false hypothesis which hinders him from reflecting upon the thing which he would explain by it.

<sup>1</sup> V p 18.

In memory we do not find such a train of operations connected by our constitution as in perception. When we perceive an object by our senses there is, first, some impression made by the object upon the organ of sense, either immediately or by means of some medium. By this, an impression is made upon the nerves and brain in consequence of which we feel some sensation ; and that sensation is attended by that conception and belief of the external object which we call perception. These operations are so connected in our constitution that it is difficult to disjoin them in our conceptions, and to attend to each without confounding it with the others. But in the operations of memory we are free from this embarrassment ; they are easily distinguished from all other acts of the mind, and the names which denote them are free from all ambiguity.

The object of memory, or thing remembered, must be something that is past ; as the object of perception and of consciousness must be something which is present. What now is, cannot be an object of memory ; neither can that which is past and gone be an object of perception or of consciousness.

Memory is always accompanied with the belief of that which we remember, as perception is accompanied with the belief of that which we perceive, and consciousness with the belief of that whereof we are conscious. Perhaps in infancy, or in a disorder of mind, things remembered may be confounded with those which are merely imagined ; but in mature years, and in a sound state of mind, every man feels that he must believe what he distinctly remembers, though he can give no other reason of his belief but that he remembers the thing distinctly ; whereas, when he merely imagines a thing ever so distinctly, he has no belief of it upon that account.

This belief, which we have from distinct memory, we account real knowledge, no less certain than if it was grounded on demonstration ; no man in his wits calls it in question or will hear any argument against it. The testimony of witnesses in causes of life and death depends

upon it, and all the knowledge of mankind of past events is built on this foundation.

There are cases in which a man's memory is less distinct and determinate, and where he is ready to allow that it may have failed him ; but this does not in the least weaken its credit when it is perfectly distinct.

Memory implies a conception and belief of past duration ; for it is impossible that a man should remember a thing distinctly without believing some interval of duration, more or less, to have passed between the time it happened and the present moment ; and I think it is impossible to show how we could acquire a notion of duration if we had no memory. Things remembered must be things formerly perceived or known. I remember the transit of Venus over the sun in the year 1769. I must therefore have perceived it at the time it happened, otherwise I could not now remember it. Our first acquaintance with any object of thought cannot be by remembrance. Memory can only produce a continuance or renewal of a former acquaintance with the thing remembered.

The remembrance of a past event is necessarily accompanied with the conviction of our own existence at the time the event happened. I cannot remember a thing that happened a year ago without a conviction as strong as memory can give, that I, the same identical person who now remember that event, did then exist.

What I have hitherto said concerning memory I consider as principles which appear obvious and certain to every man who will take the pains to reflect upon the operations of his own mind. They are facts of which every man must judge by what he feels, and they admit of no other proof but an appeal to every man's own reflection. I shall therefore take them for granted in what follows, and shall, first, draw some conclusions from them, and then examine the theories of philosophers concerning memory, and concerning duration, and our personal identity, of which we acquire the knowledge by memory.

## CHAPTER 2

## MEMORY AN ORIGINAL FACULTY

FIRST, I think it appears that memory is an original faculty, given us by the Author of our being, of which we can give no account, but that we are so made.

The knowledge which I have of things past, by my memory, seems to me as unaccountable as an immediate knowledge would be of things to come ; and I can give no reason why I should have the one and not the other, but that such is the will of my Maker. I find in my mind a distinct conception and a firm belief of a series of past events, but how this is produced I know not. I call it memory, but this is only giving a name to it — it is not an account of its cause. I believe most firmly what I distinctly remember, but I can give no reason of this belief. It is the inspiration of the Almighty that gives me this understanding.

When I believe the truth of a mathematical axiom or of a mathematical proposition, I see that it must be so : every man who has the same conception of it sees the same. There is a necessary and an evident connection between the subject and the predicate of the proposition, and I have all the evidence to support my belief which I can possibly conceive.

When I believe that I washed my hands and face this morning, there appears no necessity in the truth of this proposition. It might be, or it might not be. A man may distinctly conceive it without believing it at all. How then do I come to believe it ? I remember it distinctly. This is all I can say. This remembrance is an act of my mind. Is it impossible that this act should be, if the event had not happened ? I confess I do not see any necessary connection between the one and the other.

We know some abstract truths by comparing the terms of the proposition which expresses them, and perceiving

some necessary relation or agreement between them. It is thus I know that two and three make five ; that the diameters of a circle are all equal. Mr. Locke having discovered this source of knowledge, too rashly concluded that all human knowledge might be derived from it ; and in this he has been followed very generally — by Mr. Hume in particular.

But I apprehend that our knowledge of the existence of things contingent can never be traced to this source.<sup>1</sup> I know that such a thing exists, or did exist. This knowledge cannot be derived from the perception of a necessary agreement between existence and the thing that exists, because there is no such necessary agreement ; and therefore no such agreement can be perceived either immediately or by a chain of reasoning. The thing does not exist necessarily, but by the will and power of him that made it ; and there is no contradiction follows from supposing it not to exist.

Whence I think it follows that our knowledge of the existence of our own thoughts, of the existence of all the material objects about us, and of all past contingencies, must be derived, not from a perception of necessary relations or agreements, but from some other source.

Our Maker has provided other means for giving us the knowledge of these things — means which perfectly answer their end and produce the effect intended by them. But in what manner they do this is, I fear, beyond our skill to explain. We know our own thoughts and the operations of our minds by a power which we call consciousness : but this is only giving a name to this part of our frame. It does not explain its fabric, nor how it produces in us an irresistible conviction of its informations. We perceive

<sup>1</sup> Reid's argument is misleading here. Neither Locke nor Hume supposed that knowledge of matters of fact could be reduced to knowledge of reason. They both insisted on the distinction (*Essay*, IV. 1. 7 ; *Treatise*, I. 3, and *Enquiry concerning Human Understanding*, 4), and Hume's main question throughout Book I of the *Treatise* was "how is knowledge of matters of fact possible ?" In the strict sense, then, knowledge was restricted to those propositions which could be demonstrated, and the problem was to discover in what sense, if any, we could be said to have knowledge of contingent propositions, which do not carry the guarantee of demonstrability.

material objects and their sensible qualities by our senses, but how they give us this information, and how they produce our belief in it, we know not. We know many past events by memory, but how it gives this information, I believe, is inexplicable.

If any man thinks he can prove that the actions of a free agent cannot be foreknown, he will find the same arguments of equal force to prove that the past actions of a free agent cannot be remembered. It is true that what is past did certainly exist. It is no less true that what is future will certainly exist. I know no reasoning from the constitution of the agent, or from his circumstances, that has not equal strength whether it be applied to his past or to his future actions. The past was, but now is not. The future will be, but now is not. The present is equally connected or unconnected with both.

We are so constituted as to have an intuitive knowledge of many things past, but we have no intuitive knowledge of the future. We might perhaps have been so constituted as to have an intuitive knowledge of the future, but not of the past; nor would this constitution have been more unaccountable than the present, though it might be much more inconvenient.

Our original faculties are all unaccountable. Of these memory is one. He only who made them comprehends fully how they are made, and how they produce in us not only a conception, but a firm belief and assurance of things which it concerns us to know.

### CHAPTER 3

#### OF DURATION

FROM the principles laid down in the first chapter of this Essay I think it appears that our notion of duration, as well as our belief of it, is got by the faculty of memory.

It is essential to everything remembered that it be something which is past ; and we cannot conceive a thing to be past without conceiving some duration, more or less, between it and the present. As soon therefore as we remember anything, we must have both a notion and a belief of duration. It is necessarily suggested by every operation of our memory ; and to that faculty it ought to be ascribed.

The parts of duration have to other parts of it the relations of prior and posterior, and to the present they have the relations of past and future. The notion of past is immediately suggested by memory, as has been before observed. And when we have got the notions of present and past, and of prior and posterior, we can from these frame a notion of the future, for the future is that which is posterior to the present. Nearness and distance are relations equally applicable to time and to place. Distance in time and distance in place are things so different in their nature and so like in their relation that it is difficult to determine whether the name of distance is applied to both in the same, or an analogical sense.

## CHAPTER 4

### OF IDENTITY

THE conviction which every man has of his Identity, as far back as his memory reaches, needs no aid of philosophy to strengthen it, and no philosophy can weaken it without first producing some degree of insanity.

The philosopher, however, may very properly consider this conviction as a phenomenon of human nature worthy of his attention. If he can discover its cause, an addition is made to his stock of knowledge. If not, it must be held as a part of our original constitution, or an effect of that constitution produced in a manner unknown to us.

We may observe, first of all, that this conviction is

indispensably necessary to all exercise of reason. The operations of reason, whether in action or in speculation, are made up of successive parts. The antecedent are the foundation of the consequent, and without the conviction that the antecedent have been seen or done by me, I could have no reason to proceed to the consequent in any speculation or in any active project whatever.

There can be no memory of what is past without the conviction that we existed at the time remembered. There may be good arguments to convince me that I existed before the earliest thing I can remember ; but to suppose that my memory reaches a moment farther back than my belief and conviction of my existence is a contradiction.

The moment a man loses this conviction, as if he had drunk the water of Lethe, past things are done away, and in his own belief he then begins to exist. Whatever was thought, or said, or done, or suffered before that period may belong to some other person, but he can never impute it to himself, or take any subsequent step that supposes it to be his doing.

From this it is evident that we must have the conviction of our own continued existence and identity as soon as we are capable of thinking or doing anything, on account of what we have thought, or done, or suffered before ; that is, as soon as we are reasonable creatures.

That we may form as distinct a notion as we are able of this phenomenon of the human mind, it is proper to consider what is meant by identity in general, what by our own personal identity, and how we are led into that invincible belief and conviction which every man has of his own personal identity, as far as his memory reaches.

Identity in general I take to be a relation between a thing which is known to exist at one time, and a thing which is known to have existed at another time. If you ask whether they are one and the same, or two different things, every man of common sense understands the meaning of your question perfectly. Whence we may infer with certainty that every man of common sense has a clear and distinct notion of identity.

If you ask a definition of identity, I confess I can give none ; it is too simple a notion to admit of logical definition. I can say it is a relation, but I cannot find words to express the specific difference between this and other relations, though I am in no danger of confounding it with any other. I can say that diversity is a contrary relation, and that similitude and dissimilitude are another couple of contrary relations which every man easily distinguishes in his conception from identity and diversity.

I see evidently that identity supposes an uninterrupted continuance of existence. That which hath ceased to exist cannot be the same with that which afterwards begins to exist, for this would be to suppose a being to exist after it ceased to exist, and to have had existence before it was produced, which are manifest contradictions. Continued uninterrupted existence is therefore necessarily implied in identity.

Hence we may infer that identity cannot, in its proper sense, be applied to our pains, our pleasures, our thoughts, or any operation of our minds. The pain felt this day is not the same individual pain which I felt yesterday, though they may be similar in kind and degree, and have the same cause. The same may be said of every feeling and of every operation of mind : they are all successive in their nature, like time itself, no two moments of which can be the same moment.

It is otherwise with the parts of absolute space. They always are, and were, and will be the same. So far, I think, we proceed upon clear ground in fixing the notion of identity in general.

It is perhaps more difficult to ascertain with precision the meaning of Personality, but it is not necessary in the present subject : it is sufficient for our purpose to observe that all mankind place their personality in something that cannot be divided, or consist of parts. A part of a person is a manifest absurdity.

When a man loses his estate, his health, his strength, he is still the same person and has lost nothing of his personality. If he has a leg or an arm cut off, he is the

same person he was before. The amputated member is no part of his person, otherwise it would have a right to a part of his estate and be liable for a part of his engagements ; it would be entitled to a share of his merit and demerit — which is manifestly absurd. A person is something indivisible, and is what Leibniz calls a *monad*.

My personal identity, therefore, implies the continued existence of that indivisible thing which I call myself. Whatever this self may be, it is something which thinks, and deliberates, and resolves, and acts, and suffers. I am not thought, I am not action, I am not feeling ; I am something that thinks, and acts, and suffers. My thoughts, and actions, and feelings change every moment — they have no continued, but a successive existence ; but that *self* or *I* to which they belong is permanent, and has the same relation to all the succeeding thoughts, actions, and feelings, which I call mine.

Such are the notions that I have of my personal identity. But perhaps it may be said this may all be fancy without reality. How do you know ? — what evidence have you that there is such a permanent self which has a claim to all the thoughts, actions, and feelings which you call yours ?

To this I answer that the proper evidence I have of all this is remembrance. I remember that, twenty years ago, I conversed with such a person ; I remember several things that passed in that conversation ; my memory testifies not only that this was done, but that it was done by me who now remember it. If it was done by me, I must have existed at that time, and continued to exist from that time to the present : if the identical person whom I call myself had not a part in that conversation, my memory is fallacious — it gives a distinct and positive testimony of what is not true. Every man in his senses believes what he distinctly remembers, and everything he remembers convinces him that he existed at the time remembered.

Although memory gives the most irresistible evidence of my being the identical person that did such a thing, at such a time, I may have other good evidence of things which befell me, and which I do not remember : I know who

bore me and suckled me, but I do not remember these events.

It may here be observed (though the observation would have been unnecessary if some great philosophers had not contradicted it)<sup>1</sup> that it is not my remembering any action of mine that makes me to be the person who did it. This remembrance makes me to know assuredly that I did it ; but I might have done it though I did not remember it. That relation to me which is expressed by saying that I did it, would be the same though I had not the least remembrance of it. To say that my remembering that I did such a thing, or, as some choose to express it, my being conscious that I did it, makes me to have done it, appears to me as great an absurdity as it would be to say that my belief that the world was created made it to be created.

When we pass judgment on the identity of other persons besides ourselves, we proceed upon other grounds, and determine from a variety of circumstances, which sometimes produce the firmest assurance and sometimes leave room for doubt. The identity of persons has often furnished matter of serious litigation before tribunals of justice. But no man of a sound mind ever doubted of his own identity as far as he distinctly remembered.

The identity of a person is a perfect identity ; wherever it is real, it admits of no degrees ; and it is impossible that a person should be in part the same, and in part different, because a person is a *monad* and is not divisible into parts. The evidence of identity in other persons besides ourselves does indeed admit of all degrees, from what we account certainty to the last degree of probability. But still it is true that the same person is perfectly the same, and cannot be so in part or in some degree only.

For this cause I have first considered personal identity, as that which is perfect in its kind, and the natural measure of that which is imperfect.

We probably at first derive our notion of identity from that natural conviction which every man has from the dawn of reason of his own identity and continued existence.

<sup>1</sup> Reid is here referring to Locke (*Essay*, II. 27) ; *v. infra*, Chapter 6.

The operations of our minds are all successive and have no continued existence. But the thinking being has a continued existence, and we have an invincible belief that it remains the same when all its thoughts and operations change.

Our judgments of the identity of objects of sense seem to be formed much upon the same grounds as our judgments of the identity of other persons besides ourselves.

Wherever we observe great similarity we are apt to presume identity if no reason appears to the contrary. Two objects ever so like, when they are perceived at the same time, cannot be the same ; but, if they are presented to our senses at different times, we are apt to think them the same merely from their similarity.

Whether this be a natural prejudice or from whatever cause it proceeds, it certainly appears in children from infancy ; and when we grow up it is confirmed in most instances by experience, for we rarely find two individuals of the same species that are not distinguishable by obvious differences.

A man challenges a thief whom he finds in possession of his horse or his watch, only on similarity. When the watchmaker swears that he sold this watch to such a person, his testimony is grounded on similarity. The testimony of witnesses to the identity of a person is commonly grounded on no other evidence.

Thus it appears that the evidence we have of our own identity, as far back as we remember, is totally of a different kind from the evidence we have of the identity of other persons or of objects of sense. The first is grounded on memory and gives undoubted certainty. The last is grounded on similarity and on other circumstances which in many cases are not so decisive as to leave no room for doubt.

It may likewise be observed that the identity of objects of sense is never perfect. All bodies, as they consist of innumerable parts that may be disjoined from them by a great variety of causes, are subject to continual changes of their substance, increasing, diminishing, changing

insensibly. When such alterations are gradual, because language could not afford a different name for every different state of such a changeable being, it retains the same name and is considered as the same thing. Thus we say of an old regiment that it did such a thing a century ago, though there now is not a man alive who then belonged to it. We say a tree is the same in the seed-bed and in the forest. A ship of war, which has successively changed her anchors, her tackle, her sails, her masts, her planks, and her timbers, while she keeps the same name, is the same.

The identity, therefore, which we ascribe to bodies, whether natural or artificial, is not perfect identity ; it is rather something which, for the convenience of speech, we call identity. It admits of a great change of the subject, providing the change be gradual, sometimes even of a total change. And the changes which in common language are made consistent with identity differ from those that are thought to destroy it, not in kind, but in number and degree. It has no fixed nature when applied to bodies ; and questions about the identity of a body are very often questions about words. But identity, when applied to persons, has no ambiguity and admits not of degrees, or of more and less. It is the foundation of all rights and obligations, and of all accountableness ; and the notion of it is fixed and precise.

## CHAPTER 5

### MR. LOCKE'S ACCOUNT [OF THE ORIGIN OF OUR IDEAS, AND PARTICULARLY] OF THE IDEA OF DURATION

IT was a very laudable attempt of Mr. Locke " to inquire into the original of those ideas, notions, or whatever you please to call them, which a man observes, and is conscious to himself he has in his mind, and the ways whereby the

understanding comes to be furnished with them ".<sup>1</sup> No man was better qualified for this investigation, and I believe no man ever engaged in it with a more sincere love of truth.

I proceed to some observations on his account of the idea of duration.

" Reflection ", he says, " upon the train of ideas, which appear one after another in our minds, is that which furnishes us with the idea of succession ; and the distance between any two parts of that succession is that we call duration." <sup>2</sup>

If it be meant that the idea of succession is prior to that of duration, either in time or in the order of nature, this, I think, is impossible, because succession, as Dr. Price justly observes,<sup>3</sup> presupposes duration, and can in no sense be prior to it ; and therefore it would be more proper to derive the idea of succession from that of duration.

But how do we get the idea of succession ? It is, says he, by reflecting upon the train of ideas which appear one after another in our minds.

Reflecting upon the train of ideas can be nothing but remembering it, and giving attention to what our memory testifies concerning it ; for, if we did not remember it, we could not have a thought about it. So that it is evident that this reflection includes remembrance, without which there could be no reflection on what is past, and consequently no idea of succession.

It may here be observed that, if we speak strictly and philosophically, no kind of succession can be an object either of the senses or of consciousness, because the operations of both are confined to the present point of time, and there can be no succession in a point of time ; and on that account the motion of a body, which is a successive change of place, could not be observed by the senses alone without the aid of memory.

As this observation seems to contradict the common sense and common language of mankind when they affirm

<sup>1</sup> *Essay*, I. 1. 3.

<sup>2</sup> *Ib.* II. 14. 3.

<sup>3</sup> Richard Price, *Review of the Principal Questions in Morals*, 1. 2.

that they see a body move, and hold motion to be an object of the senses, it is proper to take notice that this contradiction between the philosopher and the vulgar is apparent only and not real. It arises from this, that philosophers and the vulgar differ in the meaning they put upon what is called the *present* time, and are thereby led to make a different limit between sense and memory.

Philosophers give the name of the *present* to that indivisible point of time which divides the future from the past ; but the vulgar find it more convenient in the affairs of life to give the name of *present* to a portion of time which extends more or less, according to circumstances, into the past or the future. Hence we say the present hour, the present year, the present century, though one point only of these periods can be present in the philosophical sense.

As the purposes of conversation make it convenient to extend what is called the present, the same reason leads men to extend the province of sense and to carry its limit as far back as they carry the present. Thus a man may say, I saw such a person just now : it would be ridiculous to find fault with this way of speaking, because it is authorised by custom and has a distinct meaning. But, if we speak philosophically, the senses do not testify what we saw but only what we see ; what I saw last moment I consider as the testimony of sense, though it is now only the testimony of memory.

There is no necessity in common life of dividing accurately the provinces of sense and of memory ; and, therefore, we assign to sense not an indivisible point of time, but that small portion of time which we call the present, which has a beginning, a middle, and an end.

Having considered the account given by Mr. Locke of the idea of succession, we shall next consider how, from the idea of succession, he derives the idea of duration.

“ The distance ”, he says, “ between any parts of that succession, or between the appearance of any two ideas in our minds, is that we call duration.”

To conceive this the more distinctly, let us call the distance between an idea and that which immediately

succeeds it, one element of duration ; the distance between an idea and the second that succeeds it, two elements, and so on : if ten such elements make duration, then one must make duration, otherwise duration must be made up of parts that have no duration, which is impossible.

For, suppose a succession of as many ideas as you please, if none of these ideas have duration, nor any interval of duration be between one and another, then it is perfectly evident there can be no interval of duration between the first and the last, how great soever their number be. I conclude, therefore, that there must be duration in every single interval or element of which the whole duration is made up. Nothing indeed is more certain than that every elementary part of duration must have duration, as every elementary part of extension must have extension.

Now it must be observed that, in these elements of duration or single intervals of successive ideas, there is no succession of ideas ; yet we must conceive them to have duration ; whence we may conclude with certainty that there is a conception of duration where there is no succession of ideas in the mind.

We may measure duration by the succession of thoughts in the mind, as we measure length by inches or feet ; but the notion or idea of duration must be antecedent to the mensuration of it, as the notion of length is antecedent to its being measured.

Mr. Locke draws some conclusions from his account of the idea of duration which may serve as a touchstone to discover how far it is genuine. One is that, if it were possible for a waking man to keep only one idea in his mind without variation, or the succession of others, he would have no perception of duration at all ; and the moment he began to have this idea would seem to have no distance from the moment he ceased to have it.

Now, that one idea should seem to have no duration, and that a multiplication of that *no duration* should seem to have duration, appears to me as impossible as that the multiplication of nothing should produce something.

Another conclusion which the author draws from this

theory is that the same period of duration appears long to us when the succession of ideas in our mind is quick, and short when the succession is slow.

There can be no doubt but the same length of duration appears in some circumstances much longer than in others ; the time appears long when a man is impatient under any pain or distress, or when he is eager in the expectation of some happiness. On the other hand, when he is pleased and happy in agreeable conversation, or delighted with a variety of agreeable objects that strike his senses or his imagination, time flies away and appears short.

According to Mr. Locke's theory, in the first of these cases the succession of ideas is very quick, and in the last very slow. I am rather inclined to think that the very contrary is the truth. When a man is racked with pain or with expectation, he can hardly think of anything but his distress ; and the more his mind is occupied by that sole object, the longer the time appears. On the other hand, when he is entertained with cheerful music, with lively conversation, and brisk sallies of wit, there seems to be the quickest succession of ideas, but the time appears shortest.

I have heard a military officer, a man of candour and observation, say that the time he was engaged in hot action always appeared to him much shorter than it really was. Yet I think it cannot be supposed that the succession of ideas was then slower than usual.

If the idea of duration were got merely by the succession of ideas in our minds, that succession must, to ourselves, appear equally quick at all times, because the only measure of duration is the number of succeeding ideas ; but I believe every man capable of reflection will be sensible that at one time his thoughts come slowly and heavily, and at another time have a much quicker and livelier motion.

I know of no ideas or notions that have a better claim to be accounted simple and original than those of Space and Time. It is essential both to space and time to be made up of parts ; but every part is similar to the whole, and of the same nature. Different parts of space, as it has three dimensions, may differ both in figure and in magni-

tude ; but time having only one dimension, its parts can differ only in magnitude ; and, as it is one of the simplest objects of thought, the conception of it must be purely the effect of our constitution, and given us by some original power of the mind.

The sense of seeing, by itself, gives us the conception and belief of only two dimensions of extension, but the sense of touch discovers three ; and reason, from the contemplation of finite extended things, leads us necessarily to the belief of an immensity that contains them. In like manner, memory gives us the conception and belief of finite intervals of duration. From the contemplation of these, reason leads us necessarily to the belief of an eternity which comprehends all things that have a beginning and end. Our conceptions, both of space and time, are probably partial and inadequate, and, therefore, we are apt to lose ourselves and to be embarrassed in our reasonings about them.

Our understanding is no less puzzled when we consider the minutest parts of time and space than when we consider the whole. We are forced to acknowledge that in their nature they are divisible without end or limit, but there are limits beyond which our faculties can divide neither the one nor the other.

It may be determined by experiment what is the least angle under which an object may be discerned by the eye, and what is the least interval of duration that may be discerned by the ear. I believe these may be different in different persons. But surely there is a limit which no man can exceed : and what our faculties can no longer divide is still divisible in itself and, by beings of superior perfection, may be divided into thousands of parts.

In order to judge to what degree of accuracy we can measure short intervals of time, it may be observed that one who has given attention to the motion of a Second pendulum, will be able to beat seconds for a minute with a very small error. When he continues this exercise long, as for five or ten minutes, he is apt to err, more even than in proportion to the time — for this reason, as I apprehend,

that it is difficult to attend long to the moments as they pass, without wandering after some other object of thought.

I have found, by some experiments, that a man may beat seconds for one minute, without erring above one second in the whole sixty ; and I doubt not but by long practice he might do it still more accurately. From this I think it follows, that the sixtieth part of a second of time is discernible by the human mind.

## CHAPTER 6

### OF MR. LOCKE'S ACCOUNT OF OUR PERSONAL IDENTITY

IN a long chapter upon Identity and Diversity,<sup>1</sup> Mr. Locke has made many ingenious and just observations, and some which I think cannot be defended. I shall only take notice of the account he gives of our own *Personal Identity*. His doctrine upon this subject has been censured by Bishop Butler in a short essay subjoined to his *Analogy*,<sup>2</sup> with whose sentiments I perfectly agree.

Identity, as was observed (Chapter 4 of this Essay), supposes the continued existence of the being of which it is affirmed, and therefore can be applied only to things which have a continued existence. While any being continues to exist, it is the same being ; but two beings which have a different beginning or a different ending of their existence cannot possibly be the same. To this I think Mr. Locke agrees.

He observes, very justly, that to know what is meant by the same person we must consider what the word *person* stands for, and he defines a person to be an intelligent being endowed with reason and with consciousness, which last he thinks inseparable from thought.

From this definition of a person it must necessarily follow

<sup>1</sup> *Essay*, II. 27.

<sup>2</sup> *Dissertation of Personal Identity*.

that, while the intelligent being continues to exist and to be intelligent, it must be the same person. To say that the intelligent being is the person, and yet that the person ceases to exist, while the intelligent being continues, or that the person continues while the intelligent being ceases to exist, is to my apprehension a manifest contradiction.

One would think that the definition of a person should perfectly ascertain the nature of personal identity, or wherein it consists, though it might still be a question how we come to know and be assured of our personal identity.

Mr. Locke tells us, however, "that personal identity — that is, the sameness of a rational being — consists in consciousness alone, and, as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person. So that, whatever hath the consciousness of present and past actions, is the same person to whom they belong."

This doctrine hath some strange consequences, which the author was aware of, such as that, if the same consciousness can be transferred from one intelligent being to another, which he thinks we cannot show to be impossible, then two or twenty intelligent beings may be the same person. And if the intelligent being may lose the consciousness of the actions done by him, which surely is possible, then he is not the person that did those actions ; so that one intelligent being may be two or twenty different persons, if he shall so often lose the consciousness of his former actions.

There is another consequence of this doctrine which follows no less necessarily, though Mr. Locke probably did not see it. It is that a man may be, and at the same time not be, the person that did a particular action.

Suppose a brave officer to have been flogged when a boy at school, for robbing an orchard, to have taken a standard from the enemy in his first campaign, and to have been made a general in advanced life : suppose also, which must be admitted to be possible, that, when he took the standard, he was conscious of his having been flogged at school, and that when made a general he was conscious of

his taking the standard, but had absolutely lost the consciousness of his flogging.

These things being supposed, it follows, from Mr. Locke's doctrine, that he who was flogged at school is the same person who took the standard, and that he who took the standard is the same person who was made a general. Whence it follows, if there be any truth in logic, that the general is the same person with him who was flogged at school. But the general's consciousness does not reach so far back as his flogging — therefore, according to Mr. Locke's doctrine, he is not the person who was flogged. Therefore the general is, and at the same time is not, the same person with him who was flogged at school.

Secondly, it may be observed that in this doctrine not only is consciousness confounded with memory, but, which is still more strange, personal identity is confounded with the evidence which we have of our personal identity.

It is very true that my remembrance that I did such a thing is the evidence I have that I am the identical person who did it. And this, I am apt to think, Mr. Locke meant. But, to say that my remembrance that I did such a thing, or my consciousness, makes me the person who did it, is, in my apprehension, an absurdity too gross to be entertained by any man who attends to the meaning of it ; for it is to attribute to memory or consciousness a strange magical power of producing its object, though that object must have existed before the memory or consciousness which produced it.

Thirdly, is it not strange that the sameness or identity of a person should consist in a thing which is continually changing and is not any two minutes the same ?

Our consciousness, our memory, and every operation of the mind, are still flowing like the water of a river, or like time itself. The consciousness I have this moment can no more be the same consciousness I had last moment, than this moment can be the last moment. Identity can only be affirmed of things which have a continued existence. Consciousness and every kind of thought is transient and momentary, and has no continued existence, and, therefore,

if personal identity consisted in consciousness it would certainly follow that no man is the same person any two moments of his life ; and, as the right and justice of reward and punishment is founded on personal identity, no man could be responsible for his actions.

But, though I take this to be the unavoidable consequence of Mr. Locke's doctrine concerning personal identity, and though some persons may have liked the doctrine the better on this account, I am far from imputing anything of this kind to Mr. Locke. He was too good a man not to have rejected with abhorrence a doctrine which he believed to draw this consequence after it.

Fourthly, there are many expressions used by Mr. Locke, in speaking of personal identity, which to me are altogether unintelligible, unless we suppose that he confounded that sameness or identity which we ascribe to an individual, with the identity which, in common discourse, is often ascribed to many individuals of the same species.

When we say that pain and pleasure, consciousness and memory, are the same in all men, this sameness can only mean similarity, or sameness of kind : but that the pain of one man can be the same individual pain with that of another man is no less impossible than that one man should be another man ; the pain felt by me yesterday can no more be the pain I feel to-day than yesterday can be this day ; and the same thing may be said of every passion and of every operation of the mind. The same kind or species of operation may be in different men, or in the same man at different times, but it is impossible that the same individual operation should be in different men or in the same man at different times.

When Mr. Locke, therefore, speaks of " the same consciousness being continued through a succession of different substances ", when he speaks of " repeating the idea of a past action, with the same consciousness we had of it at the first ", and of " the same consciousness extending to actions past and to come " <sup>1</sup> these expressions are to me unintelligible, unless he means not the same individual

<sup>1</sup> *Essay*, II. 27. 10.

consciousness, but a consciousness that is similar, or of the same kind.

If our personal identity consists in consciousness, as this consciousness cannot be the same individually any two moments, but only of the same kind, it would follow that we are not for any two moments the same individual persons, but the same kind of persons.

As our consciousness sometimes ceases to exist, as in sound sleep, our personal identity must cease with it. Mr. Locke allows that the same thing cannot have two beginnings of existence ; so that our identity would be irrecoverably gone every time we cease to think, if it was but for a moment.

## CHAPTER 7

### THEORIES CONCERNING MEMORY

THE common theory of ideas — that is, of images in the brain or in the mind of all the objects of thought — has been very generally applied to account for the faculties of memory and imagination as well as that of perception by the senses.

It is probable that in perception some impression is made upon the brain as well as upon the organ and nerves, because all the nerves terminate in the brain, and because disorders and hurts of the brain are found to affect our powers of perception when the external organ and nerve are sound ; but we are totally ignorant of the nature of this impression upon the brain : it can have no resemblance to the object perceived, nor does it in any degree account for that sensation and perception which are consequent upon it. These things have been argued in the second Essay, and shall now be taken for granted, to prevent repetition.

If the impression upon the brain be insufficient to account for the perception of objects that are present, it

can as little account for the memory of those that are past.

So that, if it were certain that the impressions made on the brain in perception remain as long as there is any memory of the object, all that could be inferred from this is that, by the laws of nature, there is a connection established between that impression and the remembrance of that object. But how the impression contributes to this remembrance we should be quite ignorant, it being impossible to discover how thought of any kind should be produced by an impression on the brain, or upon any part of the body.

To say that this impression is memory is absurd, if understood literally. If it is only meant that it is the cause of memory, it ought to be shown how it produces this effect, otherwise memory remains as unaccountable as before.

Another defect in this theory is that there is no evidence nor probability that the cause assigned does exist ; that is, that the impression made upon the brain in perception remains after the object is removed.

That impression, whatever be its nature, is caused by the impression made by the object upon the organ of sense, and upon the nerve. Philosophers suppose, without any evidence, that when the object is removed and the impression upon the organ and nerve ceases, the impression upon the brain continues and is permanent ; that is, that when the cause is removed, the effect continues. The brain surely does not appear more fitted to retain an impression than the organ and nerve.

But, granting that the impression upon the brain continues after its cause is removed, its effects ought to continue while it continues ; that is, the sensation and perception should be as permanent as the impression upon the brain, which is supposed to be their cause. But here again the philosopher makes a second supposition with as little evidence, but of a contrary nature — to wit, that while the cause remains, the effect ceases.

If this should be granted also, a third must be made — that the same cause which at first produced sensation and

perception does afterwards produce memory — an operation essentially different both from sensation and perception.

A fourth supposition must be made — that this cause, though it may be permanent, does not produce its effect at all times ; it must be like an inscription which is sometimes covered with rubbish, and on other occasions made legible ; for the memory of things is often interrupted for a long time, and circumstances bring to our recollection what had been long forgot. After all, many things are remembered which were never perceived by the senses, being no objects of sense, and therefore which could make no impression upon the brain by means of the senses.

Thus, when philosophers have piled one supposition upon another, as the giants piled the mountains in order to scale the heavens, all is to no purpose — *memory remains unaccountable* ; and we know as little how we remember things past as how we are conscious of the present.

The body and mind operate on each other according to fixed laws of nature, and it is the business of a philosopher to discover those laws by observation and experiment : but, when he has discovered them, he must rest in them as facts whose cause is inscrutable to the human understanding.

Mr. Locke and those who have followed him speak with more reserve than the ancients, and only incidentally, of impressions on the brain as the cause of memory, and impute it rather to our retaining in our minds the ideas got either by sensation or reflection.

This, Mr. Locke says, may be done two ways — “*First*, By keeping the idea for some time actually in view, which is called *contemplation* ; *Secondly*, By the power to revive again in our minds those ideas which, after imprinting, have disappeared, or have been, as it were, laid out of sight ; and this is memory, which is, as it were, the store-house of our ideas ”.

To explain this more distinctly, he immediately adds the following observation : “ But our ideas being nothing but actual perceptions in the mind, which cease to be anything when there is no perception of them, this laying up

of our ideas in the repository of the memory signifies no more but this, that the mind has a power, in many cases, to revive perceptions which it once had, with this additional perception annexed to them, that it has had them before ; and in this sense it is, that our ideas are said to be in our memories, when indeed they are actually nowhere ; but only there is an ability in the mind, when it will, to revive them again, and, as it were, paint them anew upon itself, though some with more, some with less difficulty, some more lively, and others more obscurely ".<sup>1</sup>

In this account of memory the repeated use of the phrase *as it were* leads one to judge that it is partly figurative ; we must, therefore, endeavour to distinguish the figurative part from the philosophical. The first, being addressed to the imagination, exhibits a picture of memory which, to have its effect, must be viewed at a proper distance and from a particular point of view. The second, being addressed to the understanding, ought to bear a near inspection and a critical examination.

The analogy between memory and a repository, and between remembering and retaining, is obvious and is to be found in all languages, it being very natural to express the operations of the mind by images taken from things material. But in philosophy we ought to draw aside the veil of imagery and to view them naked.

When, therefore, memory is said to be a repository or storehouse of ideas where they are laid up when not perceived, and again brought forth as there is occasion, I take this to be popular and rhetorical. For the author tells us that when they are not perceived they are nothing and nowhere, and therefore can neither be laid up in a repository nor drawn out of it.

But we are told " that this laying up of our ideas in the repository of the memory signifies no more but this, that the mind has a power to revive perceptions, which it once had, with this additional perception annexed to them, that it has had them before ". This, I think, must be understood literally and philosophically.

<sup>1</sup> *Essay*, II. 10. 1 and 2.

But it seems to me as difficult to revive things that have ceased to be anything, as to lay them up in a repository or to bring them out of it. When a thing is once annihilated, the same thing cannot be again produced, though another thing similar to it may. Mr. Locke, in another place, acknowledges that the same thing cannot have two beginnings of existence;<sup>1</sup> and that things that have different beginnings are not the same, but diverse. From this it follows that an ability to revive our ideas or perceptions, after they have ceased to be, can signify no more but an ability to create new ideas or perceptions similar to those we had before.

They are said "to be revived, with this additional perception, that we have had them before". This surely would be a fallacious perception, since they could not have two beginnings of existence: nor could we believe them to have two beginnings of existence. We can only believe that we had formerly ideas or perceptions very like to them, though not identically the same. But whether we perceive them to be the same, or only like to those we had before, this perception, one would think, supposes a remembrance of those we had before, otherwise the similitude or identity could not be perceived.

Another phrase is used to explain this reviving of our perceptions — "The mind, as it were, paints them anew upon itself". There may be something figurative in this; but, making due allowance for that, it must imply that the mind, which paints the things that have ceased to exist, must have the memory of what they were, since every painter must have a copy either before his eye or in his imagination and memory.

These remarks upon Mr. Locke's account of memory are intended to show that his system of ideas gives no light to this faculty, but rather tends to darken it; as little does it make us understand how we remember, and by that means have the certain knowledge of things past.

Every man knows what memory is and has a distinct notion of it. But when Mr. Locke speaks of a power to

<sup>1</sup> *Essay*, II. 27. 1.

revive in the mind those ideas which, after imprinting, have disappeared, or have been, as it were, laid out of sight, one would hardly know this to be memory if he had not told us. There are other things which it seems to resemble at least as much. I see before me the picture of a friend. I shut my eyes or turn them another way, and the picture disappears, or is, as it were, laid out of sight. I have a power to turn my eyes again towards the picture and immediately the perception is revived. But is this memory? No, surely; yet it answers the definition as well as memory itself can do.

We may observe that the word perception is used by Mr. Locke in too indefinite a way, as well as the word idea.

Perception, in the chapter<sup>1</sup> upon that subject, is said to be the first faculty of the mind exercised about our ideas. Here we are told that ideas are nothing but perceptions. Yet I apprehend it would sound oddly to say that perception is the first faculty of the mind exercised about perception, and still more strangely to say that ideas are the first faculty of the mind exercised about our ideas. But why should not ideas be a faculty as well as perception if both are the same?

Memory is said to be a power to revive our perceptions. Will it not follow from this that everything that can be remembered is a perception? If this be so, it will be difficult to find anything in nature but perceptions.

Our ideas, we are told, are nothing but actual perceptions; but in many places of the *Essay* ideas are said to be the objects of perception, and that the mind, in all its thoughts and reasonings, has no other immediate object which it does or can contemplate but its own ideas. Does it not appear from this either that Mr. Locke held the operations of the mind to be the same thing with the objects of these operations, or that he used the word idea sometimes in one sense and sometimes in another, without any intimation, and probably without any apprehension of its ambiguity? It is an article of Mr. Hume's philosophy that there is no distinction between the operations of the

<sup>1</sup> *Id.* II. 9.

mind and their objects. But I see no reason to impute this opinion to Mr. Locke. I rather think that, notwithstanding his great judgment and candour, his understanding was entangled by the ambiguity of the word *idea*, and that most of the imperfections of his *Essay* are owing to that cause.

These are Mr. Hume's words in his *Treatise of Human Nature*:<sup>1</sup> "We find by experience that, when any impression has been present with the mind, it again makes its appearance there as an idea; and this it may do after two different ways, either when in its new appearance it retains a considerable degree of its first vivacity and is somewhat intermediate betwixt an impression and an idea, or when it entirely loses that vivacity, and is a perfect idea. The faculty by which we repeat our impressions in the first manner is called the memory, and the other the imagination."

Upon this account of memory and imagination I shall make some remarks.

*First*, I wish to know what we are here to understand by experience? It is said, we find all this by experience; and I conceive nothing can be meant by this experience but memory — not that memory which our author defines, but memory in the common acceptation of the word. According to vulgar apprehension, memory is an immediate knowledge of something past. Our author does not admit that there is any such knowledge in the human mind. He maintains that memory is nothing but a present idea or impression. But, in defining what he takes memory to be, he takes for granted that kind of memory which he rejects. For, can we find by experience that an impression, after its first appearance to the mind, makes a second and a third, with different degrees of strength and vivacity, if we have not so distinct a remembrance of its first appearance as enables us to know it upon its second and third, notwithstanding that, in the interval, it has undergone a very considerable change?

All experience supposes memory, and there can be no such thing as experience without trusting to our own

<sup>1</sup> *Treatise*, I. i. 3.

memory or that of others. So that it appears from Mr. Hume's account of this matter that he found himself to have that kind of memory which he acknowledges and defines, by exercising that kind which he rejects.

*Secondly*, What is it we find by experience or memory ? It is, " That, when an impression has been present with the mind, it again makes its appearance there as an idea, and that after two different ways ".

If experience informs us of this, it certainly deceives us ; for the thing is impossible, and the author shows it to be so. Impressions and ideas are fleeting, perishable things which have no existence but when we are conscious of them. If an impression could make a second and a third appearance to the mind, it must have a continued existence during the interval of these appearances, which Mr. Hume acknowledges to be a gross absurdity. It seems, then, that we find by experience a thing which is impossible. We are imposed upon by our experience and made to believe contradictions.

Perhaps it may be said that these different appearances of the impression are not to be understood literally but figuratively ; that the impression is personified, and made to appear at different times and in different habits, when no more is meant but that an impression appears at one time ; afterwards a thing of a middle nature, between an impression and an idea, which we call memory ; and last of all, a perfect idea which we call imagination : that this figurative meaning agrees best with the last sentence of the period, where we are told that memory and imagination are faculties whereby we repeat our impressions in a more or less lively manner. To repeat an impression is a figurative way of speaking which signifies making a new impression similar to the former.

If, to avoid the absurdity implied in the literal meaning, we understand the philosopher in this figurative one, then his definitions of memory and imagination, when stripped of the figurative dress, will amount to this, That memory is the faculty of making a weak impression, and imagination the faculty of making an impression still weaker,

after a corresponding strong one. These definitions of memory and imagination labour under two defects : *first*, That they convey no notion of the thing defined ; and, *secondly*, That they may be applied to things of a quite different nature from those that are defined.

When we are said to have a faculty of making a weak impression after a corresponding strong one, it would not be easy to conjecture that this faculty is memory. Suppose a man strikes his head smartly against the wall, this is an impression ; now, he has a faculty by which he can repeat this impression with less force, so as not to hurt him : this, by Mr. Hume's account, must be memory. He has a faculty by which he can just touch the wall with his head, so that the impression entirely loses its vivacity. This surely must be imagination ; at least, it comes as near to the definition given of it by Mr. Hume as anything I can conceive.

*Thirdly*, We may observe that, when we are told that we have a faculty of repeating our impressions in a more or less lively manner, this implies that we are the efficient causes of our ideas of memory and imagination ; but this contradicts what the author says a little before, where he proves, by what he calls a convincing argument, that impressions are the cause of their corresponding ideas. The argument that proves this had need, indeed, to be very convincing ; whether we make the idea to be a second appearance of the impression, or a new impression similar to the former.

If the first be true, then the impression is the cause of itself. If the second, then the impression, after it is gone and has no existence, produces the idea. Such are the mysteries of Mr. Hume's philosophy.

It may be observed that the common system, that ideas are the only immediate objects of thought, leads to scepticism with regard to memory as well as with regard to the objects of sense, whether those ideas are placed in the mind or in the brain ; and the only reason why it was not observed by philosophers is because they give less attention to the memory than to the senses ; for, since

ideas are things present, how can we, from our having a certain idea presently in our mind, conclude that an event really happened ten or twenty years ago corresponding to it ?

There is the same need of arguments to prove that the ideas of memory are pictures of things that really did happen as that the ideas of sense are pictures of external objects which now exist. In both cases it will be impossible to find any argument that has real weight. So that this hypothesis leads us to absolute scepticism with regard to those things which we most distinctly remember, no less than with regard to the external objects of sense.

It does not appear to have occurred either to Locke or to Berkeley that their system has the same tendency to overturn the testimony of memory as the testimony of the senses.

Mr. Hume saw farther than both, and found this consequence of the system of ideas perfectly corresponding to his aim of establishing universal scepticism. His system is therefore more consistent than theirs, and the conclusions agree better with the premises.

But, if we should grant to Mr. Hume that our ideas of memory afford no just ground to believe the past existence of things which we remember, it may still be asked how it comes to pass that perception and memory are accompanied with belief while bare imagination is not. Though this belief cannot be justified upon his system, it ought to be accounted for as a phenomenon of human nature.

This he has done by giving us a new theory of belief in general, a theory which suits very well with that of ideas and seems to be a natural consequence of it, and which, at the same time, reconciles all the belief that we find in human nature to perfect scepticism.

What, then, is this belief ? It must either be an idea or some modification of an idea ; we conceive many things which we do not believe. The idea of an object is the same whether we believe it to exist or barely conceive it. The belief adds no new idea to the conception ; it is, therefore, nothing but a modification of the idea of the thing believed,

or a different manner of conceiving it. Hear himself :

"All the perceptions of the mind are of two kinds, impressions and ideas, which differ from each other only in their different degrees of force and vivacity. Our ideas are copied from our impressions, and represent them in all their parts. When you would vary the idea of a particular object, you can only increase or diminish its force and vivacity. If you make any other change upon it, it represents a different object or impression. The case is the same as in colours. A particular shade of any colour may acquire a new degree of liveliness or brightness, without any other variation ; but, when you produce any other variation, it is no longer the same shade or colour. So that, as belief does nothing but vary the manner in which we conceive any object, it can only bestow on our ideas an additional force and vivacity. An opinion, therefore, or belief, may be most accurately defined a lively idea, related to or associated with a present impression."<sup>1</sup>

This theory of belief is very fruitful of consequences, which Mr. Hume traces with his usual acuteness and brings into the service of his system. A great part of his system indeed is built upon it ; and it is of itself sufficient to prove what he calls his hypothesis, "that belief is more properly an act of the sensitive than of the cogitative part of our natures".

It is very difficult to examine this account of belief with the same gravity with which it is proposed. It puts one in mind of the ingenious account given by Martinus Scriblerus of the power of syllogism, by making the *major* the male, and the *minor* the female, which, being coupled by the middle *term*, generate the conclusion. There is surely no science in which men of great parts and ingenuity have fallen into such gross absurdities as in treating of the powers of the mind. I cannot help thinking that never anything more absurd was gravely maintained by any philosopher than this account of the nature of belief, and of the distinction of perception, memory, and imagination.

The belief of a proposition is an operation of mind of

<sup>1</sup> *Treatise*, I. 3. 7.

which every man is conscious, and what it is he understands perfectly, though, on account of its simplicity, he cannot give a logical definition of it. If he compares it with strength or vivacity of his ideas, or with any modification of ideas, they are so far from appearing to be one and the same that they have not the least similitude.

That a strong belief and a weak belief differ only in degree<sup>1</sup> I can easily comprehend, but that belief and no belief should differ only in degree, no man can believe who understands what he speaks. For this is in reality to say that something and nothing differ only in degree, or, that nothing is a degree of something.

Every proposition that may be the object of belief has a contrary proposition that may be the object of a contrary belief. The ideas of both, according to Mr. Hume, are the same and differ only in degrees of vivacity — that is, contraries differ only in degree; and so pleasure may be a degree of pain, and hatred a degree of love. But it is to no purpose to trace the absurdities that follow from this doctrine, for none of them can be more absurd than the doctrine itself.

Every man knows perfectly what it is to see an object with his eyes, what it is to remember a past event, and what it is to conceive a thing which has no existence. That these are quite different operations of his mind he is as certain as that sound differs from colour, and both from taste; and I can as easily believe that sound, and colour, and taste, differ only in degree, as that seeing and remembering and imagining differ only in degree.

Mr. Hume, in the third volume of his *Treatise of Human Nature*, is sensible that his theory of belief is liable to strong objections, and seems in some measure to retract it, but in what measure it is not easy to say. He seems still to think that belief is only a modification of the idea, but that vivacity is not a proper term to express that modification. Instead of it he uses some analogical phrases to explain that modification, such as "apprehending the idea more strongly, or taking faster hold of it".<sup>1</sup>

<sup>1</sup> *Ib.* Appendix.

There is nothing more meritorious in a philosopher than to retract an error upon conviction, but in this instance I humbly apprehend Mr. Hume claims that merit upon too slight a ground. For I cannot perceive that the apprehending an idea more strongly, or taking faster hold of it, expresses any other modification of the idea than what was before expressed by its strength and vivacity, or even that it expresses the same modification more properly. Whatever modification of the idea he makes belief to be, whether its vivacity, or some other without a name, to make perception, memory, and imagination to be the different degrees of that modification, is chargeable with the absurdities we have mentioned.

# ESSAY IV

## OF CONCEPTION

### CHAPTER I

#### OF CONCEPTION, OR SIMPLE APPREHENSION IN GENERAL

CONCEIVING, imagining, apprehending, understanding, having a notion of a thing, are common words used to express that operation of the understanding which the logicians call *simple apprehension*. The having an idea of a thing is, in common language, used in the same sense, chiefly, I think, since Mr. Locke's time.

Logicians define Simple Apprehension to be the bare conception of a thing without any judgment or belief about it. If this were intended for a strictly logical definition it might be a just objection to it, that conception and apprehension are only synonymous words, and that we may as well define conception by apprehension as apprehension by conception; but it ought to be remembered that the most simple operations of the mind cannot be logically defined. To have a distinct notion of them we must attend to them as we feel them in our own minds. He that would have a distinct notion of a scarlet colour will never attain it by a definition; he must set it before his eye, attend to it, compare it with the colours that come nearest to it, and observe the specific difference, which he will in vain attempt to define.

Every man is conscious that he can conceive a thousand things of which he believes nothing at all — as a horse with wings, a mountain of gold; but, although conception may be without any degree of belief, even the smallest belief cannot be without conception. He that believes

must have some conception of what he believes.

Without attempting a definition of this operation of the mind, I shall endeavour to explain some of its properties, consider the theories about it, and take notice of some mistakes of philosophers concerning it.

1. It may be observed that conception enters as an ingredient in every operation of the mind. Our senses cannot give us the belief of any object without giving some conception of it at the same time. No man can either remember or reason about things of which he hath no conception. When we will to exert any of our active powers, there must be some conception of what we will to do. There can be no desire nor aversion, love nor hatred, without some conception of the object. We cannot feel pain without conceiving it, though we can conceive it without feeling it. These things are self-evident.

As all the operations of our mind are expressed by language, everyone knows that it is one thing to understand what is said, to conceive or apprehend its meaning, whether it be a word, a sentence, or a discourse ; it is another thing to judge of it, to assent or dissent, to be persuaded or moved. The first is simple apprehension and may be without the last, but the last cannot be without the first.

2. In bare conception there can neither be truth nor falsehood, because it neither affirms nor denies. Every judgment, and every proposition by which judgment is expressed, must be true or false ; and the qualities of true and false, in their proper sense, can belong to nothing but to judgments, or to propositions which express judgment. In the bare conception of a thing there is no judgment, opinion, or belief included, and therefore it cannot be either true or false.

If we analyse those speeches in which men attribute truth or falsehood to our conception of things, we shall find in every case that there is some opinion or judgment implied in what they call conception. A child conceives the moon to be flat, and a foot or two broad — that is, this is his opinion : and, when we say it is a false notion or a

false conception, we mean that it is a false opinion. He conceives the city of London to be like his country village — that is, he believes it to be so till he is better instructed. He conceives a lion to have horns ; that is, he believes that the animal which men call a lion has horns. Such opinions language authorises us to call conceptions, and they may be true or false. But bare conception, or what the logicians call simple apprehension, implies no opinion however slight, and therefore can neither be true nor false.

What Mr. Locke says of ideas (by which word he very often means nothing but conceptions) is very just, when the word idea is so understood (Bk. II. ch. xxxii. § I) : “ Though truth and falsehood belong in propriety of speech only to propositions, yet ideas are often termed true or false (as what words are there that are not used with great latitude, and with some deviation from their strict and proper signification ?), though I think that when ideas themselves are termed true or false there is still some secret or tacit proposition which is the foundation of that denomination, as we shall see if we examine the particular occasions wherein they come to be called true or false ; in all which we shall find some kind of affirmation or negation, which is the reason of that denomination ; for our ideas, being nothing but bare appearances, or perceptions in our minds, cannot properly and simply in themselves be said to be true or false, no more than a simple name of anything can be said to be true or false ”.

3. Of all the analogies between the operations of body and those of the mind there is none so strong and so obvious to all mankind as that which there is between painting or other plastic arts, and the power of conceiving objects in the mind. Hence, in all languages the words by which this power of the mind and its various modifications are expressed are analogical, and borrowed from those arts. We consider this power of the mind as a plastic power by which we form to ourselves images of the objects of thought.

In vain should we attempt to avoid this analogical

language, for we have no other language upon the subject ; yet it is dangerous and apt to mislead. All analogical and figurative words have a double meaning, and, if we are not very much upon our guard, we slide insensibly from the borrowed and figurative meaning into the primitive. We are prone to carry the parallel between the things compared further than it will hold, and thus very naturally to fall into error.

To avoid this as far as possible in the present subject, it is proper to attend to the dissimilitude between conceiving a thing in the mind and painting it to the eye, as well as to their similitude. The similitude strikes and gives pleasure. The dissimilitude we are less disposed to observe ; but the philosopher ought to attend to it, and to carry it always in mind, in his reasonings on this subject, as a monitor, to warn him against the errors into which the analogical language is apt to draw him.

When a man paints there is some work done, which remains when his hand is taken off, and continues to exist though he should think no more of it. Every stroke of his pencil produces an effect, and this effect is different from his action in making it, for it remains and continues to exist when the action ceases. The action of painting is one thing ; the picture produced is another thing. The first is the cause, the second is the effect.

Let us next consider what is done when he only conceives this picture. He must have conceived it before he painted it ; for this is a maxim universally admitted, that every work of art must first be conceived in the mind of the operator. What is this conception ? It is an act of the mind, a kind of thought. This cannot be denied. But does it produce any effect besides the act itself ? Surely common sense answers this question in the negative, for every one knows that it is one thing to conceive, another thing to bring forth into effect. It is one thing to project, another to execute. A man may think for a long time what he is to do, and after all do nothing. Conceiving, as well as projecting or resolving, are what the schoolmen called *immanent* acts of the mind, which produce nothing

beyond themselves. But painting is a transitive act which produces an effect distinct from the operation, and this effect is the picture. Let this, therefore, be always remembered, that what is commonly called the image of a thing in the mind is no more than the act or operation of the mind in conceiving it.<sup>1</sup>

That this is the common sense of men who are untutored by philosophy appears from their language. If one ignorant of the language should ask, What is meant by conceiving a thing? we should very naturally answer that it is having an image of it in the mind — and perhaps we could not explain the word better. This shows that conception, and the image of a thing in the mind, are synonymous expressions. The image in the mind, therefore, is not the object of conception, nor is it any effect produced by conception as a cause. It is conception itself. That very mode of thinking which we call conception is by another name called an image in the mind.

Nothing more readily gives the conception of a thing than the seeing an image of it. Hence, by a figure common in language, conception is called an image of the thing conceived. But to show that it is not a real but a metaphorical image, it is called an image in the mind. We know nothing that is properly in the mind but thought, and, when anything else is said to be in the mind, the expression must be figurative and signify some kind of thought.

I know that philosophers very unanimously maintain that in conception there is a real image in the mind which

<sup>1</sup> On the subject of images, as on conception in general, Reid is very obscure. His statement here that an image is not to be distinguished from the *act* or *operation* of conceiving (although this act is to be distinguished from the object conceived — *v.* p. 243 n.) is repeated twice in the next paragraph, and elsewhere; cf. p. 251, “to infer from this that there is really an image in the mind, distinct from the operation of conceiving the object, is to be misled by an analogical expression”. He appears to be holding, as he holds of sensation, that not only does the *esse* of an image depend on its *percepti*, but also that even a distinction between an object imaged and act of imagining it is fallacious. On the other hand imagination, which on p. 233 is said to be synonymous (and therefore coextensive) with conception, is later distinguished from it (p. 239) as a special species of it, as “the conception of visible objects”. This second view is further elaborated on p. 255, and on p. 300 he explicitly says it is a mistake to regard conception and imagination as synonymous. *V.* Introd. pp. xxvii-xxviii.

is the immediate object of conception, and distinct from the act of conceiving it. I beg the reader's indulgence to defer what may be said for or against this philosophical opinion to the next chapter, intending in this only to explain what appears to me to belong to this operation of mind, without considering the theories about it. I think it appears from what has been said that the common language of those who have not imbibed any philosophical opinion upon this subject authorises us to understand *the conception of a thing, and an image of it in the mind*, not as two different things, but as two different expressions, to signify one and the same thing; and I wish to use common words in their common acceptation.

4. Taking along with us what is said in the last article, to guard us against the seduction of the analogical language used on this subject, we may observe a very strong analogy, not only between conceiving and painting in general, but between the different kinds of our conceptions and the different works of the painter. He either makes fancy pictures, or he copies from the painting of others, or he paints from the life; that is, from real objects of art or nature which he has seen. I think our conceptions admit of a division very similar.

*First*, There are conceptions which may be called fancy pictures. They are commonly called creatures of fancy or of imagination. They are not the copies of any original that exists, but are originals themselves. Such was the conception which Swift formed of the island of Laputa and of the country of the Lilliputians, Cervantes of Don Quixote and his Squire, Harrington of the Government of Oceana, and Sir Thomas More of that of Utopia. We can give names to such creatures of imagination, conceive them distinctly, and reason consequentially concerning them, though they never had an existence. They were conceived by their creators and may be conceived by others, but they never existed. We do not ascribe the qualities of true or false to them because they are not accompanied with any belief, nor do they imply any affirmation or negation.

Setting aside those creatures of imagination, there are other conceptions which may be called copies, because they have an original or archetype to which they refer and with which they are believed to agree, and we call them true or false conceptions, according as they agree or disagree with the standard to which they are referred. These are of two kinds which have different standards or originals.

The first kind is analogous to pictures taken from the life. We have conceptions of individual things that really exist such as the city of London or the government of Venice. Here the things conceived are the originals, and our conceptions are called true when they agree with the thing conceived. Thus, my conception of the city of London is true when I conceive it to be what it really is.

Individual things which really exist being the creatures of God (though some of them may receive their outward form from man), he only who made them knows their whole nature ; we know them but in part, and therefore our conceptions of them must in all cases be imperfect and inadequate ; yet they may be true and just, as far as they reach.

The *second* kind is analogous to the copies which the painter makes from pictures done before. Such I think are the conceptions we have of what the ancients called universals ; that is, of things which belong or may belong to many individuals. These are kinds and species of things such as man or elephant, which are species of substances ; wisdom or courage, which are species of qualities ; equality or similitude, which are species of relations. It may be asked — From what original are these conceptions formed ? And when are they said to be true or false ?

It appears to me that the original from which they are copied — that is, the thing conceived — is the conception or meaning which other men, who understand the language, affix to the same words.

Things are parcelled into kinds and sorts, not by nature, but by men. The individual things we are connected

with are so many that to give a proper name to every individual would be impossible. We could never attain the knowledge of them that is necessary, nor converse and reason about them, without sorting them according to their different attributes. Those that agree in certain attributes are thrown into one parcel, and have a general name given them, which belongs equally to every individual in that parcel. This common name must therefore signify those attributes which have been observed to be common to every individual in that parcel, and nothing else.

That such general words may answer their intention, all that is necessary is that those who use them should affix the same meaning or notion — that is, the same conception — to them. The common meaning is the standard by which such conceptions are formed, and they are said to be true or false according as they agree or disagree with it. Thus, my conception of felony is true and just when it agrees with the meaning of that word in the laws relating to it, and in authors who understand the law. The meaning of the word is the thing conceived, and that meaning is the conception affixed to it by those who best understand the language.

An individual is expressed in language either by a proper name or by a general word joined to such circumstances as distinguished that individual from all others; if it is unknown, it may, when an object of sense and within reach, be pointed out to the senses; when beyond the reach of the senses, it may be ascertained by a description, which, though very imperfect, may be true, and sufficient to distinguish it from every other individual. Hence it is that, in speaking of individuals, we are very little in danger of mistaking the object or taking one individual for another.

Yet, as was before observed, our conception of them is always inadequate and lame. They are the creatures of God, and there are many things belonging to them which we know not and which cannot be deduced by reasoning from what we know. They have a real essence, or constitution of nature, from which all their qualities flow; but this essence our faculties do not comprehend. They are there-

fore incapable of definition, for a definition ought to comprehend the whole nature or essence of the thing defined.

Thus, Westminster Bridge is an individual object ; though I had never seen or heard of it before, if I am only made to conceive that it is a bridge from Westminster over the Thames, this conception, however imperfect, is true, and is sufficient to make me distinguish it, when it is mentioned, from every other object that exists. The architect may have an adequate conception of its structure, which is the work of man : but of the materials, which are the work of God, no man has an adequate conception ; and, therefore, though the object may be described, it cannot be defined.

Universals are always expressed by general words ; and all the words of language, excepting proper names, are general words ; they are the signs of general conceptions or of some circumstance relating to them. These general conceptions are formed for the purpose of language and reasoning, and the object from which they are taken, and to which they are intended to agree, is the conception which other men join to the same words ; they may, therefore, be adequate and perfectly agree with the thing conceived. This implies no more than that men who speak the same language may perfectly agree in the meaning of many general words.

Thus mathematicians have conceived what they call a plane triangle. They have defined it accurately, and, when I conceive it to be a plane surface, bounded by three right lines, I have both a true and an adequate conception of it. There is nothing belonging to a plane triangle which is not comprehended in this conception of it or deducible from it by just reasoning. This definition expresses the whole essence of the thing defined, as every just definition ought to do ; but this essence is only what Mr. Locke very properly calls a nominal essence ; it is a general conception formed by the mind and joined to a general word as its sign.

If all the general words of a language had a precise meaning and were perfectly understood, as mathematical

terms are, all verbal disputes would be at an end and men would never seem to differ in opinion but when they differ in reality ; but this is far from being the case. The meaning of most general words is not learned, like that of mathematical terms, by an accurate definition, but by the experience we happen to have by hearing them used in conversation. From such experience we collect their meaning by a kind of induction ; and as this induction is, for the most part, lame and imperfect, it happens that different persons join different conceptions to the same general word, and though we intend to give them the meaning which use, the arbiter of language, has put upon them, this is difficult to find, and apt to be mistaken even by the candid and attentive. Hence, in innumerable disputes men do not really differ in their judgments, but in the way of expressing them.

Our conceptions, therefore, appear to be of three kinds. They are either the conceptions of individual things, the creatures of God ; or they are conceptions of the meaning of general words ; or they are the creatures of our own imagination : and these different kinds have different properties, which we have endeavoured to describe.

5. Our conception of things may be strong and lively, or it may be faint and languid in all degrees. These are qualities which properly belong to our conceptions, though we have no names for them but such as are analogical. Every man is conscious of such a difference in his conceptions, and finds his lively conceptions most agreeable when the object is not of such a nature as to give pain.

Abstract and general conceptions are never lively, though they may be distinct ; and, therefore, however necessary in philosophy, seldom enter into poetical description without being particularised or clothed in some visible dress.

It may be observed, however, that our conceptions of visible objects become more lively by giving them motion, and more still by giving them life and intellectual qualities. Hence, in poetry the whole creation is animated, and endowed with sense and reflection.

Imagination,<sup>1</sup> when it is distinguished from conception, seems to me to signify one species of conception — to wit, the conception of visible objects. Thus, in a mathematical proposition I imagine the figure and I conceive the demonstration ; it would not, I think, be improper to say, I conceive both ; but it would not be so proper to say, I imagine the demonstration.

6. Our conceptions of things may be clear, distinct, and steady, or they may be obscure, indistinct, and wavering. The liveliness of our conceptions gives pleasure, but it is their distinctness and steadiness that enables us to judge right and to express our sentiments with perspicuity.

If we inquire into the cause why, among persons speaking or writing on the same subject, we find in one so much darkness, in another so much perspicuity, I believe the chief cause will be found to be that one had a distinct and steady conception of what he said and wrote, and the other had not. Men generally find means to express distinctly what they have conceived distinctly.

Nay, I apprehend that indistinct conceptions of things are for the most part the cause, not only of obscurity in writing and speaking, but of error in judging.

Must not they who conceive things in the same manner form the same judgment of their agreements and disagreements ? Is it possible for two persons to differ with regard to the conclusion of a syllogism who have the same conception of the premises ?

Some persons find it difficult to enter into a mathematical demonstration. I believe we shall always find the reason to be that they do not distinctly apprehend it. A man cannot be convinced by what he does not understand. On the other hand, I think a man cannot understand a demonstration without seeing the force of it. I speak of such demonstrations as those of Euclid, where every step is set down, and nothing left to be supplied by the reader.

Sometimes one who has got through the first four books of Euclid's *Elements*, and sees the force of the demonstra-

<sup>1</sup> V. p. 233 n.

tions, finds difficulty in the fifth. What is the reason of this? You may find, by a little conversation with him, that he has not a clear and steady conception of ratios and of the terms relating to them. When the terms used in the fifth book have become familiar, and readily excite in his mind a clear and steady conception of their meaning, you may venture to affirm that he will be able to understand the demonstrations of that book, and to see the force of them.

If this be really the case, as it seems to be, it leads us to think that men are very much upon a level with regard to mere judgment, when we take that faculty apart from the apprehension or conception of the things about which we judge; so that a sound judgment seems to be the inseparable companion of a clear and steady apprehension. And we ought not to consider these two as talents, of which the one may fall to the lot of one man, and the other to the lot of another, but as talents which always go together.

From what has been said in this article, it follows that it is so far in our power to write and speak perspicuously, and to reason justly, as it is in our power to form clear and distinct conceptions of the subject on which we speak or reason. And, though nature hath put a wide difference between one man and another in this respect, yet that it is in a very considerable degree in our power to have clear and distinct apprehensions of things about which we think and reason, cannot be doubted.

7. It has been observed by many authors that, when we barely conceive any object, the ingredients of that conception must either be things with which we were before acquainted by some other original power of the mind, or they must be parts or attributes of such things. Thus, a man cannot conceive colours if he never saw, nor sounds if he never heard. If a man had not a conscience, he could not conceive what is meant by moral obligation, or by right and wrong in conduct.

Fancy may combine things that never were combined in reality. It may enlarge or diminish, multiply or divide, compound and fashion the objects which nature presents,

but it cannot, by the utmost effort of that creative power which we ascribe to it, bring any one simple ingredient into its productions which nature has not framed and brought to our knowledge by some faculty.

It is proper to observe that our most simple conceptions are not those which nature immediately presents to us. When we come to years of understanding, we have the power of analysing the objects of nature, of distinguishing their several attributes and relations, of conceiving them one by one, and of giving a name to each, whose meaning extends only to that single attribute or relation : and thus our most simple conceptions are not those of any object in nature, but of some single attribute or relation of such objects.

Thus, nature presents to our senses bodies that are extended in three dimensions, and solid. By analysing the notion we have of body from our senses, we form to ourselves the conceptions of extension, solidity, space, a point, a line, a surface — all which are more simple conceptions than that of a body. But they are the elements, as it were, of which our conception of a body is made up and into which it may be analysed. This power of analysing objects we propose to consider particularly in another place.<sup>1</sup> It is only mentioned here, that what is said in this article may not be understood so as to be inconsistent with it.

8. Though our conceptions must be confined to the ingredients mentioned in the last article, we are unconfined with regard to the arrangement of those ingredients. Here we may pick and choose, and form an endless variety of combinations and compositions, which we call creatures of the imagination. These may be clearly conceived, though they never existed : and, indeed, everything that is made must have been conceived before it was made. Every work of human art, and every plan of conduct, whether in public or in private life, must have been conceived before it was brought to execution. And we cannot avoid thinking that the Almighty, before he created the universe by

<sup>1</sup> *V.* pp. 274 *seq.*

his power, had a distinct conception of the whole and of every part, and saw it to be good, and agreeable to his intention.

It is the business of man, as a rational creature, to employ this unlimited power of conception for planning his conduct and enlarging his knowledge. It seems to be peculiar to beings endowed with reason to act by a pre-conceived plan. Brute animals seem either to want this power or to have it in a very low degree. They are moved by instinct, habit, appetite, or natural affection, according as these principles are stirred by the present occasion. But I see no reason to think that they can propose to themselves a connected plan of life or form general rules of conduct. Indeed, we see that many of the human species to whom God has given this power make little use of it. They act without a plan, as the passion or appetite which is strongest at the time leads them.

9. The last property I shall mention of this faculty is that which essentially distinguishes it from every other power of the mind; and it is, that it is not employed solely about things which have existence. I can conceive a winged horse or a centaur as easily and as distinctly as I can conceive a man whom I have seen. Nor does this distinct conception incline my judgment in the least to the belief that a winged horse or a centaur ever existed.

It is not so with the other operations of our minds. They are employed about real existences and carry with them the belief of their objects. When I feel pain, I am compelled to believe that the pain that I feel has a real existence. When I perceive any external object, my belief of the real existence of the object is irresistible. When I distinctly remember any event, though that event may not now exist, I can have no doubt but it did exist. That consciousness which we have of the operations of our own minds implies a belief of the real existence of those operations.

Thus we see that the powers of sensation, of perception, of memory, and of consciousness are all employed solely about objects that do exist or have existed. But conception is often employed about objects that neither do, nor did,

nor will exist. This is the very nature of this faculty, that its object, though distinctly conceived, may have no existence. Such an object we call a creature of imagination ; but this creature never was created.

That we may not impose upon ourselves in this matter, we must distinguish between that act or operation of the mind which we call conceiving an object, and the object which we conceive.<sup>1</sup> When we conceive anything, there is a real act or operation of the mind. Of this we are conscious and can have no doubt of its existence. But every such act must have an object, for he that conceives must conceive something. Suppose he conceives a centaur, he may have a distinct conception of this object though no centaur ever existed.

I am afraid that, to those who are unacquainted with the doctrine of philosophers upon this subject, I shall appear in a very ridiculous light for insisting upon a point so very evident as that men may barely conceive things that never existed. They will hardly believe that any man in his wits ever doubted of it. Indeed, I know no truth more evident to the common sense and to the experience of mankind. But, if the authority of philosophy, ancient and modern, opposes it, as I think it does, I wish not to treat that authority so fastidiously as not to attend patiently to what may be said in support of it.

<sup>1</sup> In the following chapter Reid elaborates his theory of conception, with particular reference to the question of objects of conception, but he does not make it very clear. Two facts are, however, established by this passage and the subsequent discussion. Reid thinks (a) all thought requires an object, and a distinction must be made between the operation of thinking and its object ; (b) the object of thought need not really exist (*v. p.* 245). (b) is clearly true, for we can think about non-existing creatures, and judge that they are non-existent ; and if thinking about them involved their existing, then to judge that they do not exist would be self-contradictory. However if (a) is also to be true, it would seem that an object of thought must in *some sense* exist ; and it is on this point that Reid is obscure. For he insists that when I conceive, say, a centaur (*p.* 250), then a centaur is the object of my thought, even though there are no centaurs ; the suggestion that what is present to my mind is in any sense a representative idea he violently rejects. He may be holding that the object of thought is the complex universal "centaur". As, however, he appears to hold (although not consistently) a conceptualist theory of universals, that suggestion would not help to explain the present obscurity. *V. Intro.* pp. xxviii-xxx.

## CHAPTER 2

## THEORIES CONCERNING CONCEPTION

THE theory of ideas has been applied to the conception of objects as well as to perception and memory. Perhaps it will be irksome to the reader, as it is to the writer, to return to that subject after so much has been said upon it, but its application to the conception of objects, which could not properly have been introduced before, gives a more comprehensive view of it and of the prejudices which have led philosophers so unanimously into it.

There are two prejudices which seem to me to have given rise to the theory of ideas in all the various forms in which it has appeared in the course of above two thousand years, and, though they have no support from the natural dictates of our faculties or from attentive reflection upon their operations, they are prejudices which those who speculate upon this subject are very apt to be led into by analogy.

The *first* is — That, in all the operations of the understanding, there must be some immediate intercourse between the mind and its object so that the one may act upon the other. The *second*, That, in all the operations of understanding, there must be an object of thought which really exists while we think of it, or, as some philosophers have expressed it, that which is not cannot be intelligible.

Had philosophers perceived that these are prejudices grounded only upon analogical reasoning, we had never heard of ideas in the philosophical sense of that word.

The *first* of these principles has led philosophers to think that, as the external objects of sense are too remote to act upon the mind immediately, there must be some image or shadow of them that is present to the mind and is the immediate object of perception. That there is such an immediate object of perception, distinct from the

external object, has been very unanimously held by philosophers, though they have differed much about the name, the nature, and the origin of those immediate objects.

We have considered what has been said in the support of this principle (Essay II. Chapter 14), to which the reader is referred, to prevent repetition.

I shall only add to what is there said, That there appears no shadow of reason why the mind must have an object immediately present to it in its intellectual operations, any more than in its affections and passions. Philosophers have not said that ideas are the immediate objects of love or resentment, of esteem or disapprobation. It is, I think, acknowledged that persons and not ideas are the immediate objects of those affections ; persons who are as far from being immediately present to the mind as other external objects, and, sometimes, persons who have now no existence, in this world at least, and who can neither act upon the mind nor be acted upon by it.

The *second* principle, which I conceive to be likewise a prejudice of philosophers grounded upon analogy, is now to be considered.

It contradicts directly what was laid down in the last article of the preceding chapter — to wit, that we may have a distinct conception of things which never existed. This is undoubtedly the common belief of those who have not been instructed in philosophy, and they will think it as ridiculous to defend it by reasoning as to oppose it.

The philosopher says, Though there may be a remote object which does not exist, there must be an immediate object which really exists ; for that which is not, cannot be an object of thought. The idea must be perceived by the mind, and, if it does not exist there, there can be no perception of it, no operation of the mind about it.

This principle deserves the more to be examined because the other before mentioned depends upon it ; for, although the last may be true, even if the first was false, yet, if the last be not true, neither can the first. If we can conceive objects which have no existence, it follows that there may be objects of thought which neither act upon the mind nor

are acted upon by it, because that which has no existence can neither act nor be acted upon.

It is by these principles that philosophers have been led to think that, in every act of memory and of conception, as well as of perception, there are two objects — the one, the immediate object, the idea, the species, the form ; the other, the mediate or external object. The vulgar know only of one object, which, in perception, is something external that exists ; in memory, something that did exist ; and, in conception, may be something that never existed. But the immediate object of the philosophers, the idea, is said to exist and to be perceived in all these operations.

These principles have not only led philosophers to split objects into two, where others can find but one, but likewise have led them to reduce the three operations now mentioned to one, making memory and conception, as well as perception, to be the perception of ideas. But nothing appears more evident to the vulgar than that what is only remembered, or only conceived, is not perceived ; and to speak of the perceptions of memory appears to them as absurd as to speak of the hearing of sight.

In a word, these two principles carry us into the whole philosophical theory of ideas and furnish every argument that ever was used for their existence. If they are true, that system must be admitted with all its consequences. If they are only prejudices grounded upon analogical reasoning, the whole system must fall to the ground with them.

It is, therefore, of importance to trace those principles, as far as we are able, to their origin, and to see, if possible, whether they have any just foundation in reason, or whether they are rash conclusions drawn from a supposed analogy between matter and mind.

The unlearned, who are guided by the dictates of nature and express what they are conscious of concerning the operations of their own mind, believe that the object which they distinctly perceive certainly exists ; that the object which they distinctly remember certainly did exist, but now may not ; but as to things that are barely conceived,

they know that they can conceive a thousand things that never existed, and that the bare conception of a thing does not so much as afford a presumption of its existence. They give themselves no trouble to know how these operations are performed, or to account for them from general principles.

But philosophers who wish to discover the causes of things, and to account for these operations of mind, observing that in other operations there must be not only an agent but something to act upon, have been led by analogy to conclude that it must be so in the operations of the mind.

The relation between the mind and its conceptions bears a very strong and obvious analogy to the relation between a man and his work. Every scheme he forms, every discovery he makes by his reasoning powers, is very properly called the work of his mind. These works of the mind are sometimes great and important works, and draw the attention and admiration of men.

It is the province of the philosopher to consider how such works of the mind are produced and of what materials they are composed. He calls the materials ideas. There must therefore be ideas which the mind can arrange and form into a regular structure. Everything that is produced must be produced of something; and from nothing, nothing can be produced.

What is a Platonic idea? It is the essence of a species. It is the exemplar, the model, according to which all the individuals of that species are made. It is entire in every individual of the species, without being multiplied or divided. It was an object of the Divine intellect from eternity, and is an object of contemplation and of science to every intelligent being. It is eternal, immutable, and uncreated; and to crown all, it not only exists, but has a more real and permanent existence than anything that ever God made.

Take this description altogether, and it would require an Oedipus to unriddle it. But take away the last part of it, and nothing is more easy. It is easy to find five hundred

things which answer to every article in the description except the last.

Take, for an instance, the nature of a circle as it is defined by Euclid — an object which every intelligent being may conceive distinctly, though no circle had ever existed ; it is the exemplar, the model, according to which all the individual figures of that species that ever existed were made, for they are all made according to the nature of a circle. It is entire in every individual of the species, without being multiplied or divided. For every circle is an entire circle, and all circles, in as far as they are circles, have one and the same nature. It was an object of the Divine intellect from all eternity, and may be an object of contemplation and of science to every intelligent being. It is the essence of a species, and, like all other essences, it is eternal, immutable, and uncreated. This means ~~no more~~ but that a circle always was a circle and can never be anything but a circle. It is the necessity of the thing, and not any act of creating power, that makes a circle to be a circle.

The nature of every species, whether of substance, of quality, or of relation, and in general everything which the ancients called a universal, answers to the description of a Platonic idea, if in that description you leave out the attribute of existence.

If we believe that no species of things could be conceived by the Almighty without a model that really existed, we must go back to the Platonic system, however mysterious. But, if it be true that the Deity could have a distinct conception of things which did not exist, and that other intelligent beings may conceive objects which do not exist, the system has no better foundation than this prejudice, that the operations of mind must be like those of the body.

Aristotle rejected the ideas of his master Plato as visionary, but he retained the prejudices that gave rise to them, and therefore substituted something in their place, but under a different name and of a different origin.

He called the objects of intellect, intelligible species ; those of the memory and imagination, phantasms ; and those of senses, sensible species.

He thought that the sensible species come from the external object, and defined a *sense* to be that which has the capacity to receive the form of sensible things without the matter ; as wax receives the form of a seal without any of the matter of it. In like manner he thought that the intellect receives the forms of things intelligible, and he calls it the place of forms.

Thus, I think, it appears that the Peripatetic system of species and phantasms, as well as the Platonic system of ideas, is grounded upon this principle, that in every kind of thought there must be some object that really exists ; in every operation of the mind, something to work upon. Whether this immediate object be called an idea with Plato, or a phantasm or species with Aristotle — whether it be eternal and uncreated, or produced by the impressions of external objects — is of no consequence in the present argument. In both systems it was thought impossible that the Deity could make the world without matter to work upon ; in both, it was thought impossible that an intelligent Being could conceive anything that did not exist but by means of a model that really existed.

The philosophers of the Alexandrian school, commonly called the latter Platonists, conceived the eternal ideas of things to be in the Divine intellect, and thereby avoided the absurdity of making them a principle distinct from and independent of the Deity ; but still they held them to exist really in the Divine mind as the objects of conception, and as the patterns and archetypes of things that are made.

Modern philosophers, still persuaded that of every thought there must be an immediate object that really exists, have not deemed it necessary to distinguish by different names the immediate objects of intellect, of imagination, and of the senses, but have given the common name of *idea* to them all.

So much is this opinion fixed in the minds of philosophers that I doubt not but it will appear to most a very strange paradox, or rather a contradiction, that men should think without ideas.

That it has the appearance of a contradiction, I confess.

But this appearance arises from the ambiguity of the word idea. If the idea of a thing means only the thought of it, or the operation of the mind in thinking about it, which is the most common meaning of the word, to think without ideas is to think without thought, which is undoubtedly a contradiction.

But an idea, according to the definition given of it by philosophers, is not thought, but an object of thought, which really exists and is perceived. Now, whether is it a contradiction to say that a man may think of an object that does not exist?

I acknowledge that a man cannot perceive an object that does not exist;<sup>1</sup> nor can he remember an object that did not exist, but there appears to me no contradiction in his conceiving an object that neither does nor ever did exist.

Let us take an example. I conceive a centaur. ~~This~~ This conception is an operation of the mind of which I am conscious and to which I can attend. The sole object of it is a centaur, an animal which, I believe, never existed. I can see no contradiction in this.

The philosopher says, I cannot conceive a centaur without having an idea of it in my mind. I am at a loss to understand what he means. He surely does not mean that I cannot conceive it without conceiving it. This would make me no wiser. What then is this idea? Is it an animal, half horse and half man? No. Then I am certain it is not the thing I conceive. Perhaps he will say that the idea is an image of the animal and is the immediate object of my conception, and that the animal is the mediate or remote object.

To this I answer — *First*, I am certain there are not two objects of this conception, but one only, and that one is as immediate an object of my conception as any can be.

<sup>1</sup> This seems inconsistent with Reid's theory of perception (*v.* p. 151 n. 2). If to perceive an object is to believe an object is present as the cause of a sensation, Reid should allow the possibility of perceiving an object which does not exist. However he might hold that all sensation must have an object as its cause, and that consequently whenever I have a sensation and attribute a cause to it I must be perceiving some object or other, although I might very well be mis-perceiving it — *i.e.* thinking the sensation to be the sign of a particular object, of which in fact it is not the sign. *V.* p. xxi n. 1.

*Secondly*, This one object which I conceive is not the image of an animal — it is an animal. I know what it is to conceive an image of an animal and what it is to conceive an animal, and I can distinguish the one of these from the other without any danger of mistake. The thing I conceive is a body of a certain figure and colour, having life and spontaneous motion. The philosopher says that the idea is an image of the animal, but that it has neither body, nor colour, nor life, nor spontaneous motion. This I am not able to comprehend.

*Thirdly*, I wish to know how this idea comes to be an object of my thought when I cannot even conceive what it means ; and, if I did conceive it, this would be no evidence of its existence, any more than my conception of a centaur is of its existence. Philosophers sometimes say ~~that we perceive ideas~~, sometimes that we are conscious of them. I can have no doubt of the existence of anything which I either perceive or of which I am conscious, but I cannot find that I either perceive ideas or am conscious of them.

Perception and consciousness are very different operations and it is strange that philosophers have never determined by which of them ideas are discerned. This is as if a man should positively affirm that he perceived an object, but whether by his eyes, or his ears, or his touch, he could not say.

But may not a man who conceives a centaur say that he has a distinct image of it in his mind ? I think he may. And if he means by this way of speaking what the vulgar mean, who never heard of the philosophical theory of ideas, I find no fault with it. By a distinct image in the mind, the vulgar mean a distinct conception ; and it is natural to call it so, on account of the analogy between an image of a thing and the conception of it. On account of this analogy, obvious to all mankind, this operation is called imagination, and an image in the mind is only a periphrasis for imagination. But to infer from this that there is really an image in the mind, distinct from the operation of conceiving the object, is to be misled by an analogical

expression ; as if, from the phrases of deliberating and balancing things in the mind, we should infer that there is really a balance existing in the mind for weighing motives and arguments.

The analogical words and phrases used in all languages to express conception do, no doubt, facilitate their being taken in a literal sense. But, if we only attend carefully to what we are conscious of in this operation, we shall find no more reason to think that images do really exist in our minds than that balances and other mechanical engines do.

We know of nothing that is in the mind but by consciousness, and we are conscious of nothing but various modes of thinking, such as understanding, willing, affection, passion, doing, suffering. If philosophers choose to give the name of an idea to any mode of thinking of which we are conscious, I have no objection to the name, ~~but~~ that it introduces a foreign word into our language without necessity, and a word that is very ambiguous and apt to mislead. But, if they give that name to images in the mind which are not thought, but only objects of thought, I can see no reason to think that there are such things in nature. If they be, their existence and their nature must be more evident than anything else, because we know nothing but by their means. I may add that, if they be, we can know nothing besides them. For, from the existence of images we can never, by any just reasoning, infer the existence of anything else, unless perhaps the existence of an intelligent Author of them. In this Bishop Berkeley reasoned right.<sup>1</sup>

If now it should be asked, What is the idea of a circle ? I answer, It is the conception of a circle. What is the immediate object of this conception ? The immediate and the only object of it is a circle. But where is this circle ? It is nowhere. If it was an individual and had a real existence, it must have a place ; but, being a universal, it has no existence and therefore no place. Is it not in the mind of him that conceives it ? The conception of it is in the mind, being an act of the mind ; and in common language, a thing being in the mind is a figurative expres-

<sup>1</sup> *V. Principles*, 18, 26, 148.

sion signifying that the thing is conceived or remembered.

It may be asked whether this conception is an image or resemblance of a circle. I answer, I have already accounted for its being, in a figurative sense, called the image of a circle in the mind. If the question is meant in the literal sense, we must observe that the word *conception* has two meanings. Properly it signifies that operation of the mind which we have been endeavouring to explain; but sometimes it is put for the object of conception, or thing conceived.

Now, if the question be understood in the last of these senses, the object of this conception is not an image or resemblance of a circle, for it is a circle, and nothing can be an image of itself.

If the question be whether the operation of mind in conceiving a circle be an image or resemblance of a circle, I think it is not, and that no two things can be more perfectly unlike than a species of thought and a species of figure. Nor is it more strange that conception should have no resemblance to the object conceived than that desire should have no resemblance to the object desired, or resentment to the object of resentment.

I can likewise conceive an individual object that really exists, such as St. Paul's Church in London. I have an idea of it; that is, I conceive it. The immediate object of this conception is four hundred miles distant, and I have no reason to think that it acts upon me or that I act upon it; but I can think of it notwithstanding. I can think of the first year or the last year of the Julian period.

This account of the faculty of conception, by images in the mind or in the brain, will deserve the regard of those who have a true taste in philosophy, when it is proved by solid arguments—*First*, That there are images in the mind, or in the brain, of the things we conceive. *Secondly*, That there is a faculty in the mind of perceiving such images. *Thirdly*, That the perception of such images produces the conception of things most distant, and even of things that have no existence. And, *fourthly*, That the perception of individual images in the mind or in the brain gives us the

conception of universals, which are the attributes of many individuals. Until this is done, the theory of images existing in the mind or in the brain ought to be placed in the same category with the sensible species, *materia prima* of Aristotle, and the *vortices* of Descartes.

### CHAPTER 3

#### MISTAKES CONCERNING CONCEPTION

1. WRITERS on logic, after the example of Aristotle, divide the operations of the understanding into three: simple apprehension (which is another word for conception), judgment, and reasoning. They teach us that reasoning is expressed by a syllogism, judgment by a proposition, and simple apprehension by a term only — that is, by one or more words which do not make a full proposition, but only the subject or predicate of a proposition. If by this they mean, as I think they do, that a proposition, or even a syllogism, may not be simply apprehended, I believe this is a mistake.

In all judgment and in all reasoning conception is included. We can neither judge of a proposition nor reason about it unless we conceive or apprehend it. We may distinctly conceive a proposition without judging of it at all. We may have no evidence on one side or the other; we may have no concern whether it be true or false. In these cases we commonly form no judgment about it, though we perfectly understand its meaning.

2. The division commonly made by logicians of simple apprehension into Sensation, Imagination, and Pure Intellection seems to me very improper in several respects.

*First*, Under the word sensation they include not only what is properly so called, but the perception of external objects by the senses. These are very different operations of the mind, and, although they are commonly conjoined

by nature, ought to be carefully distinguished by philosophers.

*Secondly*, Neither sensation nor the perception of external objects is simple apprehension. Both include judgment and belief, which are excluded from simple apprehension.

*Thirdly*, They distinguish imagination from pure intellection\* by this: that in imagination the image is in the brain, in pure intellection it is in the intellect. This is to ground a distinction upon a hypothesis. We have no evidence that there are images either in the brain or in the intellect.

I take imagination, in its most proper sense, to signify a lively conception of objects of sight. This is a talent of importance to poets and orators, and deserves a proper name on account of its connection with those arts. According to this strict meaning of the word, imagination is distinguished from conception as a part from the whole. We conceive the objects of the other senses, but it is not so proper to say that we imagine them. We conceive judgment, reasoning, propositions, and arguments, but it is rather improper to say that we imagine these things.

This distinction between imagination and conception may be illustrated by an example which Descartes uses to illustrate the distinction between imagination and pure intellection.<sup>1</sup> We can imagine a triangle or a square so clearly as to distinguish them from every other figure. But we cannot imagine a figure of a thousand equal sides and angles so clearly. The best eye, by looking at it, could not distinguish it from every figure of more or fewer sides. And that conception of its appearance to the eye, which we properly call imagination, cannot be more distinct than the appearance itself; yet we can conceive a figure of a thousand sides, and even can demonstrate the properties which distinguish it from all figures of more or fewer sides. It is not by the eye, but by a superior faculty, that we form the notion of a great number such as a thousand. And a distinct notion of this number of sides not being to be

<sup>1</sup> 6th Meditation.

got by the eye, it is not imagined, but it is distinctly conceived, and easily distinguished from every other number.

3. Simple apprehension is commonly represented as the first operation of the understanding ; and judgment, as being a composition or combination of simple apprehensions.

This mistake has probably arisen from the taking sensation, and the perception of objects by the senses, to be nothing but simple apprehension. They are, very probably, the first operations of the mind ; but they are not simple apprehensions.

It is generally allowed that we cannot conceive sounds if we have never heard, nor colours if we have never seen ; and the same thing may be said of the objects of the other senses. In like manner we must have judged or reasoned before we have the conception or simple apprehension of judgment and of reasoning.

Simple apprehension, therefore, though it be the simplest, is not the first operation of the understanding ; and, instead of saying that the more complex operations of the mind are formed by compounding simple apprehensions, we ought rather to say that simple apprehensions are got by analysing more complex operations.<sup>1</sup>

4. There remains another mistake concerning conception which deserves to be noticed. It is — That our conception of things is a test of their possibility, so that, what we can distinctly conceive, we may conclude to be possible ; and of what is impossible, we can have no conception.

This opinion has been held by philosophers for more than a hundred years without contradiction or dissent, as far as I know ; and, if it be an error, it may be of some use to inquire into its origin, and the causes that it has been so generally received as a maxim whose truth could not be brought into doubt.

One of the fruitless questions agitated among the scholastic philosophers in the dark ages was — What is the criterion of truth ? as if men could have any other way

<sup>1</sup> *V.* pp. 274 *seq.*

to distinguish truth from error but by the right use of that power of judging which God has given them.

Descartes endeavoured to put an end to this controversy by making it a fundamental principle in his system that whatever we clearly and distinctly perceive is true.

To understand this principle of Descartes, it must be observed that he gave the name of perception to every power of the human understanding, and in explaining this very maxim he tells us that sense, imagination, and pure intellection, are only different modes of perceiving, and so the maxim was understood by all his followers.

The learned Dr. Cudworth seems also to have adopted this principle: "The criterion of true knowledge", says he, "is only to be looked for in our knowledge and conceptions themselves: for the entity of all theoretical truth is nothing else, but, clear intelligibility, and whatever is clearly conceived is an entity and a truth; but that which is false, Divine power itself cannot make it to be clearly and distinctly understood. A falsehood can never be clearly conceived or apprehended to be true." (*Etern. and Immut. Morality*, p. 172 etc.)

This Cartesian maxim seems to me to have led the way to that now under consideration, which seems to have been adopted as the proper correction of the former. When the authority of Descartes declined, men began to see that we may clearly and distinctly conceive what is not true, but thought that our conception, though not in all cases a test of truth, might be a test of possibility.

This indeed seems to be a necessary consequence of the received doctrine of ideas, it being evident that there can be no distinct image, either in the mind or anywhere else, of that which is impossible. The ambiguity of the word *conceive* which we observed (Essay I. Chapter 1), and the common phraseology of saying *we cannot conceive such a thing* when we would signify that we think it impossible, might likewise contribute to the reception of this doctrine.

But, whatever was the origin of this opinion, it seems to prevail universally and to be received as a maxim.

"The bare having an idea of the proposition proves the

thing not to be impossible ; for of an impossible proposition there can be no idea." — DR. SAMUEL CLARKE.

"Of that which neither does nor can exist we can have no idea." — LORD BOLINGBROKE.

"The measure of impossibility to us is inconceivableness, that of which we can have no idea, but that reflecting upon it, it appears to be nothing, we pronounce to be impossible." — ABERNETHY.

"In every idea is implied the possibility of the existence of its object, nothing being clearer than that there can be no idea of an impossibility, or conception of what cannot exist." — DR. PRICE.

"Impossibile est cujus nullam notionem formare possumus ; possibile e contra, cui aliqua respondet notio." — WOLFII ONTOLOG.

"It is an established maxim in metaphysics that whatever the mind conceives includes the idea of possible existence, or, in other words, that nothing we imagine is absolutely impossible." — D. HUME.

It were easy to muster up many other respectable authorities for this maxim, and I have never found one that called it in question.

If the maxim be true in the extent which the famous Wolfius has given it in the passage above quoted, we shall have a short road to the determination of every question about the possibility or impossibility of things. We need only look into our own breast, and that, like the Urim and Thummim, will give an infallible answer. If we can conceive the thing, it is possible ; if not, it is impossible. And surely every man may know whether he can conceive what is affirmed or not.

Other philosophers have been satisfied with one half of the maxim of Wolfius. They say that whatever we can conceive is possible, but they do not say that whatever we cannot conceive is impossible.

I cannot help thinking even this to be a mistake which philosophers have been unwarily led into from the causes before mentioned. My reasons are these :

1. Whatever is said to be possible or impossible is

expressed by a proposition. Now, what is it to conceive a proposition? I think it is no more than to understand distinctly its meaning. I know no more that can be meant by simple apprehension or conception when applied to a proposition. The axiom, therefore, amounts to this: Every proposition of which you understand the meaning distinctly is possible. I am persuaded that I understand as distinctly the meaning of this proposition, *Any two sides of a triangle are together equal to the third*, as of this — *Any two sides of a triangle are together greater than the third*; yet the first of these is impossible.

Perhaps it will be said that, though you understand the meaning of the impossible proposition, you cannot suppose or conceive it to be true.

Here we are to examine the meaning of the phrases of *supposing* and *conceiving* a proposition to be true. I can certainly suppose it to be true, because I can draw consequences from it which I find to be impossible, as well as the proposition itself.

If by conceiving it to be true be meant giving some degree of assent to it, however small, this I confess I cannot do. But will it be said that every proposition to which I can give any degree of assent is possible? This contradicts experience, and, therefore, the maxim cannot be true in this sense.

Sometimes, when we say that *we cannot conceive a thing to be true*, we mean by that expression that *we judge it to be impossible*. In this sense I cannot indeed conceive it to be true that two sides of a triangle are equal to the third. I judge it to be impossible. If, then, we understand in this sense that maxim, that nothing we can conceive is impossible, the meaning will be that nothing is impossible which we judge to be possible. But does it not often happen that what one man judges to be possible, another man judges to be impossible? The maxim, therefore, is not true in this sense.

I am not able to find any other meaning of *conceiving a proposition*, or of *conceiving it to be true*, besides these I have mentioned. I know nothing that can be meant by

having the idea of a proposition, but either the understanding its meaning or the judging of its truth. I can understand a proposition that is false or impossible, as well as one that is true or possible ; and I find that men have contradictory judgments about what is possible or impossible as well as about other things. In what sense, then, can it be said that the having an idea of a proposition gives certain evidence that it is possible ?

If it be said that the idea of a proposition is an image of it in the mind, I think indeed there cannot be a distinct image, either in the mind or elsewhere, of that which is impossible ; but what is meant by the image of a proposition I am not able to comprehend, and I shall be glad to be informed.

2. Every proposition that is necessarily true stands opposed to a contradictory proposition that is ~~impossible~~, and he that conceives one conceives both. Thus, a man who believes that two and three necessarily make five must believe it to be impossible that two and three should not make five. He conceives both propositions when he believes one. Every proposition carries its contradictory in its bosom, and both are conceived at the same time. " It is confessed ", says Mr. Hume, " that, in all cases where we dissent from any person, we conceive both sides of the question ; but we can believe only one " <sup>1</sup> From this it certainly follows that, when we dissent from any person about a necessary proposition, we conceive one that is impossible ; yet I know no philosopher who has made so much use of the maxim, that whatever we conceive is possible, as Mr. Hume. A great part of his peculiar tenets is built upon it ; and, if it is true, they must be true. But he did not perceive that in the passage now quoted, the truth of which is evident, he contradicts it himself.

3. Mathematicians have in many cases proved some things to be possible and others to be impossible, which, without demonstration, would not have been believed. Yet I have never found that any mathematician has attempted to prove a thing to be possible because it can

<sup>1</sup> *Treatise*, I. 3. 7.

be conceived, or impossible because it cannot be conceived. Why is not this maxim applied to determine whether it is possible to square the circle? a point about which very eminent mathematicians have differed. It is easy to conceive that, in the infinite series of numbers and intermediate fractions, some one number, integral or fractional, may bear the same ratio to another as the side of a square bears to its diagonal; yet, however conceivable this may be, it may be demonstrated to be impossible.

4. Mathematicians often require us to conceive things that are impossible in order to prove them to be so. This is the case in all their demonstrations *ad absurdum*. Conceive, says Euclid, a right line drawn from one point of the circumference of a circle to another, to fall without the circle: I conceive this — I reason from it until I come to a consequence that is manifestly absurd, and from thence conclude that the thing which I conceived is impossible.

[CHAPTER 4. OF THE TRAIN OF THOUGHT  
IN THE MIND]

# ESSAY V

## OF ABSTRACTION

### CHAPTER I

#### OF GENERAL WORDS

THE words we use in language are either general words or proper names. Proper names are intended to signify one individual only. Such are the names of men, kingdoms, provinces, cities, rivers, and of every other creature of God, or work of man, which we choose to distinguish from all others of the kind, by a name appropriated to it. All the other words of language are general words, not appropriated to signify any one individual thing, but equally related to many.

Under general words, therefore, I comprehend not only those which logicians call general terms — that is, such general words as may make the subject or the predicate of a proposition — but likewise their auxiliaries or accessories, as the learned Mr. Harris calls them;<sup>1</sup> such as prepositions, conjunctions, articles, which are all general words, though they cannot properly be called general terms.

In every language, rude or polished, general words make the greatest part, and proper names the least. Grammarians have reduced all words to eight or nine classes, which are called parts of speech. Of these there is only one — to wit, that of *nouns* — wherein proper names are found. All *pronouns*, *verbs*, *participles*, *adverbs*, *articles*, *prepositions*, *conjunctions*, and *interjections* are general words. Of *nouns*, all *adjectives* are general words,

<sup>1</sup> James Harris, *Hermes, A Philosophical Inquiry concerning Universal Grammar*, Bk I. ch. 3; and Bk II.

and the greater part of *substantives*. Every substantive that has a plural number is a general word ; for no proper name can have a plural number, because it signifies only one individual. In all the fifteen books of Euclid's *Elements* there is not one word that is not general ; and the same may be said of many large volumes.

At the same time, it must be acknowledged that all the objects we perceive are individuals. Every object of sense, of memory, or of consciousness, is an individual object. All the good things we enjoy or desire, and all the evils we feel or fear, must come from individuals ; and I think we may venture to say that every creature which God has made, in the heavens above, or in the earth beneath, or in the waters under the earth, is an individual.

How comes it to pass, then, that in all languages general words make the greatest part of the language, and proper names but a very small and inconsiderable part of it ?

This seemingly strange phenomenon may, I think, be easily accounted for by the following observations :

*First*, Though there be a few individuals that are obvious to the notice of all men, and therefore have proper names in all languages — such as the sun and moon, the earth and sea — yet the greatest part of the things to which we think fit to give proper names are local, known perhaps to a village or to a neighbourhood, but unknown to the greater part of those who speak the same language, and to all the rest of mankind. The names of such things being confined to a corner, and having no names answering to them in other languages, are not accounted a part of the language any more than the customs of a particular hamlet are accounted part of the law of the nation.

For this reason there are but few proper names that belong to a language. It is next to be considered why there must be many general words in every language.

*Secondly*, It may be observed that every individual object that falls within our view has various attributes, and it is by them that it becomes useful or hurtful to us. We know not the essence of any individual object ; all the

knowledge we can attain of it is the knowledge of its attributes — its quantity, its various qualities, its various relations to other things, its place, its situation, and motions. It is by such attributes of things only that we can communicate our knowledge of them to others. By their attributes our hopes or fears for them are regulated, and it is only by attention to their attributes that we can make them subservient to our ends, and therefore we give names to such attributes.

Now all attributes must, from their nature, be expressed by general words, and are so expressed in all languages. In the ancient philosophy attributes in general were called by two names which express their nature. They were called *universals*, because they might belong equally to many individuals, and are not confined to one. They were also called *predicables*, because whatever is *predicated*, that is, affirmed or denied of one subject, may be of more, and therefore is a universal, and expressed by a general word. A predicable therefore signifies the same thing as an attribute, with this difference only, that the first is Latin, the last English. The attributes we find either in the creatures of God or in the works of men are common to many individuals. We either find it to be so or presume it may be so, and give them the same name in every subject to which they belong.

There are not only attributes belonging to individual subjects, but there are likewise attributes of attributes, which may be called secondary attributes. Most attributes are capable of different degrees and different modifications, which must be expressed by general words.

Thus it is an attribute of many bodies to be moved ; but motion may be in an endless variety of directions. It may be quick or slow, rectilinear or curvilinear ; it may be equable, or accelerated, or retarded.

As all attributes, therefore, whether primary or secondary, are expressed by general words, it follows that, in every proposition we express in language, what is affirmed or denied of the subject of the proposition must be expressed by general words : and that the subject of the proposition

may often be a general word will appear from the next observation.

*Thirdly*, The same faculties by which we distinguish the different attributes belonging to the same subject, and give names to them, enable us likewise to observe that many subjects agree in certain attributes while they differ in others. By this means we are enabled to reduce individuals which are infinite to a limited number of classes, which are called kinds and sorts, and, in the scholastic language, *genera* and *species*.

Observing many individuals to agree in certain attributes, we refer them all to one class and give a name to the class. This name comprehends in its signification not one attribute only, but all the attributes which distinguish that class ; and by affirming this name of any individual, we affirm it to have all the attributes which characterise the class : thus men, dogs, horses, elephants, are so many different classes of animals. In like manner we marshal other substances, vegetable and inanimate, into classes.

Nor is it only substances that we thus form into classes. We do the same with regard to qualities, relations, actions, affections, passions, and all other things.

When a class is very large it is divided into subordinate classes in the same manner. The higher class is called a *genus* or kind, the lower, a *species* or sort of the higher. Sometimes a species is still subdivided into subordinate species, and this subdivision is carried on as far as is found convenient for the purpose of language or for the improvement of knowledge.

In this distribution of things into *genera* and *species* it is evident that the name of the species comprehends more attributes than the name of the genus. The species comprehends all that is in the genus, and those attributes likewise which distinguish that species from others belonging to the same genus ; and the more subdivisions we make, the names of the lower become still the more comprehensive in their signification, but the less extensive in their application to individuals.

Hence it is an axiom in logic that the more extensive

any general term is, it is the less comprehensive ; and, on the contrary, the more comprehensive, the less extensive. Thus, in the following series of subordinate general terms, animal, man, Frenchman, Parisian, every subsequent term comprehends in its signification all that is in the preceding, and something more ; and every antecedent term extends to more individuals than the subsequent.

Such divisions and subdivisions of things into *genera* and *species* with general names are not confined to the learned and polished languages ; they are found in those of the rudest tribes of mankind. From which we learn that the invention and the use of general words, both to signify the attributes of things and to signify the *genera* and *species* of things, is not a subtle invention of philosophers, but an operation which all men perform by the light of common sense. Philosophers may speculate about this operation and reduce it to canons and aphorisms ; but men of common understanding, without knowing anything of the philosophy of it, can put it in practice, in like manner as they can see objects and make good use of their eyes, although they know nothing of the structure of the eye or of the theory of vision.

Every genus and every species of things may be either the subject or the predicate of a proposition — nay, of innumerable propositions ; for every attribute common to the genus or species may be affirmed of it ; and the genus may be affirmed of every species, and both genus and species of every individual to which it extends.

Thus, of man it may be affirmed that he is an animal made up of body and mind ; that he is of few days, and full of trouble ; that he is capable of various improvements in arts, in knowledge, and in virtue. In a word, everything common to the species may be affirmed of man ; and of all such propositions, which are innumerable, man is the subject.

Again, of every nation and tribe, and of every individual of the human race that is, or was, or shall be, it may be affirmed that they are men. In all such propositions, which are innumerable, man is the predicate of the proposition.

We observed above an extension and a comprehension in general terms, and that, in any subdivision of things, the name of the lowest species is most comprehensive, and that of the highest genus most extensive. I would now observe that, by means of such general terms, there is also an extension and comprehension of propositions which is one of the noblest powers of language, and fits it for expressing, with great ease and expedition, the highest attainments in knowledge of which the human understanding is capable.

When the predicate is a *genus* or a *species*, the proposition is more or less comprehensive, according as the predicate is. Thus, when I say that this seal is gold, by this single proposition I affirm of it all the properties which that metal is known to have. When I say of any man that he is a mathematician, this appellation comprehends all the attributes that belong to him as an animal, as a man, and as one who has studied mathematics. When I say that the orbit of the planet Mercury is an ellipsis, I thereby affirm of that orbit all the properties which Apollonius and other geometricians have discovered, or may discover, of that species of figure.

Again, when the subject of a proposition is a *genus* or a *species*, the proposition is more or less extensive, according as the subject is. Thus, when I am taught that the three angles of a plane triangle are equal to two right angles, this properly extends to every species of plane triangle, and to every individual plane triangle that did, or does, or can exist.

It is by means of such extensive and comprehensive propositions that human knowledge is condensed, as it were, into a size adapted to the capacity of the human mind, with great addition to its beauty, and without any diminution of its distinctness and perspicuity.

General propositions in science may be compared to the seed of a plant which, according to some philosophers, has not only the whole future plant enclosed within it, but the seeds of that plant, and the plants that shall spring from them through all future generations.

But the similitude falls short in this respect, that time

and accidents, not in our power, must concur to disclose the contents of the seed and bring them into our view ; whereas the contents of a general proposition may be brought forth, ripened, and exposed to view at our pleasure, and in an instant.

Thus the wisdom of ages, and the most sublime theorems of science, may be laid up, like an Iliad in a nutshell, and transmitted to future generations. And this noble purpose of language can only be accomplished by means of general words annexed to the divisions and subdivisions of things.

What has been said in this chapter, I think, is sufficient to show that there can be no language, not so much as a single proposition, without general words ; that they must make the greatest part of every language ; and that it is by them only that language is fitted to express, with wonderful ease and expedition, all the treasures of human wisdom and knowledge.

## CHAPTER 2

### OF GENERAL CONCEPTIONS

As general words are so necessary in language, it is natural to conclude that there must be general conceptions of which they are the signs.

Words are empty sounds when they do not signify the thoughts of the speaker, and it is only from their signification that they are denominated general. Every word that is spoken, considered merely as a sound, is an individual sound. And it can only be called a general word because that which it signifies is general. Now, that which it signifies is conceived by the mind both of the speaker and hearer, if the word have a distinct meaning, and be distinctly understood. It is therefore impossible that words can have a general signification unless there be conceptions in the mind of the speaker and of the hearer of things that

are general. It is to such that I give the name of general conceptions ; and it ought to be observed that they take this denomination, not from the act of the mind in conceiving, which is an individual act, but from the object or thing conceived, which is general.

We are, therefore, here to consider whether we have such general conceptions, and how they are formed.

To begin with the conceptions expressed by general terms — that is, by such general words as may be the subject or the predicate of a proposition. They are either attributes of things or they are *genera* or *species* of things.

It is evident, with respect to all the individuals we are acquainted with, that we have a more clear and distinct conception of their attributes than of the subject to which those attributes belong.

Take, for instance, any individual body we have access to know — what conception do we form of it ? Every man may know this from his consciousness. He will find that he conceives it as a thing that has length, breadth, and thickness, such a figure and such a colour ; that it is hard, or soft, or fluid ; that it has such qualities, and is fit for such purposes. If it is a vegetable, he may know where it grew, what is the form of its leaves, and flower, and seed. If an animal, what are its natural instincts, its manner of life, and of rearing its young. Of these attributes, belonging to this individual and numberless others, he may surely have a distinct conception, and he will find words in language by which he can clearly and distinctly express each of them.

If we consider, in like manner, the conception we form of any individual person of our acquaintance, we shall find it to be made up of various attributes which we ascribe to him ; such as, that he is the son of such a man, the brother of such another ; that he has such an employment or office ; has such a fortune ; that he is tall or short, well or ill made, comely or ill favoured, young or old, married or unmarried ; to this we may add his temper, his character, his abilities, and perhaps some anecdotes of his history.

Such is the conception we form of individual persons

of our acquaintance. By such attributes we describe them to those who know them not, and by such attributes historians give us a conception of the personages of former times. Nor is it possible to do it in any other way.

All the distinct knowledge we have or can attain of any individual is the knowledge of its attributes, for we know not the essence of any individual. This seems to be beyond the reach of the human faculties.

Now, every attribute is what the ancients called a universal. It is, or may be, common to various individuals. There is no attribute belonging to any creature of God which may not belong to others; and, on this account, attributes in all languages are expressed by general words.

It appears likewise, from every man's experience, that he may have as clear and distinct a conception of such attributes as we have named, and of innumerable others, as he can have of any individual to which they belong.

Indeed, the attributes of individuals are all that we distinctly conceive about them. It is true we conceive a subject to which the attributes belong; but of this subject, when its attributes are set aside, we have but an obscure and relative conception, whether it be body or mind.

This was before observed with regard to bodies (Essay II. Chapter 19, to which we refer), and it is no less evident with regard to minds. What is it we call a mind? It is a thinking, intelligent, active being. Granting that thinking, intelligence, and activity are attributes of mind, I want to know what the thing or being is to which these attributes belong. To this question I can find no satisfying answer. The attributes of mind, and particularly its operations, we know clearly, but of the thing itself we have only an obscure notion.

Nature teaches us that thinking and reasoning are attributes which cannot exist without a subject, but of that subject I believe the best notion we can form implies little more than that it is the subject of such attributes.

Whether other created beings may have the knowledge of the real essence of created things so as to be able to

deduce their attributes from their essence and constitution, or whether this be the prerogative of him who made them, we cannot tell, but it is a knowledge which seems to be quite beyond the reach of the human faculties.

We know the essence of a triangle, and from that essence can deduce its properties. It is a universal, and might have been conceived by the human mind though no individual triangle had ever existed. It has only what Mr. Locke calls a nominal essence, which is expressed in its definition. But everything that exists has a real essence, which is above our comprehension, and therefore we cannot deduce its properties or attributes from its nature, as we do in the triangle. We must take a contrary road in the knowledge of God's works, and satisfy ourselves with their attributes as facts, and with the general conviction that there is a subject to which those attributes belong.

Enough, I think, has been said to show not only that we may have clear and distinct conceptions of attributes, but that they are the only things with regard to individuals of which we have a clear and distinct conception.

The other class of general terms are those that signify the *genera* and *species* into which we divide and subdivide things. And, if we be able to form distinct conceptions of attributes, it cannot surely be denied that we may have distinct conceptions of *genera* and *species*; because they are only collections of attributes which we conceive to exist in a subject, and to which we give a general name. If the attributes comprehended under that general name be distinctly conceived, the thing meant by the name must be distinctly conceived. And the name may justly be attributed to every individual which has those attributes.

Thus, I conceive distinctly what it is to have wings, to be covered with feathers, to lay eggs. Suppose, then, that we give the name of *bird* to every animal that has these three attributes. Here undoubtedly my conception of a bird is as distinct as my notion of the attributes which are common to this species: and, if this be admitted to be the definition of a bird, there is nothing I conceive more distinctly. If I had never seen a bird, and can but be made to

understand the definition, I can easily apply it to every individual of the species without danger of mistake.

When things are divided and subdivided by men of science, and names given to the *genera* and *species*, those names are defined. Thus, the genera and species of plants and of other natural bodies are accurately defined by the writers in the various branches of natural history, so that, to all future generations, the definition will convey a distinct notion of the genus or species defined.

There are without doubt many words signifying genera and species of things which have a meaning somewhat vague and indistinct, so that those who speak the same language do not always use them in the same sense. But, if we attend to the cause of this indistinctness, we shall find that it is not owing to their being general terms, but to this, that there is no definition of them that has authority. Their meaning, therefore, has not been learned by a definition, but by a kind of induction, by observing to what individuals they are applied by those who understand the language. We learn by habit to use them as we see others do, even when we have not a precise meaning annexed to them. A man may know that to certain individuals they may be applied with propriety, but whether they can be applied to certain other individuals he may be uncertain, either from want of good authorities or from having contrary authorities which leave him in doubt.

Thus, a man may know that when he applies the name of beast to a lion or a tiger, and the name of bird to an eagle or a turkey, he speaks properly. But whether a bat be a bird or a beast, he may be uncertain. If there was any accurate definition of a beast and of a bird that was of sufficient authority, he could be at no loss.

It is said to have been sometimes a matter of dispute with regard to a monstrous birth of a woman whether it was a man or not. Although this be, in reality, a question about the meaning of a word, it may be of importance on account of the privileges which laws have annexed to the human character. To make such laws perfectly precise, the definition of a man would be necessary, which I believe

legislators have seldom or never thought fit to give. It is, indeed, very difficult to fix a definition of so common a word, and the cases wherein it would be of any use so rarely occur that perhaps it may be better, when they do occur, to leave them to the determination of a judge or of a jury than to give a definition which might be attended with unforeseen consequences.

A genus or species being a collection of attributes conceived to exist in one subject, a definition is the only way to prevent any addition or diminution of its ingredients in the conception of different persons ; and when there is no definition that can be appealed to as a standard, the name will hardly retain the most perfect precision in its signification.

From what has been said, I conceive it is evident that the words which signify genera and species of things have often as precise and definite a signification as any words whatsoever, and that, when it is otherwise, their want of precision is not owing to their being general words but to other causes.

Having shown that we may have a perfectly clear and distinct conception of the meaning of general terms, we may, I think, take it for granted that the same may be said of other general words such as prepositions, conjunctions,\*articles. My design at present being only to show that we have general conceptions no less clear and distinct than those of individuals, it is sufficient for this purpose if this appears with regard to the conceptions expressed by general terms. To conceive the meaning of a general word, and to conceive that which it signifies, is the same thing. We conceive distinctly the meaning of general terms, therefore we conceive distinctly that which they signify. But such terms do not signify any individual, but what is common to many individuals ; therefore we have a distinct conception of things common to many individuals — that is, we have distinct general conceptions.

We must here beware of the ambiguity of the word *conception*, which sometimes signifies the act of the mind in conceiving, sometimes the thing conceived, which is the

object of that act. If the word be taken in the first sense, I acknowledge that every act of the mind is an individual act; the universality, therefore, is not in the act of the mind, but in the object or thing conceived. The thing conceived is an attribute common to many subjects, or it is a genus or species common to many individuals.

### CHAPTER 3

#### OF GENERAL CONCEPTIONS FORMED BY ANALYSING OBJECTS

WE are next to consider the operations of the understanding, by which we are enabled to form general conceptions.

These appear to me to be three : *First*, The resolving or analysing a subject into its known attributes, and giving a name to each attribute, which name shall signify that attribute and nothing more.

*Secondly*, The observing one or more such attributes to be common to many subjects. The first is by philosophers called *abstraction* ; the second may be called *generalising* ; but both are commonly included under the name of *abstraction*.

It is difficult to say which of them goes first, or whether they are not so closely connected that neither can claim the precedence. For, on the one hand, to perceive an agreement between two or more objects in the same attribute seems to require nothing more than to compare them together. A savage, upon seeing snow and chalk, would find no difficulty in perceiving that they have the same colour. Yet, on the other hand, it seems impossible that he should observe this agreement without abstraction — that is, distinguishing in his conception the colour, wherein those two objects agree, from the other qualities wherein they disagree.

It seems, therefore, that we cannot generalise without

some degree of abstraction ; but I apprehend we may abstract without generalising. For what hinders me from attending to the whiteness of the paper before me without applying that colour to any other object ? The whiteness of this individual object is an abstract conception, but not a general one, while applied to one individual only. These two operations, however, are subservient to each other ; for the more attributes we observe and distinguish in any one individual, the more agreements we shall discover between it and other individuals.

A *third* operation of the understanding, by which we form abstract conceptions, is the combining into one whole a certain number of those attributes of which we have formed abstract notions and giving a name to that combination. It is thus we form abstract notions of the genera and species of things. These three operations we shall consider in order.

With regard to abstraction strictly so called, I can perceive nothing in it that is difficult either to be understood or practised. What can be more easy than to distinguish the different attributes which we know to belong to a subject ? In a man, for instance, to distinguish his size, his complexion, his age, his fortune, his birth, his profession, and twenty other things that belong to him. To think and speak of these things with understanding is surely within the reach of every man endowed with the human faculties.

There may be distinctions that require nice discernment or an acquaintance with the subject that is not common. Thus, a critic in painting may discern the style of Raphael or Titian when another man could not. A lawyer may be acquainted with many distinctions in crimes, and contracts, and actions, which never occurred to a man who has not studied law. One man may excel another in the talent of distinguishing, as he may in memory or in reasoning ; but there is a certain degree of this talent without which a man would have no title to be considered as a reasonable creature.

It ought likewise to be observed that attributes may,

with perfect ease, be distinguished and disjoined in our conception which cannot be actually separated in the subject. Thus, in a body, I can distinguish its solidity from its extension, and its weight from both. In extension I can distinguish length, breadth, and thickness, yet none of these can be separated from the body or from one another. There may be attributes belonging to a subject, and inseparable from it, of which we have no knowledge, and consequently no conception, but this does not hinder our conceiving distinctly those of its attributes which we know.

Thus, all the properties of a circle are inseparable from the nature of a circle and may be demonstrated from its definition, yet a man may have a perfectly distinct notion of a circle who knows very few of those properties of it which mathematicians have demonstrated ; and a circle probably has many properties which no mathematician ever dreamed of.

It is therefore certain that attributes, which in their nature are absolutely inseparable from their subject and from one another, may be disjoined in our conception ; one cannot exist without the other, but one can be conceived without the other.

Having considered abstraction strictly so called, let us next consider the operation of generalising, which is nothing but the observing one or more attributes to be common to many subjects.

If any man can doubt whether there be attributes that are really common to many individuals, let him consider whether there be not many men that are above six feet high, and many below it ; whether there be not many men that are rich, and many more that are poor ; whether there be not many that were born in Britain, and many that were born in France. To multiply instances of this kind would be to affront the reader's understanding. It is certain, therefore, that there are innumerable attributes that are really common to many individuals ; and if this be what the schoolmen called *universale a parte rei*, we may affirm with certainty that there are such universals.

There are some attributes expressed by general words

of which this may seem more doubtful. Such are the qualities which are inherent in their several subjects. It may be said that every subject hath its own qualities, and that which is the quality of one subject cannot be the quality of another subject. Thus the whiteness of the sheet of paper upon which I write cannot be the whiteness of another sheet, though both are called white. The weight of one guinea is not the weight of another guinea, though both are said to have the same weight.<sup>1</sup>

To this I answer that the whiteness of this sheet is one thing, whiteness is another ; the conceptions signified by these two forms of speech are as different as the expressions. The first signifies an individual quality really existing, and is not a general conception, though it be an abstract one : the second signifies a general conception, which implies no existence but may be predicated of everything that is white, and in the same sense. On this account, if one should say that the whiteness of this sheet is the whiteness of another sheet, every man perceives this to be absurd ; but when he says both sheets are white, this is true and perfectly understood. The conception of whiteness implies no existence ; it would remain the same though everything in the universe that is white were annihilated.

It appears, therefore, that the general names of qualities as well as of other attributes are applicable to many individuals in the same sense, which cannot be if there be not general conceptions signified by such names.

If it should be asked how early, or at what period of life, men begin to form general conceptions, I answer, As soon as a child can say, with understanding, that he has two brothers or two sisters — as soon as he can use the plural number — he must have general conceptions ; for no individual can have a plural number.

Upon the whole, these two operations of abstracting and generalising appear common to all men that have understanding. The practice of them is, and must be, familiar to every man that uses language ; but it is one thing to

<sup>1</sup> Cf. J. Cook Wilson, *Statement and Inference*, esp. pp. 171, 341 ; G. F. Stout, *Studies in Philosophy and Psychology*, Essay XVII.

practise them, and another to explain how they are performed ; as it is one thing to see, another to explain how we see. The first is the province of all men, and is the natural and easy operation of the faculties which God hath given us. The second is the province of philosophers, and, though a matter of no great difficulty in itself, has been much perplexed by the ambiguity of words, and still more by the hypotheses of philosophers.

As it is by analysing a complex object into its several attributes that we acquire our simplest abstract conceptions, it may be proper to compare this analysis with that which a chemist makes of a compounded body into the ingredients which enter into its composition ; for, although there be such an analogy between these two operations that we give to both the name of analysis or resolution, there is at the same time so great a dissimilitude in some respects that we may be led into error by applying to one what belongs to the other.

It is obvious that the chemical analysis is an operation of the hand upon matter by various material instruments. The analysis we are now explaining is purely an operation of the understanding which requires no material instrument, nor produces any change upon any external thing ; we shall therefore call it the intellectual or mental analysis.

In the chemical analysis the compound body itself is the subject analysed : a subject so imperfectly known that it may be compounded of various ingredients, when to our senses it appears perfectly simple ; and even when we are able to analyse it into the different ingredients of which it is composed, we know not how or why the combination of those ingredients produces such a body.

Thus, pure sea-salt is a body to appearance as simple as any in nature. Every the least particle of it, discernible by our senses, is perfectly similar to every other particle in all its qualities. The nicest taste, the quickest eye, can discern no mark of its being made up of different ingredients, yet by the chemical art it can be analysed into an acid and an alkali, and can be again produced by the combination of those two ingredients. But how this combination pro-

duces sea-salt no man has been able to discover. The ingredients are both as unlike the compound as any bodies we know. No man could have guessed, before the thing was known, that sea-salt is compounded of those two ingredients ; no man could have guessed that the union of those two ingredients should produce such a compound as sea-salt. Such, in many cases, are the phenomena of the chemical analysis of a compound body.

If we consider the intellectual analysis of an object, it is evident that nothing of this kind can happen, because the thing analysed is not an external object imperfectly known ; it is a conception of the mind itself. And, to suppose that there can be anything in a conception that is not conceived is a contradiction.

The reason of observing this difference between those two kinds of analysis is that some philosophers, in order to support their systems, have maintained that a complex idea may have the appearance of the most perfect simplicity, and retain no similitude of any of the simple ideas of which it is compounded ; just as a white colour may appear perfectly simple and retain no similitude to any of the seven primary colours of which it is compounded, or as a chemical composition may appear perfectly simple and retain no similitude to any of the ingredients.

From which those philosophers have drawn this important conclusion, that a cluster of the ideas of sense, properly combined, may make the idea of a mind, and that all the ideas which Mr. Locke calls ideas of reflection are only compositions of the ideas which we have by our five senses. From this the transition is easy, that, if a proper composition of the ideas of matter may make the idea of a mind, then a proper composition of matter itself may make a mind, and that man is only a piece of matter curiously formed.

In this curious system the whole fabric rests upon this foundation, that a complex idea, which is made up of various simple ideas, may appear to be perfectly simple and to have no marks of composition, because a compound body may appear to our senses to be perfectly simple.

Upon this fundamental proposition of this system I beg leave to make two remarks.

1. Supposing it to be true, it affirms only what *may be*. We are, indeed, in most cases very imperfect judges of what may be. But this we know, that, were we ever so certain that a thing may be, this is no good reason for believing that it really is. A *may-be* is a mere hypothesis which may furnish matter of investigation, but is not entitled to the least degree of belief. The transition from what may be to what really is, is familiar and easy to those who have a predilection for a hypothesis ; but to a man who seeks truth without prejudice or prepossession it is a very wide and difficult step, and he will never pass from the one to the other without evidence not only that the thing may be, but that it really is.

2. As far as I am able to judge, this, which it is said may be, cannot be. That a complex idea should be made up of simple ideas, so that to a ripe understanding reflecting upon that idea there should be no appearance of composition, nothing similar to the simple ideas of which it is compounded seems to me to involve a contradiction. The idea is a conception of the mind. If anything more than this is meant by the idea, I know not what it is, and I wish both to know what it is and to have proof of its existence. Now, that there should be anything in the conception of an object which is not conceived appears to me as manifest a contradiction as that there should be an existence which does not exist, or that a thing should be conceived and not conceived at the same time.

But, say these philosophers, a white colour is produced by the composition of the primary colours, and yet has no resemblance to any of them. I grant it. But what can be inferred from this with regard to the composition of ideas ? To bring this argument home to the point, they must say that because a white colour is compounded of the primary colours, therefore the idea of a white colour is compounded of the ideas of the primary colours. This reasoning, if it was admitted, would lead to innumerable absurdities. An opaque fluid may be compounded of two or more pellucid

fluids. Hence, we might infer with equal force that the idea of an opaque fluid may be compounded of the idea of two or more pellucid fluids.

Nature's way of compounding bodies, and our way of compounding ideas, are so different in many respects that we cannot reason from the one to the other, unless it can be found that ideas are combined by fermentations and elective attractions and may be analysed in a furnace by the force of fire and of menstruums. Until this discovery be made, we must hold those to be simple ideas which, upon the most attentive reflection, have no appearance of composition; and those only to be the ingredients of complex ideas which, by attentive reflection, can be perceived to be contained in them.

If the idea of mind and its operations may be compounded of the ideas of matter and its qualities, why may not the idea of matter be compounded of the ideas of mind? There is the same evidence for the last *may-be* as for the first. And why may not the idea of sound be compounded of the ideas of colour, or the idea of colour of those of sound? Why may not the idea of wisdom be compounded of ideas of folly, or the idea of truth of ideas of absurdity? But we leave these mysterious *may-bes* to them that have faith to receive them.

## CHAPTER 4

### OF GENERAL CONCEPTIONS FORMED BY COMBINATION

AS, by an intellectual analysis of objects, we form general conceptions of single attributes (which, of all conceptions that enter into the human mind, are the most simple), so, by combining several of these into one parcel and giving a name to that combination, we form general conceptions that may be very complex and, at the same time, very distinct.

Thus one who, by analysing extended objects, has got the simple notions of a point, a line, straight or curve, an angle, a surface, a solid, can easily conceive a plane surface terminated by four equal straight lines, meeting in four points at right angles. To this species of figure he gives the name of a square. In like manner he can conceive a solid terminated by six equal squares and give it the name of a cube. A square, a cube, and every name of mathematical figure, is a general term expressing a complex general conception, made by a certain combination of the simple elements into which we analyse extended bodies.

Every mathematical figure is accurately defined by enumerating the simple elements of which it is formed, and the manner of their combination. The definition contains the whole essence of it. And every property that belongs to it may be deduced by demonstrative reasoning from its definition. It is not a thing that exists, for then it would be an individual; but it is a thing that is conceived without regard to existence.

A farm, a manor, a parish, a county, a kingdom, are complex general conceptions formed by various combinations and modifications of inhabited territory under certain forms of government.

When we observe that nature, in her animal, vegetable, and inanimate productions, has formed many individuals that agree in many of their qualities and attributes, we are led by natural instinct to expect their agreement in other qualities which we have not had occasion to perceive. Thus, a child who has once burnt his finger by putting it in the flame of one candle, expects the same event if he puts it in the flame of another candle, or in any flame, and is thereby led to think that the quality of burning belongs to all flame. This instinctive induction is not justified by the rules of logic, and it sometimes leads men into harmless mistakes which experience may afterwards correct, but it preserves us from destruction in innumerable dangers to which we are exposed.

The reason of taking notice of this principle in human nature in this place is that the distribution of the produc-

tions of nature into *genera* and *species* becomes, on account of this principle, more generally useful.

The physician expects that the rhubarb which has never yet been tried will have like medical virtues with that which he has prescribed on former occasions. Two parcels of rhubarb agree in certain sensible qualities, from which agreement they are both called by the same general name *rhubarb*. Therefore it is expected that they will agree in their medical virtues. And, as experience has discovered certain virtues in one parcel, or in many parcels, we presume, without experience, that the same virtues belong to all parcels of rhubarb that shall be used.

Nature has given us the power of combining such simple attributes, and such a number of them as we find proper ; and of giving one name to that combination, and considering it as one object of thought.

The simple attributes of things, which fall under our observation, are not so numerous but that they may all have names in a copious language. But to give names to all the combinations that can be made of two, three, or more of them, would be impossible. The most copious languages have names but for a very small part.

It may likewise be observed that the combinations that have names are nearly, though not perfectly, the same in the different languages of civilized nations that have intercourse with one another. Hence it is that the lexicographer, for the most part, can give words in one language answering perfectly, or very nearly, to those of another, and what is written in a simple style in one language can be translated almost word for word into another.

From these observations we may conclude that there are either certain common principles of human nature, or certain common occurrences of human life, which dispose men, out of an infinite number that might be formed, to form certain combinations rather than others.

Mr. Hume, in order to account for this phenomenon, has recourse to what he calls the associating qualities of ideas ; to wit, causation, contiguity in time and place, and similitude. He conceives—" That one of the most remark-

able effects of those associating qualities is the complex ideas which are the common subjects of our thoughts. That this also is the cause why languages so nearly correspond to one another ; nature in a manner pointing out to everyone those ideas which are most proper to be united into a complex one." <sup>1</sup>

I agree with this ingenious author that nature in a manner points out those simple ideas which are most proper to be united into a complex one : but nature does this, not solely or chiefly by the relations between the simple ideas of contiguity, causation, and resemblance, but rather by the fitness of the combinations we make to aid our own conceptions and to convey them to others by language easily and agreeably.

The end and use of language, without regard to the associating qualities of ideas, will lead men that have common understanding to form such complex notions as are proper for expressing their wants, their thoughts, and their desires : and in every language we shall find these to be the complex notions that have names.

In the rudest state of society, men must have occasion to form the general notions of man, woman, father, mother, son, daughter, sister, brother, neighbour, friend, enemy, and many others, to express the common relations of one person to another.

If they are employed in hunting, they must have general terms to express the various implements and operations of the chase. Their houses and clothing, however simple, will furnish another set of general terms to express the materials, the workmanship, and the excellences and defects of those fabrics. If they sail upon rivers or upon the sea, this will give occasion to a great number of general terms which otherwise would never have occurred to their thoughts.

The same thing may be said of agriculture, of pasturage, of every art they practise, and of every branch of knowledge they attain. The necessity of general terms for communicating our sentiments is obvious, and the invention of

<sup>1</sup> *Treatise*, I. 1. 4.

them, as far as we find them necessary, requires no other talent but that degree of understanding which is common to men.

The notions of debtor and creditor, of profit and loss, of account, balance, stock on hand, and many others, are owing to commerce. The notions of latitude, longitude, course, distance run, and those of ships, and of their various parts, furniture, and operations, are owing to navigation. The anatomist must have names for the various similar and dissimilar parts of the human body, and words to express their figure, position, structure, and use. The physician must have names for the various diseases of the body, their causes, symptoms, and means of cure.

The like may be said of the grammarian, the logician, the critic, the rhetorician, the moralist, the naturalist, the mechanic, and every man that professes any art or science.

Among nations that are civilized and have intercourse with one another, the most necessary and useful arts will be common ; the important parts of human knowledge will be common ; their several languages will be fitted to it, and consequently to one another.

What is peculiar to a nation in its customs, manners, or laws, will give occasion to complex notions and words peculiar to the language of that nation. Hence it is easy to see why an impeachment and an attainder in the English language, and ostracism in the Greek language, have not names answering to them in other languages.

I apprehend, therefore, that it is utility, and not the associating qualities of the ideas, that has led men to form only certain combinations and to give names to them in language, while they neglect an infinite number that might be formed.

There remains a very large class of complex general terms on which I shall make some observations ; I mean those by which we name the species, genera, and tribes of natural substances.

It is utility, indeed, that leads us to give general names to the various species of natural substances ; but, in com-

binning the attributes which are included under the specific name, we are more aided and directed by nature than in forming other combinations of mixed modes and relations. In the last the ingredients are brought together in the occurrences of life, or in the actions or thoughts of men. But in the first the ingredients are united by nature in many individual substances which God has made. We form a general notion of those attributes wherein many individuals agree. We give a specific name to this combination, which name is common to all substances having those attributes which either do or may exist. The specific name comprehends neither more nor fewer attributes than we find proper to put into its definition. It comprehends not time, nor place, nor even existence, although there can be no individual without these.

This work of understanding is absolutely necessary for speaking intelligibly of the productions of nature, and for reaping the benefits we receive, and avoiding the dangers we are exposed to from them. The individuals are so many that to give a proper name to each would be beyond the power of language. If a good or bad quality was observed in an individual, of how small use would this be if there was not a species in which the same quality might be expected.

Without some general knowledge of the qualities of natural substances human life could not be preserved. And there can be no general knowledge of this kind without reducing them to species under specific names. For this reason, among the rudest nations we find names for fire, water, earth, air, mountains, fountains, rivers ; for the kinds of vegetables they use ; of animals they hunt or tame, or that are found useful or hurtful.

Each of those names signifies in general a substance having a certain combination of attributes. The name, therefore, must be common to all substances in which those attributes are found.

Such general names of substances being found in all vulgar languages before philosophers began to make accurate divisions and less obvious distinctions, it is not

to be expected that their meaning should be more precise than is necessary for the common purposes of life.

As the knowledge of nature advances, more species of natural substances are observed and their useful qualities discovered. In order that this important part of human knowledge may be communicated and handed down to future generations, it is not sufficient that the species have names. Such is the fluctuating state of language that a general name will not always retain the same precise signification unless it have a definition in which men are disposed to acquiesce.

There was undoubtedly a great fund of natural knowledge among the Greeks and Romans in the time of Pliny. There is a great fund in his *Natural History*; but much of it is lost to us — for this reason among others, that we know not what species of substance he means by such a name.

Nothing could have prevented this loss but an accurate definition of the name by which the species might have been distinguished from all others as long as that name and its definition remained.

To prevent such loss in future times, modern philosophers have very laudably attempted to give names and accurate definitions of all the known species of substances wherewith the bountiful Creator hath enriched our globe.

This is necessary in order to form a copious and distinct language concerning them, and consequently to facilitate our knowledge of them and to convey it to future generations.

Every species that is known to exist ought to have a name, and that name ought to be defined by such attributes as serve best to distinguish the species from all others.

When the species are so numerous as to burden the memory, it is greatly assisted by distributing them into *genera*, the *genera* into tribes, the tribes into orders, and the orders into classes.

Such a regular distribution of natural substances, by divisions and subdivisions, has got the name of a system.

It is not a system of truths but a system of general

terms, with their definitions ; and it is not only a great help to memory, but facilitates very much the definition of the terms. For the definition of the genus is common to all the species of that genus, and so is understood in the definition of each species without the trouble of repetition. In like manner the definition of a tribe is understood in the definition of every genus and every species of that tribe, and the same may be said of every superior division.

The effect of such a systematical distribution of the productions of nature is seen in our systems of zoology, botany, and mineralogy, in which a species is commonly defined accurately in a line or two, which, without the systematical arrangement, could hardly be defined in a page.

With regard to the utility of systems of this kind, men have gone into contrary extremes ; some have treated them with contempt as a mere dictionary of words ; others, perhaps, rest in such systems as all that is worth knowing in the works of nature.

On the one hand, it is not the intention of such systems to communicate all that is known of the natural productions which they describe. The properties most fit for defining and distinguishing the several species are not always those that are most useful to be known. To discover and to communicate the uses of natural substances in life and in the arts is no doubt that part of the business of a naturalist which is the most important, and the systematical arrangement of them is chiefly to be valued for its subserviency to this end. This every judicious naturalist will grant.

But, on the other hand, the labour is not to be despised by which the road to a useful and important branch of knowledge is made easy in all time to come, especially when this labour requires both extensive knowledge and great abilities.

The talent of arranging properly and defining accurately is so rare, and at the same time so useful, that it may very justly be considered as a proof of real genius and as entitled to a high degree of praise. There is an intrinsic beauty in

arrangement which captivates the mind and gives pleasure, even abstracting from its utility ; as in most other things, so in this particularly, nature has joined beauty with utility. The arrangement of an army in the day of battle is a grand spectacle. The same men crowded in a fair have no such effect. It is not more strange, therefore, that some men spend their days in studying systems of nature than that other men employ their lives in the study of languages. The most important end of those systems, surely, is to form a copious and an unambiguous language concerning the productions of nature, by which every useful discovery concerning them may be communicated to the present, and transmitted to all future generations, without danger of mistake.

General terms, especially such as are complex in their signification, will never keep one precise meaning without accurate definition, and accurate definitions of such terms can in no way be formed so easily and advantageously as by reducing the things they signify into a regular system.

Very eminent men in the medical profession, in order to remove all ambiguity in the names of diseases and to advance the healing art, have of late attempted to reduce into a systematical order the diseases of the human body and to give distinct names and accurate definitions of the several species, *genera*, orders, and classes, into which they distribute them ; and I apprehend that, in every art and science where the terms of the art have any ambiguity that obstructs its progress, this method will be found the easiest and most successful for the remedy of that evil.

It were even to be wished that the general terms which we find in common language, as well as those of the arts and sciences, could be reduced to a systematical arrangement and defined so as that they might be free from ambiguity ; but perhaps the obstacles to this are insurmountable. I know no man who has attempted it but Bishop Wilkins in his *Essay towards a Real Character and a Philosophical Language*.<sup>1</sup> The attempt was grand, and worthy of a man of genius.

<sup>1</sup> V. Lancelot Hogben, *Dangerous Thoughts*, 2nd essay.

The formation of such systems, therefore, of the various productions of nature instead of being despised ought to be ranked among the valuable improvements of modern ages, and to be the more esteemed that its utility reaches to the most distant future times and, like the invention of writing, serves to embalm a most important branch of human knowledge, and to preserve it from being corrupted or lost.

## CHAPTER 5

### OBSERVATIONS CONCERNING THE NAMES GIVEN TO OUR GENERAL NOTIONS

HAVING now explained, as well as I am able, those operations of the mind by which we analyse the objects which nature presents to our observation into their simple attributes, giving a general name to each, and by which we combine any number of such attributes into one whole and give a general name to that combination, I shall offer some observations relating to our general notions, whether simple or complex.

I apprehend that the names given to them by modern philosophers have contributed to darken our speculations about them, and to render them difficult and abstruse.

We call them general notions, conceptions, ideas. The words notion and conception, in their proper and most common sense, signify the act or operation of the mind in conceiving an object. In a figurative sense they are sometimes put for the object conceived. And I think they are rarely, if ever, used in this figurative sense except when we speak of what we call general notions or general conceptions. The word idea, as it is used in modern times, has the same ambiguity.

Now it is only in the last of these senses, and not in the first, that we can be said to have general notions or conceptions. The generality is in the object conceived,

and not in the act of the mind by which it is conceived. Every act of the mind is an individual act, which does or did exist. But we have power to conceive things which neither do nor ever did exist. We have power to conceive attributes without regard to their existence. The conception of such an attribute is a real and individual act of the mind; but the attribute conceived is common to many individuals that do or may exist. We are too apt to confound an object of conception with the conception of that object. But the danger of doing this must be much greater when the object of conception is called a conception.

The Peripatetics gave to such objects of conception the names of universals and of predicables. Those names had no ambiguity, and I think were much more fit to express what was meant by them than the names we use.

It is for this reason that I have so often used the word attribute, which has the same meaning with predicable. And for the same reason I have thought it necessary repeatedly to warn the reader that when, in compliance with custom, I speak of general notions or general conceptions, I always mean things conceived, and not the act of the mind in conceiving them.

The Pythagoreans and Platonists gave the name of *ideas* to such general objects of conception, and to nothing else. As we borrowed the word *idea* from them, so that it is now familiar in all the languages of Europe, I think it would have been happy if we had also borrowed their meaning and had used it only to signify what they meant by it. I apprehend we want an unambiguous word to distinguish things barely conceived from things that exist. If the word *idea* was used for this purpose only, it would be restored to its original meaning and supply that want.

We may surely agree with the Platonists in the meaning of the word *idea* without adopting their theory concerning ideas. We need not believe, with them, that ideas are eternal and self-existent, and that they have a more real existence than the things we see and feel.

They were led to give existence to ideas from the

common prejudice that everything which is an object of conception must really exist ; and, having once given existence to ideas, the rest of their mysterious system about ideas followed of course ; for things merely conceived have neither beginning nor end, time nor place ; they are subject to no change ; they are the patterns and exemplars according to which the Deity made everything that he made ; for the work must be conceived by the artificer before it is made.

These are undeniable attributes of the ideas of Plato, and, if we add to them that of real existence, we have the whole mysterious system of Platonic ideas. Take away the attribute of existence, and suppose them not to be things that exist but things that are barely conceived, and all the mystery is removed ; all that remains is level to the human understanding.

The word *essence* came to be much used among the schoolmen, and what the Platonists called the idea of a species they called its essence. The word *essentia* is said to have been made by Cicero, but even his authority could not give it currency until long after his time. It came at last to be used, and the schoolmen fell into much the same opinions concerning essences as the Platonists held concerning ideas. The essences of things were held to be uncreated, eternal, and immutable.

Mr. Locke distinguishes two kinds of essence, the real and the nominal. By the real essence he means the constitution of an individual, which makes it to be what it is. This essence must begin and end with the individual to which it belongs. It is not, therefore, a Platonic idea. But what Mr. Locke calls the nominal essence is the constitution of a species, or that which makes an individual to be of such a species ; and this is nothing but that combination of attributes which is signified by the name of the species, and which we conceive without regard to existence.

The essence of a species, therefore, is what the Platonists called the idea of the species.

If the word *idea* be restricted to the meaning which it bore among the Platonists and Pythagoreans, many things

which Mr. Locke has said with regard to ideas will be just and true, and others will not.

It will be true that most words (indeed all general words) are the signs of ideas ; but proper names are not : they signify individual things, and not ideas. It will be true not only that there are general and abstract ideas, but that all ideas are general and abstract. It will be so far from the truth that all our simple ideas are got immediately, either from sensation or from consciousness, that no simple idea is got by either without the co-operation of other powers. The objects of sense, of memory, and of consciousness, are not ideas but individuals ; they must be analysed by the understanding into their simple ingredients before we can have simple ideas ; and those simple ideas must be again combined by the understanding, in distinct parcels with names annexed, in order to give us complex ideas. It will be probable not only that brutes have no abstract ideas, but that they have no ideas at all.

From all that has been said about abstract and general conceptions I think we may draw the following conclusions concerning them.

*First*, That it is by abstraction that the mind is furnished with all its most simple and most distinct notions. The simplest objects of sense appear both complex and indistinct, until by abstraction they are analysed into their more simple elements ; and the same may be said of the objects of memory and of consciousness.

*Secondly*, Our most distinct complex notions are those that are formed by compounding the simple notions got by abstraction.

*Thirdly*, Without the powers of abstracting and generalising, it would be impossible to reduce things into any order and method by dividing them into genera and species.

*Fourthly*, Without those powers there could be no definition ; for definition can only be applied to universals, and no individual can be defined.

*Fifthly*, Without abstract and general notions there can neither be reasoning nor language.

*Sixthly*, As brute animals show no signs of being able

to distinguish the various attributes of the same subject ; of being able to class things into genera and species ; to define, to reason, or to communicate their thoughts by artificial signs, as men do — I must think, with Mr. Locke, that they have not the powers of abstracting and generalising, and that in this particular nature has made a specific difference between them and the human species.

## CHAPTER 6

### OPINIONS OF PHILOSOPHERS ABOUT UNIVERSALS

IN the ancient philosophy the doctrine of universals — that is, of things which we express by general terms — makes a great figure. The ideas of the Pythagoreans and Platonists, of which so much has been already said, were universals. All science is employed about universals as its object. It was thought that there can be no science unless its object be something real and immutable, and therefore those who paid homage to truth and science maintained that ideas or universals have a real and immutable existence.

The sceptics, on the contrary (for there were sceptical philosophers in those early days), maintained that all things are mutable and in a perpetual fluctuation, and from this principle inferred that there is no science, no truth ; that all is uncertain opinion.

Plato, and his masters of the Pythagorean school, yielded this with regard to objects of sense, and acknowledged that there could be no science or certain knowledge concerning them. But they held that there are objects of intellect of a superior order and nature which are permanent and immutable. These are ideas, or universal natures, of which the objects of sense are only the images and shadows.

To these ideas they ascribed, as I have already observed,

the most magnificent attributes. Of man, of a rose, of a circle, and of every species of things, they believed that there is one idea or form which existed from eternity, before any individual of the species was formed ; that this idea is the exemplar or pattern according to which the Deity formed the individuals of the species ; that every individual of the species participates of this idea, which constitutes its essence ; and that this idea is likewise an object of the human intellect, when, by due abstraction, we discern it to be one in all the individuals of the species.

Thus the idea of every species, though one and immutable, might be considered in three different views or respects : *first*, As having an eternal existence before there was an individual of the species ; *secondly*, As existing in every individual of that species, without division or multiplication, and making the essence of the species ; and, *thirdly*, As an object of intellect and of science in man.

Such I take to be the doctrine of Plato as far as I am able to comprehend it. His disciple Aristotle rejected the first of these views of ideas as visionary, but differed little from his master with regard to the two last. He did not admit the existence of universal natures antecedent to the existence of individuals ; but he held that every individual consists of matter and form, that the form (which I take to be what Plato calls the idea) is common to all the individuals of the species, and that the human intellect is fitted to receive the forms of things as objects of contemplation. Such profound speculations about the nature of universals we find even in the first ages of philosophy. I wish I could make them more intelligible to myself and to the reader.

The division of universals into five classes — to wit, genus, species, specific difference, properties, and accidents — is likewise very ancient, and I conceive was borrowed by the Peripatetics from the Pythagorean school.

Porphyry has given us a very distinct treatise upon these as an *Introduction to Aristotle's Categories*. But he has omitted the intricate metaphysical questions that were agitated about their nature : such as whether genera and

species do really exist in nature or whether they are only conceptions of the human mind. If they exist in nature, whether they are corporeal or incorporeal; and whether they are inherent in the objects of sense or disjoined from them. These questions, he tells us, for brevity's sake he omits, because they are very profound and require accurate discussion.<sup>1</sup> It is probable that these questions exercised the wits of the philosophers till about the twelfth century.

About that time Roscellinus or Roscelinus, the master of the famous Abelard, introduced a new doctrine — that there is nothing universal but words or names.<sup>2</sup> For this and other heresies he was much persecuted. However, by his eloquence and abilities, and those of his disciple Abelard, the doctrine spread, and those who followed it were called Nominalists. His antagonists, who held that there are things that are really universal, were called Realists. The scholastic philosophers, from the beginning of the twelfth century, were divided into these two sects. Some few took a middle road between the contending parties. That universality which the Realists held to be in things themselves, Nominalists in names only, they held to be neither in things nor in names only, but in our conceptions. On this account they were called Conceptualists: but, being exposed to the batteries of both the opposite parties, they made no great figure.

When the sect of Nominalists was like to expire, it received new life and spirit from Occam, the disciple of Scotus, in the fourteenth century.<sup>3</sup> Then the dispute about universals, *a parte rei*, was revived with the greatest animosity in the schools of Britain, France, and Germany, and carried on, not by arguments only, but by bitter reproaches, blows, and bloody affrays, until the doctrines of Luther and the other Reformers turned the attention of the learned world to more important subjects.

<sup>1</sup> *Introduction to Aristotle's Categories*, 1a (Busse, vol. iv, p. 1)

<sup>2</sup> Our knowledge of the doctrines of Roscellinus, of whose writings nothing survives except a letter to his pupil Abelard (Migne, *Patrol. Lat.* 178, pp. 257-72), is mainly derived from criticisms made by Anselm and by Abelard himself.

<sup>3</sup> *Quodlibeta Septem.*

After the revival of learning, Mr. Hobbes adopted the opinion of the Nominalists. *Human Nature*, ch. 5, § 6: "It is plain, therefore," says he, "that there is nothing universal but names".<sup>1</sup> And in his *Leviathan*, Pt. I, ch. 4: "There being nothing universal but names, proper names bring to mind one thing only; universals recall any one of many".

Mr. Locke, according to the division before mentioned, I think may be accounted a Conceptualist. He does not maintain that there are things that are universal, but that we have general or universal ideas which we form by abstraction; and this power of forming abstract and general ideas he conceives to be that which makes the chief distinction in point of understanding between men and brutes.<sup>2</sup>

Mr. Locke's doctrine about abstraction has been combated by two very powerful antagonists, Bishop Berkeley and Mr. Hume, who have taken up the opinion of the Nominalists. The former thinks "that the opinion that the mind hath a power of forming abstract ideas or notions of things has had a chief part in rendering speculation intricate and perplexed, and has occasioned innumerable errors and difficulties in almost all parts of knowledge": that "abstract ideas are like a fine and subtle net, which has miserably perplexed and entangled the minds of men, with this peculiar circumstance, that by how much the finer and more curious was the wit of any man, by so much the deeper was he like to be ensnared and faster held therein": that "among all the false principles that have obtained in the world, there is none hath a more wide influence over the thoughts of speculative men than this of abstract general ideas".

The good bishop, therefore, in twenty-four pages of the Introduction to his *Principles of Human Knowledge*, encounters this principle with a zeal proportioned to his apprehension of its malignant and extensive influence.

That the zeal of the sceptical philosopher against abstract ideas was almost equal to that of the bishop appears from his words (*Treatise of Human Nature*, Bk. I. Pt. I.

<sup>1</sup> Cf. *De Corpore*, Pt. I. ch. 2.

<sup>2</sup> *Essay*, II. 11. 9 and 10.

§ 7): "A very material question has been started concerning abstract or general ideas — whether they be general or particular, in the mind's conception of them. A great philosopher" (he means Dr. Berkeley) "has disputed the received opinion in this particular, and has asserted that all general ideas are nothing but particular ones annexed to a certain term, which gives them a more extensive signification, and makes them recall, upon occasion, other individuals which are similar to them. As I look upon this to be one of the greatest and most valuable discoveries that have been made of late years in the republic of letters, I shall here endeavour to confirm it by some arguments which, I hope, will put it beyond all doubt and controversy."

I shall make an end of this subject with some reflections on what has been said upon it by these two eminent Philosophers.

1. *First*, I apprehend that we cannot with propriety be said to have abstract and general ideas, either in the popular or in the philosophical sense of that word. In the popular sense, an idea is a thought; it is the act of the mind in thinking, or in conceiving any object. This act of the mind is always an individual act and, therefore, there can be no general idea in this sense. In the philosophical sense, an idea is an image in the mind or, in the brain which, in Mr. Locke's system, is the immediate object of thought; in the system of Berkeley and Hume, the only object of thought. I believe there are no ideas of this kind and, therefore, no abstract general ideas. Indeed, if there were really such images in the mind or in the brain, they could not be general, because everything that really exists is an individual. Universals are neither acts of the mind nor images in the mind.

As, therefore, there are no general ideas in either of the senses in which the word idea is used by the moderns, Berkeley and Hume have, in this question, an advantage over Mr. Locke, and their arguments against him are good *ad hominem*. They saw further than he did into the just consequences of the hypothesis concerning ideas which was common to them and to him, and they reasoned justly

from this hypothesis when they concluded from it that there is neither a material world nor any such power in the human mind as that of abstraction.

A triangle in general, or any other universal, might be called an idea by a Platonist ; but in the style of modern philosophy it is not an idea, nor do we ever ascribe to ideas the properties of triangles. It is never said of any idea that it has three sides and three angles. We do not speak of equilateral, isosceles, or scalene ideas, nor of right-angled, acute-angled, or obtuse-angled ideas. And if these attributes do not belong to ideas, it follows necessarily that a triangle is not an idea. The same reasoning may be applied to every other universal.

Ideas are said to have a real existence in the mind, at least while we think of them ; but universals have no real existence. When we ascribe existence to them, it is not an existence in time or place, but existence in some individual subject ; and this existence means no more but that they are truly attributes of such a subject. Their existence is nothing but predicability, or the capacity of being attributed to a subject. The name of predicables, which was given them in ancient philosophy, is that which most properly expresses their nature.

2. I think it must be granted, in the *second* place, that universals cannot be the objects of imagination when we take that word in its strict and proper sense. " I find ", says Berkeley, " I have a faculty of imagining or representing to myself the ideas of those particular things I have perceived, and of variously compounding and dividing them. I can imagine a man with two heads, or the upper parts of a man joined to the body of a horse. I can imagine the hand, the eye, the nose, each by itself, abstracted or separated from the rest of the body. But then, whatever hand or eye I imagine, it must have some particular shape or colour. Likewise, the idea of a man that I frame to myself must either be of a white, or a black, or a tawny ; a straight or a crooked ; a tall, or a low, or a middle-sized man."<sup>1</sup>

<sup>1</sup> *Principles*, Introd. 11.

I believe every man will find in himself what this ingenious author found — that he cannot imagine a man without colour, or stature, or shape.

Imagination, as we before observed,<sup>1</sup> properly signifies a conception of the appearance an object would make to the eye if actually seen. A universal is not an object of any external sense, and therefore cannot be imagined ; but it may be distinctly conceived. When Mr. Pope says “ The proper study of mankind is man ”, I conceive his meaning distinctly, though I neither imagine a black or a white, a crooked or a straight man. The distinction between conception and imagination is real, though it be too often overlooked, and the words taken to be synonymous.<sup>2</sup> I can conceive a thing that is impossible, but I cannot distinctly imagine a thing that is impossible. I can conceive a proposition or a demonstration, but I cannot imagine either. I can conceive understanding and will, virtue and vice, and other attributes of mind, but I cannot imagine them. In like manner I can distinctly conceive universals, but I cannot imagine them.

As to the manner how we conceive universals I confess my ignorance. I know not how I hear, or see, or remember, and as little do I know how I conceive things that have no existence. In all our original faculties the fabric and manner of operation is, I apprehend, beyond our comprehension, and perhaps is perfectly understood by him only who made them.

But we ought not to deny a fact of which we are conscious, though we know not how it is brought about. And I think we may be certain that universals are not conceived by means of images of them in our minds, because there can be no image of a universal.

3. It seems to me that on this question Mr. Locke and his two antagonists have divided the truth between them. He saw very clearly that the power of forming abstract and general conceptions is one of the most distinguishing powers of the human mind, and puts a specific difference between man and the brute creation. But he did not see

<sup>1</sup> P. 239.

<sup>2</sup> V. p. 233 and n.

that this power is perfectly irreconcilable to his doctrine concerning ideas.

His opponents saw this inconsistency, but instead of rejecting the hypothesis of ideas, they explain away the power of abstraction and leave no specific distinction between the human understanding and that of brutes.

4. Berkeley, in his reasoning against abstract general ideas, seems unwillingly or unwarily to grant all that is necessary to support abstract and general conceptions.

"A man", he says, "may consider a figure merely as triangular, without attending to the particular qualities of the angles, or relations of the sides. So far he may abstract. But this will never prove that he can frame an abstract general inconsistent idea of a triangle."<sup>1</sup>

If a man may consider a figure merely as triangular, he must have some conception of this object of his consideration, for no man can consider a thing which he does not conceive. He has a conception, therefore, of a triangular figure merely as such. I know no more that is meant by an abstract general conception of a triangle.

He that considers a figure merely as triangular must understand what is meant by the word triangular. If to the conception he joins to this word he adds any particular quality of angles or relation of sides, he misunderstands it, and does not consider the figure merely as triangular. Whence, I think, it is evident that he who considers a figure merely as triangular must have the conception of a triangle, abstracting from any quality of angles or relation of sides.

The Bishop, in like manner, grants "that we may consider Peter so far forth as man, or so far forth as animal, without framing the forementioned abstract idea, inasmuch as all that is perceived is not considered".<sup>2</sup> It may here be observed that he who considers Peter so far forth as man, or so far forth as animal, must conceive the meaning of those abstract general words *man* and *animal*, and he who conceives the meaning of them has an abstract general conception.

<sup>1</sup> *Principles*, Introd. 16.

<sup>2</sup> *Ibid.*

From these concessions one would be apt to conclude that the Bishop thinks that we can abstract, but that we cannot frame abstract ideas ; and in this I should agree with him. But I cannot reconcile his concessions with the general principle he lays down before. "To be plain," says he, "I deny that I can abstract one from another, or conceive separately those qualities which it is impossible should exist so separated."<sup>1</sup> This appears to me inconsistent with the concessions above mentioned, and inconsistent with experience.

If we can consider a figure merely as triangular, without attending to the particular quality of the angles or relation of the sides, this, I think, is conceiving separately things which cannot exist so separated ; for surely a triangle cannot exist without a particular quality of angles and relation of sides. And it is well known, from experience, that a man may have a distinct conception of a triangle without having any conception or knowledge of many of the properties without which a triangle cannot exist.

Let us next consider the Bishop's notion of generalising. He does not absolutely deny that there are general ideas, but only that there are abstract general ideas. "An idea", he says, "which, considered in itself, is particular, becomes general by being made to represent or stand for all other particular ideas of the same sort. To make this plain by an example : Suppose a geometrician is demonstrating the method of cutting a line in two equal parts. He draws, for instance, a black line, of an inch in length. This, which is in itself a particular line, is nevertheless, with regard to its signification, general ; since, as it is there used, it represents all particular lines whatsoever ; so that what is demonstrated of it, is demonstrated of all lines, or, in other words, of a line in general. And as that particular line becomes general by being made a sign, so the name *line*, which, taken absolutely, is particular, by being a sign, is made general."<sup>2</sup>

Here I observe that when a particular idea is made a

<sup>1</sup> *Principles*, Introd. 10.

<sup>2</sup> *Ib.* 12.

sign to represent and stand for all of a sort, this supposes a distinction of things into sorts or species. To be of a sort implies having those attributes which characterise the sort and are common to all the individuals that belong to it. There cannot, therefore, be a sort without general attributes, nor can there be any conception of a sort without a conception of those general attributes which distinguish it. The conception of a sort, therefore, is an abstract general conception.

The particular idea cannot surely be made a sign of a thing of which we have no conception. I do not say that you must have an idea of the sort, but surely you ought to understand or conceive what it means when you make a particular idea a representative of it, otherwise your particular idea represents you know not what.

When I demonstrate any general property of a triangle, such as that the three angles are equal to two right angles, I must understand or conceive distinctly what is common to all triangles. I must distinguish the common attributes of all triangles from those wherein particular triangles may differ. And if I conceive distinctly what is common to all triangles, without confounding it with what is not so, this is to form a general conception of a triangle. And without this it is impossible to know that the demonstration extends to all triangles.

The Bishop takes particular notice of this argument, and makes this answer to it : " Though the idea I have in view, whilst I make the demonstration, be, for instance, that of an isosceles rectangular triangle whose sides are of a determinate length, I may nevertheless be certain that it extends to all other rectilinear triangles, of what sort or bigness soever ; and that because neither the right angle, nor the equality or determinate length of the sides, are at all concerned in the demonstration." <sup>1</sup>

But if he do not, in the idea he has in view, clearly distinguish what is common to all triangles from what is not, it would be impossible to discern whether something that is not common be concerned in the demonstration or not.

<sup>1</sup> *Ib.* 16.

In order, therefore, to perceive that the demonstration extends to all triangles, it is necessary to have a distinct conception of what is common to all triangles, excluding from that conception all that is not common. And this is all I understand by an abstract general conception of a triangle.

Berkeley catches an advantage to his side of the question from what Mr. Locke expresses (too strongly indeed) of the difficulty of framing abstract general ideas, and the pains and skill necessary for that purpose. From which the Bishop infers that a thing so difficult cannot be necessary for communication by language, which is so easy and familiar to all sorts of men.

There may be some abstract and general conceptions that are difficult, or even beyond the reach of persons of weak understanding ; but there are innumerable which are not beyond the reach of children. It is impossible to learn language without acquiring general conceptions, for there cannot be a single sentence without them. I believe the forming these, and being able to articulate the sounds of language, make up the whole difficulty that children find in learning language at first.

But this difficulty, we see, they are able to overcome so early as not to remember the pains it cost them. They have the strongest inducement to exert all their labour and skill in order to understand and to be understood, and they no doubt do so.

The labour of forming abstract notions is the labour of learning to speak and to understand what is spoken. As the words of every language, excepting a few proper names, are general words, the minds of children are furnished with general conceptions in proportion as they learn the meaning of general words. I believe most men have hardly any general notions but those which are expressed by the general words they hear and use in conversation. The meaning of some of these is learned by a definition which at once conveys a distinct and accurate general conception. The meaning of other general words we collect, by a kind of induction, from the way in which

we see them used on various occasions by those who understand the language. Of these our conception is often less distinct, and in different persons is perhaps not perfectly the same.

"Is it not a hard thing", says the Bishop, "that a couple of children cannot prate together of their sugar-plums and rattles, and the rest of their little trinkets, till they have first tacked together numberless inconsistencies, and so formed in their minds abstract general ideas and annexed them to every common name they make use of?"<sup>1</sup>

However hard a thing it may be, it is an evident truth that a couple of children, even about their sugar-plums and their rattles, cannot prate so as to understand and be understood until they have learned to conceive the meaning of many general words — and this, I think, is to have general conceptions.

5. Having considered the sentiments of Bishop Berkeley on this subject, let us next attend to those of Mr. Hume as they are expressed Part I. § 7, *Treatise of Human Nature*. He agrees perfectly with the Bishop "that all general ideas are nothing but particular ones annexed to a certain term, which gives them a more extensive signification and makes them recall, upon occasion, other individuals which are similar to them. A particular idea becomes general by being annexed to a general term; that is, to a term which, from a customary conjunction, has a relation to many other particular ideas and readily recalls them in the imagination. Abstract ideas are therefore in themselves individual, however they may become general in their representation. The image in the mind is only that of a particular object, though the application of it in our reasoning be the same as if it was universal."<sup>2</sup>

Although Mr. Hume looks upon this to be one of the greatest and most valuable discoveries that has been made of late years in the republic of letters, it appears to be no other than the opinion of the Nominalists, about which

<sup>1</sup> *Principles*, Introd. 14.

<sup>2</sup> This and all the following quotations from Hume in this chapter are taken from *Treatise*, I. i. 7.

so much dispute was held from the beginning of the twelfth century down to the Reformation, and which was afterwards supported by Mr. Hobbes. I shall briefly consider the arguments by which Mr. Hume hopes to have put it beyond all doubt and controversy.

*First*, He endeavours to prove, by three arguments, that it is utterly impossible to conceive any quantity or quality without forming a precise notion of its degrees.

This is indeed a great undertaking ; but, if he could prove it, it is not sufficient for his purpose — for two reasons.

*First*, Because there are many attributes of things besides quantity and quality, and it is incumbent upon him to prove that it is impossible to conceive any attribute without forming a precise notion of its degree. Each of the ten categories of Aristotle is a genus, and may be an attribute. And if he should prove of two of them — to wit, quantity and quality — that there can be no general conception of them, there remain eight behind, of which this must be proved.

The other reason is because, though it were impossible to conceive any quantity or quality without forming a precise notion of its degree, it does not follow that it is impossible to have a general conception even of quantity and quality. The conception of a pound troy is the conception of a quantity, and of the precise degree of that quantity ; but it is an abstract general conception notwithstanding, because it may be the attribute of many individual bodies and of many kinds of bodies. He ought, therefore, to have proved that we cannot conceive quantity or quality, or any other attribute, without joining it inseparably to some individual subject.

This remains to be proved, which will be found no easy matter. For instance, I conceive what is meant by a Japanese as distinctly as what is meant by an Englishman or a Frenchman. It is true a Japanese is neither quantity nor quality, but it is an attribute common to every individual of a populous nation. I never saw an individual of that nation ; and, if I can trust my consciousness, the

general term does not lead me to imagine one individual of the sort as a representative of all others.

Though Mr. Hume, therefore, undertakes much, yet if he could prove all he undertakes to prove, it would by no means be sufficient to show that we have no abstract general conceptions.

Passing this, let us attend to his arguments for proving this extraordinary position, that it is impossible to conceive any quantity or quality without forming a precise notion of its degree.

The first argument is that it is impossible to distinguish things that are not actually separable. "The precise length of a line is not different or distinguishable from the line."

I have before endeavoured to show that things inseparable in their nature may be distinguished in our conception.<sup>1</sup> And we need go no further to be convinced of this than the instance here brought to prove the contrary. The precise length of a line, he says, is not distinguishable from the line. When I say *This is a line*, I say and mean one thing. When I say *It is a line of three inches*, I say and mean another thing. If this be not to distinguish the precise length of the line from the line, I know not what it is to distinguish.

Second argument: "Every object of sense — that is, every impression — is an individual, having its determinate degrees of quantity and quality. But whatever is true of the impression is true of the idea, as they differ in nothing but their strength and vivacity."

The conclusion in this argument is, indeed, justly drawn from the premises. If it be true that ideas differ in nothing from objects of sense but in strength and vivacity, as it must be granted that all the objects of sense are individuals, it will certainly follow that all ideas are individuals. Granting, therefore, the justness of this conclusion, I beg leave to draw two other conclusions from the same premises which will follow no less necessarily.

*First*, If ideas differ from the objects of sense only in

<sup>1</sup> P. 276.

strength and vivacity, it will follow that the idea of a lion is a lion of less strength and vivacity. And hence may arise a very important question, whether the idea of a lion may not tear in pieces and devour the ideas of sheep, oxen, and horses, and even of men, women, and children.

*Secondly*, If ideas differ only in strength and vivacity from the objects of sense, it will follow that objects merely conceived are not ideas ; for such objects differ from the objects of sense in respects of a very different nature from strength and vivacity. Every object of sense must have a real existence, and time and place. But things merely conceived may neither have existence, nor time nor place ; and, therefore, though there should be no abstract ideas, it does not follow that things abstract and general may not be conceived.

The third argument is this : “ It is a principle generally received in philosophy that everything in nature is individual, and that it is utterly absurd to suppose a triangle really existent which has no precise proportion of sides and angles. If this, therefore, be absurd in fact and reality, it must be absurd in idea, since nothing of which we can form a clear and distinct idea is absurd or impossible.”

I acknowledge it to be impossible that a triangle should really exist which has no precise proportion of sides and angles, and impossible that any being should exist which is not an individual being, for I think a being and an individual being mean the same thing ; but that there can be no attributes common to many individuals I do not acknowledge. Thus, to many figures that really exist it may be common that they are triangles ; and to many bodies that exist it may be common that they are fluid. Triangle and fluid are not beings, they are attributes of beings.

As to the principle here assumed that nothing of which we can form a clear and distinct idea is absurd or impossible, I refer to what was said upon it, Chapter 3, Essay IV. It is evident that in every mathematical demonstration *ad absurdum*, of which kind almost one-

half of mathematics consists, we are required to suppose, and consequently to conceive, a thing that is impossible. From that supposition we reason until we come to a conclusion that is not only impossible but absurd. From this we infer that the proposition supposed at first is impossible and, therefore, that its contradictory is true.

As this is the nature of all demonstrations *ad absurdum*, it is evident I do not say that we can have a clear and distinct idea but that we can clearly and distinctly conceive things impossible.

The rest of Mr. Hume's discourse upon this subject is employed in explaining how an individual idea, annexed to a general term, may serve all the purposes in reasoning which have been ascribed to abstract general ideas.

"When we have found a resemblance among several objects that often occur to us, we apply the same name to all of them, whatever differences we may observe in the degrees of their quantity and quality, and whatever other differences may appear among them. After we have acquired a custom of this kind, the hearing of that name revives the idea of one of these objects, and makes the imagination conceive it, with all its circumstances and proportions." But along with this idea there is a readiness to survey any other of the individuals to which the name belongs, and to observe that no conclusion be formed contrary to any of them. If any such conclusion is formed, those individual ideas which contradict it immediately crowd in upon us and make us perceive the falsehood of the proposition. If the mind suggests not always these ideas upon occasion, it proceeds from some imperfection in its faculties; and such a one as is often the source of false reasoning and sophistry.

This is, in substance, the way in which he accounts for what he calls "the foregoing paradox that some ideas are particular in their nature, but general in their representation". Upon this account I shall make some remarks.

1. He allows that we find a resemblance among several objects, and such a resemblance as leads us to apply the

same name to all of them. This concession is sufficient to show that we have general conceptions. There can be no resemblance in objects that have no common attribute ; and, if there be attributes belonging in common to several objects, and in man a faculty to observe and conceive these and to give names to them, this is to have general conceptions.

I believe, indeed, we may have an indistinct perception of resemblance without knowing wherein it lies. Thus, I may see a resemblance between one face and another when I cannot distinctly say in what feature they resemble ; but by analysing the two faces, and comparing feature with feature, I may form a distinct notion of that which is common to both. A painter, being accustomed to an analysis of this kind, would have formed a distinct notion of this resemblance at first sight ; to another man it may require some attention.

There is, therefore, an indistinct notion of resemblance when we compare the objects only in gross : and this I believe brute animals may have. There is also a distinct notion of resemblance when we analyse the objects into their different attributes, and perceive them to agree in some while they differ in others. It is in this case only that we give a name to the attributes wherein they agree, which must be a common name, because the thing signified by it is common. Thus, when I compare cubes of different matter, I perceive them to have this attribute in common, that they are comprehended under six equal squares, and this attribute only is signified by applying the name of *cube* to them all. When I compare clean linen with snow, I perceive them to agree in colour ; and when I apply the name of white to both, this name signifies neither snow nor clean linen, but the attribute which is common to both.

2. The author says that when we have found a resemblance among several objects, we apply the same name to all of them.

It must here be observed that there are two kinds of names which the author seems to confound, though they

are very different in nature and in the power they have in language. There are proper names, and there are common names or appellatives. The first are the names of individuals. The same proper name is never applied to several individuals on account of their similitude, because the very intention of a proper name is to distinguish one individual from all others ; and hence it is a maxim in grammar that proper names have no plural number. A proper name signifies nothing but the individual whose name it is, and when we apply it to the individual, we neither affirm nor deny anything concerning him.

A common name or appellative is not the name of any individual but a general term signifying something that is or may be common to several individuals. Common names, therefore, signify common attributes. Thus, when I apply the name of son or brother to several persons, this signifies and affirms that this attribute is common to all of them.

From this it is evident that the applying the same name to several individuals on account of their resemblance can, in consistence with grammar and common sense, mean nothing else than the expressing, by a general term, something that is common to those individuals, and which, therefore, may be truly affirmed of them all.

3. The author says, " It is certain that we form the idea of individuals whenever we use any general term. The word raises up an individual idea, and makes the imagination conceive it, with all its particular circumstances and proportions."

This fact he takes a great deal of pains to account for, from the effect of custom.

But the fact should be ascertained before we take pains to account for it. I can see no reason to believe the fact ; and I think a farmer can talk of his sheep and his black cattle without conceiving, in his imagination, one individual, with all its circumstances and proportions. If this be true, the whole of his theory of general ideas falls to the ground. To me it appears that when a general term is well understood it is only by accident if it suggest some

individual of the kind ; but this effect is by no means constant.<sup>1</sup>

I understand perfectly what mathematicians call a line of the fifth order, yet I never conceived in my imagination any one of the kind in all its circumstances and proportions. Sir Isaac Newton first formed a distinct general conception of lines of the third order, and afterwards, by great labour and deep penetration, found out and described the particular species comprehended under that general term. According to Mr. Hume's theory, he must first have been acquainted with the particulars, and then have learned by custom to apply one general name to all of them.

The author observes " That the idea of an equilateral triangle of an inch perpendicular may serve us in talking of a figure, a rectilinear figure, a regular figure, a triangle, and an equilateral triangle."

I answer, the man that uses these general terms either understands their meaning or he does not. If he does not understand their meaning, all his talk about them will be found only without sense, and the particular idea mentioned cannot enable him to speak of them with understanding. If he understands the meaning of the general terms, he will find no use for the particular idea.

4. He tells us gravely " That in a globe of white marble the figure and the colour are undistinguishable, and are in effect the same ". How foolish have mankind been to give different names, in all ages and in all languages, to things undistinguishable and in effect the same. Henceforth, in all books of science and of entertainment, we may substitute figure for colour and colour for figure. By this we shall make numberless curious discoveries without danger of error.

<sup>1</sup> It is worth noting that this is the only point on which Berkeley and Hume appear to differ in their theories of general ideas. Whereas Hume held that we only understand the meaning of a general term if when it is used we *do* have a suitable mental image, Berkeley insisted (*Principles*, Introd. 19) that it was enough that we should *be able* to have the image — i.e. he analyses meaning dispositionally.

# ESSAY VI

## OF JUDGMENT

### CHAPTER I

#### OF JUDGMENT IN GENERAL

JUDGING is an operation of the mind so familiar to every man who hath understanding, and its name is so common and so well understood that it needs no definition.

As it is impossible by a definition to give a notion of colour to a man who never saw colours, so it is impossible by any definition to give a distinct notion of judgment to a man who has not often judged, and who is not capable of reflecting attentively upon this act of his mind. The best use of a definition is to prompt him to that reflection, and without it the best definition will be apt to mislead him.

The definition commonly given of judgment by the more ancient writers in logic was, that it is an act of the mind whereby one thing is affirmed or denied of another. I believe this is as good a definition of it as can be given. Why I prefer it to some later definitions will afterwards appear. Without pretending to give any other, I shall make two remarks upon it, and then offer some general observations on this subject.

1. It is true that it is by affirmation or denial that we express our judgments ; but there may be judgment which is not expressed. It is a solitary act of the mind, and the expression of it by affirmation or denial is not at all essential to it. It may be tacit and not expressed. Nay, it is well known that men may judge contrary to what they affirm or deny ; the definition therefore must be understood of mental affirmation or denial, which indeed is only another name for judgment.

2. Affirmation and denial is very often the expression of testimony, which is a different act of the mind and ought to be distinguished from judgment.

A judge asks of a witness what he knows of such a matter to which he was an eye or ear witness. He answers by affirming or denying something. But his answer does not express his judgment; it is his testimony. Again, I ask a man his opinion in a matter of science or of criticism. His answer is not testimony; it is the expression of his judgment.

Testimony is a social act, and it is essential to it to be expressed by words or signs. A tacit testimony is a contradiction: but there is no contradiction in a tacit judgment; it is complete without being expressed.

In testimony a man pledges his veracity for what he affirms, so that a false testimony is a lie: but a wrong judgment is not a lie; it is only an error.

Although men must have judged in many cases before tribunals of justice were erected, yet it is very probable that there were tribunals before men began to speculate about judgment, and that the word may be borrowed from the practice of tribunals. As a judge, after taking the proper evidence, passes sentence in a cause, and that sentence is called his judgment, so the mind, with regard to whatever is true or false, passes sentence, or determines according to the evidence that appears. Some kinds of evidence leave no room for doubt. Sentence is passed immediately, without seeking or hearing any contrary evidence, because the thing is certain and notorious. In other cases there is room for weighing evidence on both sides before sentence is passed. The analogy between a tribunal of justice and this inward tribunal of the mind is too obvious to escape the notice of any man who ever appeared before a judge. And it is probable that the word *judgment*, as well as many other words we use in speaking of this operation of mind, is grounded on this analogy.

Having premised these things, that it may be clearly understood what I mean by judgment, I proceed to make some general observations concerning it.

*First*, Judgment is an act of the mind specifically different from simple apprehension or the bare conception of a thing. It would be unnecessary to observe this if some philosophers had not been led by their theories to a contrary opinion.

Although there can be no judgment without a conception of the things about which we judge, yet conception may be without any judgment.<sup>1</sup> Judgment can be expressed by a proposition only, and a proposition is a complete sentence; but simple apprehension may be expressed by a word or words which make no complete sentence. When simple apprehension is employed about a proposition, every man knows that it is one thing to apprehend a proposition — that is, to conceive what it means — but it is quite another thing to judge it to be true or false.

• It is self-evident that every judgment must be either true or false, but simple apprehension, or conception, can neither be true nor false, as was shown before.

One judgment may be contradictory to another; and it is impossible for a man to have two judgments at the same time, which he perceives to be contradictory. But contradictory propositions may be conceived, at the same time without any difficulty.<sup>2</sup> That the sun is greater than the earth, and that the sun is not greater than the earth, are contradictory propositions. He that apprehends the meaning of one apprehends the meaning of both. But it is impossible for him to judge both to be true at the same time. He knows that if the one is true, the other must be false. For these reasons I hold it to be certain that judgment and simple apprehension are acts of the mind specifically different.

*Secondly*, There are notions or ideas that ought to be referred to the faculty of judgment as their source, because, if we had not that faculty, they could not enter into our minds; and to those that have that faculty, and are capable of reflecting upon its operations, they are obvious and familiar.

<sup>1</sup> Cf. p. 230 and *Int. Powers*, I. 7 (H. p. 243 a).

<sup>2</sup> *I.* p. 259.

Among these we may reckon the notion of judgment itself ; the notions of a proposition — of its subject, predicate, and copula ; of affirmation and negation, of true and false ; of knowledge, belief, disbelief, opinion, assent, evidence. From no source could we acquire these notions but from reflecting upon our judgments. Relations of things make one great class of our notions or ideas ; and we cannot have the idea of any relation without some exercise of judgment, as will appear afterwards.<sup>1</sup>

*Thirdly*, In persons come to years of understanding, judgment necessarily accompanies all sensation, perception by the senses, consciousness, and memory, but not conception.

I restrict this to persons come to the years of understanding, because it may be a question whether infants, in the first period of life, have any judgment or belief at all. The same question may be put with regard to brutes and some idiots. This question is foreign to the present subject, and I say nothing here about it, but speak only of persons who have the exercise of judgment.

In them it is evident that a man who feels pain judges and believes that he is really pained. The man who perceives an object believes that it exists and is what he distinctly perceives it to be ; nor is it in his power to avoid such judgment. And the like may be said of memory and of consciousness. Whether judgment ought to be called a necessary concomitant of these operations, or rather a part or ingredient of them, I do not dispute,<sup>2</sup> but it is certain that all of them are accompanied with a determination that something is true or false, and a consequent belief. If this determination be not judgment, it is an operation that has got no name ; for it is not simple apprehension, neither is it reasoning ; it is a mental affirmation or negation ; it may be expressed by a proposition affirmative or negative, and it is accompanied

<sup>1</sup> *V.* p. 328.

<sup>2</sup> If he is to be consistent with his theory of perception, Reid should say that judgment is not a concomitant, but a part of perception. *V.* p. 151 n. 2.

with the firmest belief. These are the characteristics of judgment, and I must call it judgment till I can find another name to it.

The judgments we form are either of things necessary or of things contingent. That three times three is nine, that the whole is greater than a part, are judgments about things necessary. Our assent to such necessary propositions is not grounded upon any operation of sense, of memory, or of consciousness, nor does it require their concurrence ; it is unaccompanied by any other operation but that of conception, which must accompany all judgment ; we may therefore call this judgment of things necessary pure judgment. Our judgment of things contingent must always rest upon some other operation of the mind such as sense, or memory, or consciousness, or credit in testimony, which is itself grounded upon sense.

That I now write upon a table covered with green cloth is a contingent event which I judge to be most undoubtedly true. My judgment is grounded upon my perception and is a necessary concomitant or ingredient of my perception. That I dined with such a company yesterday, I judge to be true because I remember it ; and my judgment necessarily goes along with this remembrance, or makes a part of it.

There are many forms of speech in common language which show that the senses, memory, and consciousness are considered as judging faculties. We say that a man judges of colours by his eye, of sounds by his ear. We speak of the evidence of sense, the evidence of memory, the evidence of consciousness. Evidence is the ground of judgment, and when we see evidence it is impossible not to judge.

When we speak of seeing or remembering anything, we indeed hardly ever add that we judge it to be true. But the reason of this appears to be that such an addition would be mere superfluity of speech, because everyone knows that what I see or remember I must judge to be true, and cannot do otherwise.

Perhaps this manner of speaking may have led philo-

sophers into the opinion that in perception by the senses, in memory, and in consciousness there is no judgment at all. Because it is not mentioned in speaking of these faculties, they conclude that it does not accompany them ; that they are only different modes of simple apprehension, or of acquiring ideas ; and that it is no part of their office to judge.

I apprehend the same cause has led Mr. Locke into a notion of judgment which I take to be peculiar to him. He thinks that the mind has two faculties conversant about truth and falsehood. *First*, knowledge ; and, *secondly*, judgment. In the first, the perception of the agreement or disagreement of the ideas is certain. In the second, it is not certain, but probable only.<sup>1</sup>

According to this notion of judgment, it is not by judgment that I perceive that two and three make five ; it is by the faculty of knowledge. I apprehend there can be no knowledge without judgment, though there may be judgment without that certainty which we commonly call knowledge.

Mr. Locke, in another place of his *Essay*,<sup>2</sup> tells us " that the notice we have by our senses of the existence of things without us, though not altogether so certain as our intuitive knowledge, or the deductions of our reason about abstract ideas, yet is an assurance that deserves the name of knowledge ". I think by this account of it, and by his definitions before given of knowledge and judgment, it deserves as well the name of *judgment*.

That I may avoid disputes about the meaning of words, I wish the reader to understand that I give the name of judgment to every determination of the mind concerning what is true or what is false. This I think is what logicians, from the days of Aristotle, have called judgment. Whether it be called one faculty, as I think it has always been, or whether a philosopher chooses to split it into two, seems not very material. And if it be granted that by our senses, our memory, and consciousness we not only have ideas or simple apprehensions, but form determinations

<sup>1</sup> *Essay*, IV. 1 and 14.

<sup>2</sup> *Ib.* IV. 11. 3.

concerning what is true and what is false — whether these determinations ought to be called *knowledge* or *judgment* is of small moment.

The judgments grounded upon the evidence of sense, of memory, and of consciousness put all men upon a level. The philosopher, with regard to these, has no prerogative above the illiterate, or even above the savage.

Their reliance upon the testimony of these faculties is as firm and as well grounded as his. His superiority is in judgments of another kind — in judgments about things abstract and necessary. And he is unwilling to give the name of judgment to that wherein the most ignorant and unimproved of the species are his equals.

But philosophers have never been able to give any definition of judgment which does not apply to the determinations of our senses, our memory, and consciousness, nor any definition of simple apprehension which can comprehend those determinations.

Our judgments of this kind are purely the gift of nature, nor do they admit of improvement by culture. The memory of one man may be more tenacious than that of another, but both rely with equal assurance upon what they distinctly remember. One man's sight may be more acute, or his feeling more delicate, than that of another, but both give equal credit to the distinct testimony of their sight and touch.

And as we have this belief by the constitution of our nature, without any effort of our own, so no effort of ours can overturn it.

The sceptic may perhaps persuade himself, in general, that he has no ground to believe his senses or his memory ; but in particular cases that are interesting, his disbelief vanishes and he finds himself under a necessity of believing both.

These judgments may, in the strictest sense, be called *judgments of nature*. Nature has subjected us to them whether we will or not. They are neither got, nor can they be lost by any use or abuse of our faculties ; and it is evidently necessary for our preservation that it should be

so. For if belief in our senses and in our memory were to be learned by culture, the race of men would perish before they learned this lesson. It is necessary to all men for their being and preservation, and therefore is unconditionally given to all men by the Author of nature.

I acknowledge that, if we were to rest in those judgments of nature of which we now speak, without building others upon them, they would not entitle us to the denomination of reasonable beings. But yet they ought not to be despised, for they are the foundation upon which the grand superstructure of human knowledge must be raised. And as in other superstructures the foundation is commonly overlooked, so it has been in this. The more sublime attainments of the human mind have attracted the attention of philosophers, while they have bestowed but a careless glance upon the humble foundation on which the whole fabric rests.

A fourth observation is, that some exercise of judgment is necessary in the formation of all abstract and general conceptions, whether more simple or more complex ; in dividing, in defining, and, in general, in forming all clear and distinct conceptions of things, which are the only fit materials of reasoning.

These operations are allied to each other, and therefore I bring them under one observation. They are more allied to our rational nature than those mentioned in the last observation, and therefore are considered by themselves.

It is impossible to distinguish the different attributes belonging to the same subject without judging that they are really different and distinguishable, and that they have that relation to the subject which logicians express by saying that they may be predicated of it. We cannot generalise without judging that the same attribute does or may belong to many individuals. It has been shown that our simplest general notions are formed by these two operations of distinguishing and generalising ; judgment therefore is exercised in forming the simplest general notions.

I add in general that without some degree of judgment we can form no accurate and distinct notions of things ; so that one province of judgment is to aid us in forming clear and distinct conceptions of things which are the only fit materials for reasoning.

This will probably appear to be a paradox to philosophers, who have always considered the formation of ideas of every kind as belonging to simple apprehension, and that the sole province of judgment is to put them together in affirmative or negative propositions ; and therefore it requires some confirmation.

*First*, I think it necessarily follows, from what has been already said in this observation. For if, without some degree of judgment, a man can neither distinguish, nor divide, nor define, nor form any general notion, simple or complex, he surely, without some degree of judgment, cannot have in his mind the materials necessary to reasoning.

There cannot be any proposition in language which does not involve some general conception. The proposition, *that I exist*, which Descartes thought the first of all truths and the foundation of all knowledge, cannot be conceived without the conception of existence, one of the most abstract general conceptions. A man cannot believe his own existence, or the existence of anything he sees or remembers, until he has so much judgment as to distinguish things that really exist from things which are only conceived. He sees a man six feet high ; he conceives a man sixty feet high : he judges the first object to exist, because he sees it ; the second he does not judge to exist, because he only conceives it. Now I would ask whether he can attribute existence to the first object, and not to the second, without knowing what existence means. It is impossible.

How early the notion of existence enters into the mind I cannot determine, but it must certainly be in the mind as soon as we can affirm of anything, with understanding, that it exists.

In every other proposition the predicate at least must

be a general notion—a predicable and a universal being one and the same. Besides this, every proposition either affirms or denies. And no man can have a distinct conception of a proposition who does not understand distinctly the meaning of affirming or denying. But these are very general conceptions and, as was before observed, are derived from judgment as their source and origin.

I am sensible that a strong objection may be made to this reasoning, and that it may seem to lead to an absurdity or a contradiction. It may be said that every judgment is a mental affirmation or negation. If, therefore, some previous exercise of judgment be necessary to understand what is meant by affirmation or negation, the exercise of judgment must go before any judgment which is absurd.

In like manner every judgment may be expressed by a proposition, and a proposition must be conceived before we can judge of it. If, therefore, we cannot conceive the meaning of a proposition without a previous exercise of judgment, it follows that judgment must be previous to the conception of any proposition, and at the same time that the conception of a proposition must be previous to all judgment, which is a contradiction.

The reader may please to observe that I have limited what I have said to distinct conception and some degree of judgment, and it is by this means I hope to avoid this labyrinth of absurdity and contradiction. The faculties of conception and judgment have an infancy and a maturity as man has. What I have said is limited to their mature state. I believe in their infant state they are very weak and indistinct, and that by imperceptible degrees they grow to maturity, each giving aid to the other and receiving aid from it. But which of them first began this friendly intercourse is beyond my ability to determine.

The necessity of some degree of judgment in forming accurate and distinct notions of things will further appear if we consider attentively what notions we can form, without any aid of judgment, of the objects of sense, of the operations of our own minds, or of the relations of things.

To begin with the objects of sense. It is acknowledged

on all hands that the first notions we have of sensible objects are got by the external senses only, and probably before judgment is brought forth ; but these first notions are neither simple nor are they accurate and distinct : they are gross and indistinct and, like the *chaos*, a *rudis indigestaque moles*. Before we can have any distinct notion of this mass, it must be analysed ; the heterogeneous parts must be separated in our conception, and the simple elements, which before lay hid in the common mass, must first be distinguished and then put together into one whole.

In this way it is that we form distinct notions even of the objects of sense ; but this process of analysis and composition by habit becomes so easy, and is performed so readily, that we are apt to overlook it and to impute the distinct notion we have formed of the object to the senses alone ; and this we are the more prone to do because, when once we have distinguished the sensible qualities of the object from one another, the sense gives testimony to each of them.

You perceive, for instance, an object white, round, and a foot in diameter. I grant that you perceive all these attributes of the object by sense ; but if you had not been able to distinguish the colour from the figure, and both from the magnitude, your senses would only have given you one complex and confused notion of all these mingled together.

A man who is able to say with understanding, or to determine in his own mind, that this object is white, must have distinguished whiteness from other attributes. If he has not made this distinction, he does not understand what he says.

Suppose a cube of brass to be presented at the same time to a child of a year old and to a man. The regularity of the figure will attract the attention of both. Both have the senses of sight and of touch in equal perfection ; and, therefore, if anything be discovered in this object by the man which cannot be discovered by the child, it must be owing, not to the senses, but to some other faculty which the child has not yet attained.

*First*, then, The man can easily distinguish the body

from the surface which terminates it ; this the child cannot do. *Secondly*, The man can perceive that this surface is made up of six planes of the same figure and magnitude ; the child cannot discover this. *Thirdly*, The man perceives that each of these planes has four equal sides and four equal angles, and that the opposite sides of each plane and the opposite planes are parallel.

It will surely be allowed that a man of ordinary judgment may observe all this in a cube which he makes an object of contemplation, and takes time to consider ; that he may give the name of a square to a plane terminated by four equal sides and four equal angles, and the name of a cube to a solid terminated by six equal squares : all this is nothing else but analysing the figure of the object presented to his senses into its simplest elements, and again compounding it of those elements.

By this analysis and composition two effects are produced. *First*, From the one complex object which his senses presented, though one of the most simple the senses can present, he educes many simple and distinct notions of right lines, angles, plane surface, solid, equality, parallelism—notions which the child has not yet faculties to attain. *Secondly*, When he considers the cube as compounded of these elements put together in a certain order, he has then, and not before, a distinct and scientific notion of a cube. The child neither conceives those elements nor in what order they must be put together in order to make a cube, and therefore has no accurate notion of a cube which can make it a subject of reasoning.

Whence I think we may conclude that the notion which we have from the senses alone, even of the simplest objects of sense, is indistinct and incapable of being either described or reasoned upon until it is analysed into its simple elements, and considered as compounded of those elements.

A distinct notion of an object, even of sense, is never got in an instant ; but the sense performs its office in an instant. Time is not required to see it better, but to analyse it, to distinguish the different parts and their relation to one another and to the whole.

Hence it is that, when any vehement passion or emotion hinders the cool application of judgment, we get no distinct notion of an object, even though the sense be long directed to it. A man who is put into a panic by thinking he sees a ghost may stare at it long without having any distinct notion of it; it is his understanding, and not his sense, that is disturbed by his horror. If he can lay that aside, judgment immediately enters upon its office and examines the length and breadth, the colour, and figure, and distance of the object. Of these, while his panic lasted, he had no distinct notion, though his eyes were open all the time.

When the eye of sense is open, but that of judgment shut by a panic or any violent emotion that engrosses the mind, we see things confusedly and probably much in the same manner that brutes and perfect idiots do, and infants before the use of judgment.

There are, therefore, notions of the objects of sense which are gross and indistinct, and there are others that are distinct and scientific. The former may be got from the senses alone, but the latter cannot be obtained without some degree of judgment.

The clear and accurate notions which geometry presents to us of a point, a right line, an angle, a square, a circle, of ratios direct and inverse, and others of that kind, can find no admittance into a mind that has not some degree of judgment. They are not properly ideas of the senses, nor are they got by compounding ideas of the senses, but by analysing the ideas or notions we get by the senses into their simplest elements, and again combining these elements into various accurate and elegant forms which the senses never did nor can exhibit.

Had Mr. Hume attended duly to this, it ought to have prevented a very bold attempt, which he has prosecuted through fourteen pages of his *Treatise of Human Nature*,<sup>1</sup> to prove that geometry is founded upon ideas that are not exact, and axioms that are not precisely true.

The fundamental articles of his system are that all the perceptions of the human mind are either impressions or

<sup>1</sup> *Treatise*, I. 2. 4.

ideas, and that ideas are only faint copies of impressions. The idea of a right line, therefore, is only a faint copy of some line that has been seen, or felt by touch ; and the faint copy cannot be more perfect than the original. Now of such right lines it is evident that the axioms of geometry are not precisely true, for two lines that are straight to our sight or touch may include a space, or they may meet in more points than one. If, therefore, we cannot form any notion of a straight line more accurate than that which we have from the senses of sight and touch, geometry has no solid foundation. If, on the other hand, the geometrical axioms are precisely true, the idea of a right line is not copied from any impression of sight or touch, but must have a different origin and a more perfect standard.

As the geometrician, by reflecting only upon the extension and figure of matter, forms a set of notions more accurate and scientific than any which the senses exhibit, so the natural philosopher, reflecting upon other attributes of matter, forms another set, such as those of density, quantity of matter, velocity, momentum, fluidity, elasticity, centres of gravity, and of oscillation. These notions are accurate and scientific, but they cannot enter into a mind that has not some degree of judgment, nor can we make them intelligible to children until they have some ripeness of understanding.

Having said so much of the notions we get from the senses alone of the objects of sense, let us next consider what notions we can have from consciousness alone of the operations of our minds.

Mr. Locke very properly calls consciousness an internal sense. It gives the like immediate knowledge of things in the mind — that is, of our own thoughts and feelings — as the senses give us of things external. There is this difference, however, that an external object may be at rest, and the sense may be employed about it for some time. But the objects of consciousness are never at rest : the stream of thought flows like a river, without stopping a moment ; the whole train of thought passes in succession under the eye of consciousness, which is always employed

about the present. But is it consciousness that analyses complex operations, distinguishes their different ingredients, and combines them in distinct parcels under general names? This surely is not the work of consciousness, nor can it be performed without reflection, recollecting and judging of what we were conscious of and distinctly remember. This reflection does not appear in children. Of all the powers of the mind it seems to be of the latest growth, whereas consciousness is coeval with the earliest.

Consciousness, being a kind of internal sense, can no more give us distinct and accurate notions of the operations of our minds than the external senses can give of external objects. Reflection upon the operations of our minds is the same kind of operation with that by which we form distinct notions of external objects. They differ not in their nature, but in this only, that one is employed about external, and the other about internal objects; and both may, with equal propriety, be called *reflection*.

Mr. Locke has restricted the word *reflection* to that which is employed about the operations of our minds, without any authority, as I think, from custom, the arbiter of language. For surely I may reflect upon what I have seen or heard as well as upon what I have thought. The word in its proper and common meaning is equally applicable to objects of sense and to objects of consciousness. He has likewise confounded reflection with consciousness, and seems not to have been aware that they are different powers and appear at very different periods of life.

If that eminent philosopher had been aware of these mistakes about the meaning of the word *reflection*, he would, I think, have seen that as it is by reflection upon the operations of our own minds that we can form any distinct and accurate notions of them, and not by consciousness without reflection, so it is by reflection upon the objects of sense, and not by the senses without reflection, that we can form distinct notions of them. Reflection upon anything, whether external or internal, makes it an object of our intellectual powers by which we survey it on all sides, and form such judgments about it as appear to be just and true.

I proposed, in the *third* place, to consider our notions of the relations of things : and here I think, that without judgment, we cannot have any notion of relations.

There are two ways in which we get the notion of relations. The first is by comparing the related objects, when we have before had the conception of both. By this comparison we perceive the relation, either immediately or by a process of reasoning. That my foot is longer than my finger I perceive immediately, and that three is the half of six. This immediate perception is immediate and intuitive judgment. That the angles at the base of an isosceles triangle are equal I perceive by a process of reasoning in which it will be acknowledged there is judgment.

Another way in which we get the notion of relations (which seems not to have occurred to Mr. Locke) is when, by attention to one of the related objects, we perceive or judge that it must from its nature have a certain relation to something else which before, perhaps, we never thought of ; and thus our attention to one of the related objects produces the notion of a correlate and of a certain relation between them.

Thus, when I attend to colour, figure, weight, I cannot help judging these to be qualities which cannot exist without a subject ; that is, something which is coloured, figured, heavy. If I had not perceived such things to be qualities, I should never have had any notion of their subject or of their relation to it.

By attending to the operations of thinking, memory, reasoning, we perceive or judge that there must be something which thinks, remembers, and reasons, which we call the mind. When we attend to any change that happens in nature, judgment informs us that there must be a cause of this change, which had power to produce it ; and thus we get the notions of cause and effect, and of the relation between them. When we attend to body, we perceive that it cannot exist without space ; hence we get the notion of space (which is neither an object of sense nor of consciousness), and of the relation which bodies have to a certain portion of unlimited space, as their place.

I apprehend, therefore, that all our notions of relations

may more properly be ascribed to judgment as their source and origin than to any other power of the mind. We must first perceive relations by our judgment before we can conceive them without judging of them, as we must first perceive colours by sight before we can conceive them without seeing them. I think Mr. Locke, when he comes to speak of the ideas of relations, does not say that they are ideas of sensation or reflection, but only that they terminate in, and are concerned about, ideas of sensation or reflection.<sup>1</sup>

The notions of unity and number are so abstract that it is impossible they should enter into the mind until it has some degree of judgment. We see with what difficulty, and how slowly, children learn to use, with understanding, the names even of small numbers, and how they exult in this acquisition when they have attained it. Every number is conceived by the relation which it bears to unity, or to known combinations of units ; and upon that account, as well as on account of its abstract nature, all distinct notions of it require some degree of judgment.

In its proper place I shall have occasion to show that judgment is an ingredient in all determinations of taste,<sup>2</sup> in all moral determinations,<sup>3</sup> and in many of our passions and affections.<sup>2</sup> So that this operation, after we come to have any exercise of judgment, mixes with most of the operations of our minds and, in analysing them, cannot be overlooked without confusion and error.

## CHAPTER 2

### OF COMMON SENSE

THE word *sense*, in common language, seems to have a different meaning from that which it has in the writings

<sup>1</sup> Cf. *Essay*, II. 25. 9.

<sup>2</sup> *V. esp. Essays on the Active Powers of the Human Mind*, II. 2.

<sup>3</sup> *Ib.* V. 7.

of philosophers, and those different meanings are apt to be confounded and to occasion embarrassment and error.

Not to go back to ancient philosophy upon this point, modern philosophers consider sense as a power that has nothing to do with judgment. Sense they consider as the power by which we receive certain ideas or impressions from objects, and judgment as the power by which we compare those ideas and perceive their necessary agreements and disagreements.

The external senses give us the idea of colour, figure, sound, and other qualities of body, primary or secondary. Mr. Locke gave the name of an internal sense to consciousness, because by it we have the ideas of thought, memory, reasoning, and other operations of our own minds. Dr. Hutcheson of Glasgow, conceiving that we have simple and original ideas which cannot be imputed either to the external senses or to consciousness, introduced other internal senses, such as the sense of harmony, the sense of beauty, and the moral sense. Ancient philosophers also spoke of internal senses, of which memory was accounted one.

But all these senses, whether external or internal, have been represented by philosophers as the means of furnishing our minds with ideas, without including any kind of judgment. Dr. Hutcheson defines a sense to be a determination of the mind to receive any idea from the presence of an object independent on our will.<sup>1</sup>

"By this term [sense] philosophers, in general, have denominated those faculties in consequence of which we are liable to feelings relative to ourselves only, and from which they have not pretended to draw any conclusions concerning the nature of things ; whereas truth is not relative, but absolute and real " (Dr. Priestley's *Exam. of Dr. Reid*, etc., p. 123).

On the contrary, in common language sense always implies judgment. A man of sense is a man of judgment. Good sense is good judgment. Nonsense is what is

<sup>1</sup> *Inquiry concerning Beauty, etc.*, I. 1 ; *Nature and Conduct of the Passions*, 1.

evidently contrary to right judgment. Common sense is that degree of judgment which is common to men with whom we can converse and transact business.

' Seeing and hearing by philosophers are called senses, because we have ideas by them ; by the vulgar they are called senses, because we judge by them. We judge of colours by the eye ; of sounds by the ear ; of beauty and deformity by taste ; of right and wrong in conduct, by our moral sense or conscience.

We may take Mr. Pope as good authority for the meaning of an English word. He uses it often and, in his *Epistle to the Earl of Burlington*, has made a little descant upon it :

- Oft have you hinted to your brother Peer,  
A certain truth, which many buy too dear :  
Something there is more needful than expense,  
And something previous ev'n to taste—'tis sense.  
Good sense, which only is the gift of heaven,  
And, though no science, fairly worth the seven ;  
A light which in yourself you must perceive,  
' Jones and Le Nôtre have it not to give.

This inward light or sense is given by heaven to different persons in different degrees. There is a certain degree of it which is necessary to our being subjects of law and government, capable of managing our own affairs, and answerable for our conduct towards others : this is called common sense, because it is common to all men with whom we can transact business or call to account for their conduct.

The same degree of understanding which makes a man capable of acting with common prudence in the conduct of life makes him capable of discovering what is true and what is false in matters that are self-evident, and which he distinctly apprehends.

All knowledge and all science must be built upon principles that are self-evident, and of such principles every man who has common sense is a competent judge when he conceives them distinctly. Hence it is that disputes very often terminate in an appeal to common sense.

While the parties agree in the first principles on which their arguments are grounded, there is room for reasoning ; but when one denies what to the other appears too evident to need or to admit of proof, reasoning seems to be at an end ; an appeal is made to common sense, and each party is left to enjoy his own opinion.

There seems to be no remedy for this, nor any way left to discuss such appeals, unless the decisions of common sense can be brought into a code in which all reasonable men shall acquiesce. This indeed, if it be possible, would be very desirable and would supply a desideratum in logic ; and why should it be thought impossible that reasonable men should agree in things that are self-evident ?

All that is intended in this chapter is to explain the meaning of common sense that it may not be treated, as it has been by some, as a new principle or as a word without any meaning. I have endeavoured to show that sense in its most common, and therefore its most proper meaning, signifies judgment, though philosophers often use it in another meaning. From this it is natural to think that common sense should mean common judgment ; and so it really does.

What the precise limits are which divide common judgment from what is beyond it on the one hand, and from what falls short of it on the other, may be difficult to determine, and men may agree in the meaning of the word who have different opinions about those limits, or who even never thought of fixing them. This is as intelligible as that all Englishmen should mean the same thing by the county of York, though perhaps not a hundredth part of them can point out its precise limits.

Indeed it seems to me that common sense is as unambiguous a word and as well understood as the county of York. We find it in innumerable places in good writers ; we hear it on innumerable occasions in conversation ; and, as far as I am able to judge, always in the same meaning. And this is probably the reason why it is so seldom defined or explained.

Dr. Johnson, in the authorities he gives to show that

the word *sense* signifies understanding, soundness of faculties, strength of natural reason, quotes Dr. Bentley for what may be called a definition of common sense, though probably not intended for that purpose, but mentioned accidentally: "God hath endowed mankind with power and abilities which we call natural light and reason, and common sense".

It is true that common sense is a popular and not a scholastic word, and by most of those who have treated systematically of the powers of the understanding it is only occasionally mentioned, as it is by other writers. But I recollect two philosophical writers who are exceptions to this remark. One is Buffier, who treated largely of common sense as a principle of knowledge above fifty years ago.<sup>1</sup> The other is Bishop Berkeley, who I think has laid as much stress upon common sense, in opposition to the doctrines of philosophers, as any philosopher that has come after him. If the reader chooses to look back to Essay II. Chapter 10, he will be satisfied of this from the quotations there made for another purpose, which it is unnecessary here to repeat.<sup>2</sup>

Men rarely ask what common sense is, because every man believes himself possessed of it, and would take it for an imputation upon his understanding to be thought unacquainted with it. Yet I remember two very eminent authors who have put this question, and it is not improper to hear their sentiments upon a subject so frequently mentioned and so rarely canvassed.

It is well known that Lord Shaftesbury gave to one of his treatises the title of *Sensus Communis; an Essay on the Freedom of Wit and Humour, in a Letter to a Friend*,

<sup>1</sup> *Traité des Vérités Premières* (1717).

<sup>2</sup> *Int. Powers*, II. 10 (H. pp. 283-4). Reid gives a number of quotations from the *Dialogues*, e.g. (from the Preface): "it has been my aim to introduce the notions I advance into the mind in the most easy and familiar manner; especially because they carry with them a great opposition to the prejudices of philosophers, which have so far prevailed against the common sense and natural notions of mankind. If the principles which I here endeavour to propagate are admitted for true, the consequences . . . are . . . several useless parts of science retrenched, speculation referred to practice, and men reduced from paradoxes to common sense."

in which he puts his friend in mind of a free conversation with some of their friends on the subjects of morality and religion. Amidst the different opinions started and maintained with great life and ingenuity, one or other would every now and then take the liberty to appeal to common sense. Everyone allowed the appeal ; no one would offer to call the authority of the court in question, till a gentleman whose good understanding was never yet brought in doubt desired the company, very gravely, that they would tell him what common sense was.

" If ", said he, " by the word *sense* we were to understand opinion and judgment, and by the word *common* the generality or any considerable part of mankind, it would be hard to discover where the subject of common sense could lie, for that which was according to the sense of one part of mankind was against the sense of another. And if the majority were to determine common sense, it would change as often as men changed. That in religion, common sense was as hard to determine as *catholic* or *orthodox*. What to one was absurdity, to another was demonstration.

" In policy, if plain British or Dutch sense were right, Turkish and French must certainly be wrong. And as mere nonsense as passive obedience seemed, we found it to be the common sense of a great party amongst ourselves, a greater party in Europe, and perhaps the greatest part of all the world besides. As for morals, the difference was still wider, for even the philosophers could never agree in one and the same system. And some even of our most admired modern philosophers had fairly told us that virtue and vice had no other law or measure than mere fashion and vogue."

This is the substance of the gentleman's speech, which I apprehend explains the meaning of the word perfectly and contains all that has been said or can be said against the authority of common sense and the propriety of appeals to it.

As there is no mention of any answer immediately made to this speech, we might be apt to conclude that the noble

author adopted the sentiments of the intelligent gentleman whose speech he recites. But the contrary is manifest from the title of *Sensus Communis* given to his essay, from his frequent use of the word, and from the whole tenor of the essay.

The author appears to have a double intention in that essay corresponding to the double title prefixed to it. One intention is to justify the use of wit, humour, and ridicule, in discussing among friends the gravest subjects. "I can very well suppose", says he, "men may be frightened out of their wits; but I have no apprehension they should be laughed out of them. I can hardly imagine that, in a pleasant way, they should ever be talked out of their love for society, or reasoned out of humanity and common sense."

The other intention, signified by the title *Sensus Communis*, is carried on hand in hand with the first, and is to show that common sense is not so vague and uncertain a thing as it is represented to be in the sceptical speech before recited. "I will try", says he, "what certain knowledge or assurance of things may be recovered in that very way (to wit, of humour), by which all certainty, you thought, was lost, and an endless scepticism introduced."

He gives some criticisms upon the word *sensus communis* in Juvenal, Horace, and Seneca, and after showing, in a facetious way throughout the treatise, that the fundamental principles of morals, of politics, of criticism, and of every branch of knowledge, are the dictates of common sense, he sums up the whole in these words: "That some moral and philosophical truths there are so evident in themselves that it would be easier to imagine half mankind run mad, and joined precisely in the same species of folly, than to admit anything as truth which should be advanced against such natural knowledge, fundamental reason, and common sense". And on taking leave, he adds: "And now, my friend, should you find I had moralised in any tolerable manner, according to common sense, and without canting, I should be satisfied with my performance".

Another eminent writer who has put the question what common sense is, is Fenelon, the famous Archbishop of Cambrai.

That ingenious and pious author, having had an early prepossession in favour of the Cartesian philosophy, made an attempt to establish, on a sure foundation, the metaphysical arguments which Descartes had invented to prove the being of the Deity. For this purpose he begins with the Cartesian doubt. He proceeds to find out the truth of his own existence, and then to examine wherein the evidence and certainty of this and other such primary truths consisted. This, according to Cartesian principles, he places in the clearness and distinctness of the ideas. On the contrary, he places the absurdity of the contrary propositions in their being repugnant to his clear and distinct ideas.

To illustrate this, he gives various examples of questions manifestly absurd and ridiculous which every man of common understanding would at first sight perceive to be so, and then goes on to this purpose.<sup>1</sup>

“What is it that makes these questions ridiculous? Wherein does this ridicule precisely consist? It will, perhaps, be replied that it consists in this, that they shock common sense. But what is this same common sense? It is not the first notions that all men have equally of the same things. This common sense, which is always and in all places the same; which prevents inquiry; which makes inquiry in some cases ridiculous; which, instead of inquiring, makes a man laugh whether he will or not; which puts it out of a man’s power to doubt: this sense, which only waits to be consulted — which shows itself at the first glance and immediately discovers the evidence or the absurdity of a question — is not this the same that I call my ideas?

“Behold, then, those ideas or general notions which it is not in my power either to contradict or examine, and by which I examine and decide in every case, insomuch that I laugh instead of answering, as often as anything is pro-

<sup>1</sup> *Traité de l’Existence de Dieu*, II. 2. 33.

posed to me, which is evidently contrary to what these immutable ideas represent."

I shall only observe upon this passage that the interpretation it gives of Descartes' criterion of truth, whether just or not, is the most intelligible and the most favourable I have met with.

I beg leave to mention one passage from Cicero, and to add two or three from late writers, which show that this word is not become obsolete, nor has changed its meaning.

*De Oratore*, lib. 3 : " Omnes enim tacito quodam sensu, sine ulla arte aut ratione, in artibus ac rationibus, recta ac prava dijudicant. Idque cum faciant in picturis, et in signis, et in aliis operibus, ad quorum intelligentiam a natura minus habent instrumenti, tum multo ostendunt magis in verborum, numerorum, vocumque judicio ; quod ea sint in communibus infixis sensibus ; neque earum rerum quemquam funditus natura voluit expertem."

Hume's *Essays and Treatises*, vol. i. p. 5 : " But a philosopher who proposes only to represent the common sense of mankind in more beautiful and more engaging colours, if by accident he commits a mistake, goes no farther, but, renewing his appeal to common sense and the natural sentiments of the mind, returns into the right path and secures himself from any dangerous illusions".<sup>1</sup>

Hume's *Enquiry concerning the Principles of Morals*, p. 2 : " Those who have denied the reality of moral distinctions may be ranked among the disingenuous disputants. The only way of converting an antagonist of this kind is to leave him to himself ; for, finding that nobody keeps up the controversy with him, it is probable he will at last, of himself, from mere weariness, come over to the side of common sense and reason."

Priestley's *Institutes*, Preliminary Essay, vol. i. p. 27 : " Because common sense is a sufficient guard against many errors in religion, it seems to have been taken for granted that that common sense is a sufficient instructor also, whereas in fact, without positive instruction, men would

<sup>1</sup> *Enquiry concerning Human Understanding*, § 1.

naturally have been mere savages with respect to religion ; as, without similar instruction, they would be savages with respect to the arts of life and the sciences. Common sense can only be compared to a judge ; but what can a judge do without evidence and proper materials from which to form a judgment ? ”<sup>1</sup>

Priestley's *Examination of Dr. Reid*, etc., p. 127 : “ But should we, out of complaisance, admit that what has hitherto been called judgment may be called sense, it is making too free with the established signification of words to call it common sense, which, in common acceptance, has long been appropriated to a very different thing — viz. to that capacity for judging of common things that persons of middling capacities are capable of ”. P. 129 : “ I should, therefore, expect that, if a man was so totally deprived of common sense as not to be able to distinguish truth from falsehood in one case, he would be equally incapable of distinguishing it in another ”.<sup>2</sup>

From this cloud of testimonies, to which hundreds might be added, I apprehend that whatever censure is thrown upon those who have spoken of common sense as a principle of knowledge, or who have appealed to it in matters that are self-evident, will fall light when there are so many to share in it. Indeed the authority of this tribunal is too sacred and venerable, and has prescription too long in its favour, to be now *wisely* called in question. Those who are disposed to do so may remember the shrewd saying of Mr. Hobbes — “ When reason is against a man, a man will be against reason ”.<sup>3</sup> This is equally applicable to common sense.

From the account I have given of the meaning of this term, it is easy to judge both of the proper use and of the abuse of it.

It is absurd to conceive that there can be any opposition between reason and common sense. It is indeed the first-born of Reason ; and, as they are commonly joined

<sup>1</sup> *Essay on Communicating Religious Knowledge.*

<sup>2</sup> *Remarks on Dr. Beattie's Essay*, § 1.

<sup>3</sup> *Tripes*, Epistle Dedicatory ; cf. *Leviathan*, I. 11.

together in speech and in writing, they are inseparable in their nature.

We ascribe to reason two offices or two degrees. The first is to judge of things self-evident ; the second to draw conclusions that are not self-evident from those that are.<sup>1</sup> The first of these is the province, and the sole province, of common sense, and, therefore, it coincides with reason in its whole extent and is only another name for one branch or one degree of reason. Perhaps it may be said, Why then should you give it a particular name, since it is acknowledged to be only a degree of reason ? It would be a sufficient answer to this, Why do you abolish a name which is to be found in the language of all civilised nations and has acquired a right by prescription ? Such an attempt is equally foolish and ineffectual. Every wise man will be apt to think that a name which is found in all languages as far back as we can trace them is not without some use.

But there is an obvious reason why this degree of reason should have a name appropriated to it ; and that is, that in the greatest part of mankind no other degree of reason is to be found. It is this degree that entitles them to the denomination of reasonable creatures. It is this degree of reason, and this only, that makes a man capable of managing his own affairs and answerable for his conduct towards others. There is, therefore, the best reason why it should have a name appropriated to it.

These two degrees of reason differ in other respects which would be sufficient to entitle them to distinct names.

The first is purely the gift of Heaven. And where Heaven has not given it, no education can supply the want. The second is learned by practice and rules, when the first is not wanting. A man who has common sense may be taught to reason. But if he has not that gift, no teaching will make him able either to judge of first principles or to reason from them.

I have only this further to observe, that the province of common sense is more extensive in refutation than in confirmation. A conclusion drawn by a train of just reasoning

<sup>1</sup> For Reid's special meaning of " self-evident " v. p. 114 n.

from true principles cannot possibly contradict any decision of common sense, because truth will always be consistent with itself. Neither can such a conclusion receive any confirmation from common sense, because it is not within its jurisdiction.

But it is possible that, by setting out from false principles or by an error in reasoning, a man may be led to a conclusion that contradicts the decisions of common sense. In this case the conclusion is within the jurisdiction of common sense, though the reasoning on which it was grounded be not ; and a man of common sense may fairly reject the conclusion without being able to show the error of the reasoning that led to it.

Thus, if a mathematician, by a process of intricate demonstration in which some false step was made, should be brought to this conclusion, that two quantities which are both equal to a third are not equal to each other, a man of common sense, without pretending to be a judge of the demonstration, is well entitled to reject the conclusion and to pronounce it absurd.

## CHAPTER 3

### SENTIMENTS OF PHILOSOPHERS CONCERNING JUDGMENT

A DIFFERENCE about the meaning of a word ought not to occasion disputes among philosophers, but it is often very proper to take notice of such differences in order to prevent verbal disputes. There are, indeed, no words in language more liable to ambiguity than those by which we express the operations of the mind, and the most candid and judicious may sometimes be led into different opinions about their precise meaning.

I hinted before <sup>1</sup> what I take to be a peculiarity in Mr.

<sup>1</sup> P. 318.

Locke with regard to the meaning of the word judgment, and mentioned what I apprehend may have led him into it. But let us hear himself, *Essay*, Bk. iv. ch. 14 : " The faculty which God has given to man to supply the want of clear and certain knowledge, where that cannot be had, is judgment ; whereby the mind takes its ideas to agree or disagree ; or, which is the same, any proposition to be true or false, without perceiving a demonstrative evidence in the proofs. Thus the mind has two faculties conversant about truth and falsehood. *First*, Knowledge, whereby it certainly perceives, and is undoubtedly satisfied of, the agreement or disagreement of any ideas. *Secondly*, Judgment, which is the putting ideas together, or separating them from one another in the mind, when their certain agreement or disagreement is not perceived, but presumed to be so."

Knowledge, I think, sometimes signifies things known ; sometimes that act of the mind by which we know them. And in like manner opinion sometimes signifies things believed ; sometimes the act of the mind by which we believe them. But judgment is the faculty which is exercised in both these acts of the mind. In knowledge we judge without doubting, in opinion with some mixture of doubt. But I know no authority, besides that of Mr. Locke, for calling knowledge a faculty any more than for calling opinion a faculty.

Neither do I think that knowledge is confined within the narrow limits which Mr. Locke assigns to it, because the far greatest part of what all men call human knowledge is in things which neither admit of intuitive nor of demonstrative proof.

I have all along used the word *judgment* in a more extended sense than Mr. Locke does in the passage above-mentioned. I understand by it that operation of mind by which we determine, concerning anything that may be expressed by a proposition, whether it be true or false. Every proposition is either true or false ; so is every judgment. A proposition may be simply conceived without judging of it. But when there is not only a conception of

the proposition, but a mental affirmation or negation, an assent or dissent of the understanding, whether weak or strong, that is judgment.

The common theory concerning ideas naturally leads to a theory concerning judgment which may be a proper test of its truth, for, as they are necessarily connected, they must stand or fall together. Their connection is thus expressed by Mr. Locke, Bk. IV. ch. 1 : " Since the mind, in all its thoughts and reasonings, hath no other immediate object but its own ideas, which it alone does or can contemplate, it is evident that our knowledge is only conversant about them. Knowledge then seems to me to be nothing but the *perception of the connection and agreement, or disagreement and repugnancy, of any of our ideas. In this alone it consists.*"

There can only be one objection to the justice of this inference, and that is, that the antecedent proposition from which it is inferred seems to have some ambiguity ; for, in the first clause of that proposition, the mind is said to have no other *immediate* object but its own ideas ; in the second, that it has no other object at all ; that it does or can contemplate ideas alone.

If the word *immediate* in the first clause be a mere expletive, and be not intended to limit the generality of the proposition, then the two clauses will be perfectly consistent, the second being only a repetition or explication of the first, and the inference that our knowledge is only conversant about ideas will be perfectly just and logical.

But if the word *immediate* in the first clause be intended to limit the general proposition, and to imply that the mind has other objects besides its own ideas, though no other immediate objects, then it will not be true that it does or can contemplate ideas alone ; nor will the inference be justly drawn that our knowledge is only conversant about ideas.

Mr. Locke must either have meant his antecedent proposition without any limitation by the word *immediate*, or he must have meant to limit it by that word, and to signify that there are objects of the mind which are not ideas.

The first of these suppositions appears to me most probable, for several reasons.

*First*, Because, when he purposely defines the word *idea*, in the Introduction to the *Essay*, he says it is whatsoever is the object of the understanding when a man thinks, or whatever the mind can be employed about in thinking. Here there is no room left for objects of the mind that are not ideas. The same definition is often repeated throughout the *Essay*. Sometimes, indeed, the word *immediate* is added, as in the passage now under consideration, but there is no intimation made that it ought to be understood when it is not expressed. Now, if it had really been his opinion that there are objects of thought which are not ideas, this definition, which is the groundwork of the whole *Essay*, would have been very improper, and apt to mislead his reader.

*Secondly*, He has never attempted to show how there can be objects of thought which are not immediate objects ; and, indeed, this seems impossible. For whatever the object be, the man either thinks of it or he does not. There is no medium between these. If he thinks of it, it is an immediate object of thought while he thinks of it. If he does not think of it, it is no object of thought at all. Every object of thought, therefore, is an immediate object of thought, and the word *immediate*, joined to objects of thought, seems to be a mere expletive.

*Thirdly*, Though Malebranche and Bishop Berkeley believed that we have no ideas of minds, or of the operations of minds, and that we may think and reason about them without ideas, this was not the opinion of Mr. Locke. He thought that there are ideas of minds, and of their operations, as well as of the objects of sense ; that the mind perceives nothing but its own ideas, and that all words are the signs of ideas.

A *fourth* reason is, That to suppose that he intended to limit the antecedent proposition by the word *immediate* is to impute to him a blunder in reasoning which I do not think Mr. Locke could have committed ; for what can be a more glaring paralogism than to infer that, since ideas are

partly, though not solely, the objects of thought, it is evident that all our knowledge is only conversant about them? If, on the contrary, he meant that ideas are the only objects of thought, then the conclusion drawn is perfectly just and obvious, and he might very well say *that, since it is ideas only that the mind does or can contemplate, it is evident that our knowledge is only conversant about them.*

As to the conclusion itself, I have only to observe that, though he extends it only to what he calls knowledge and not to what he calls judgment, there is the same reason for extending it to both.

It is true of judgment as well as of knowledge that it can only be conversant about objects of the mind, or about things which the mind can contemplate. Judgment as well as knowledge supposes the conception of the object about which we judge, and to judge of objects that never were nor can be objects of the mind is evidently impossible.

This, therefore, we may take for granted, that if knowledge be conversant about ideas only, because there is no other object of the mind, it must be no less certain that judgment is conversant about ideas only, for the same reason.

Mr. Locke adds, as the result of his reasoning : “Knowledge, then, seems to me to be nothing but the perception of the connection and agreement, or disagreement and repugnancy, of any of our ideas. In this alone it consists.”

This is a very important point, not only on its own account, but on account of its necessary connection with his system concerning ideas, which is such as that both must stand or fall together ; for, if there is any part of human knowledge which does not consist in the perception of the agreement or disagreement of ideas, it must follow that there are objects of thought and of contemplation which are not ideas.

This point, therefore, deserves to be carefully examined. With this view let us first attend to its meaning, which I think can hardly be mistaken, though it may need some explication.

Every point of knowledge and every judgment is expressed by a proposition wherein something is affirmed or denied of the subject of the proposition.

By perceiving the connection or agreement of two ideas I conceive is meant perceiving the truth of an affirmative proposition of which the subject and predicate are ideas. In like manner, by perceiving the disagreement and repugnancy of any two ideas I conceive is meant perceiving the truth of a negative proposition of which both subject and predicate are ideas. This I take to be the only meaning the words can bear, and it is confirmed by what Mr. Locke says in a passage already quoted in this chapter, that "the mind, taking its ideas to agree or disagree, is the same as taking any proposition to be true or false". Therefore, if the definition of knowledge given by Mr. Locke be a just one, the subject as well as the predicate of every proposition, by which any point of knowledge is expressed, must be an idea and can be nothing else; and the same must hold of every proposition by which judgment is expressed, as has been shown above.

Having ascertained the meaning of this definition of human knowledge, we are next to consider how far it is just.

*First*, I would observe that if the word *idea* be taken in the meaning which it had at first among the Pythagoreans and Platonists, and if by knowledge be meant only abstract and general knowledge (which I believe Mr. Locke had chiefly in his view), I think the proposition is true that such knowledge consists solely in perceiving the truth of propositions whose subject and predicate are ideas.

By ideas here I mean things conceived abstractly without regard to their existence. We commonly call them abstract notions, abstract conceptions, abstract ideas — the Peripatetics called them universals; and the Platonists, who knew no other ideas, called them ideas without addition.

Such ideas are both subject and predicate in every proposition which expresses abstract knowledge.

The whole body of pure mathematics is an abstract

science, and in every mathematical proposition both subject and predicate are ideas in the sense above explained. Thus, when I say the side of a square is not commensurable to its diagonal — in this proposition *the side and the diagonal of a square* are the subjects (for, being a relative proposition, it must have two subjects).<sup>1</sup> A square, its side, and its diagonal, are ideas or universals; they are not individuals, but things predicable of many individuals. Existence is not included in their definition, nor in the conception we form of them. The predicate of the proposition is *commensurable*, which must be a universal, as the predicate of every proposition is so. In other branches of knowledge many abstract truths may be found, but for the most part mixed with others that are not abstract.

I add that I apprehend that what is strictly called demonstrative evidence is to be found in abstract knowledge only. This was the opinion of Aristotle, of Plato, and, I think, of all the ancient philosophers, and I believe in this they judged right. It is true we often meet with demonstration in astronomy, in mechanics, and in other branches of natural philosophy, but I believe we shall always find that such demonstrations are grounded upon principles of suppositions which have neither intuitive nor demonstrative evidence.

Thus, when we demonstrate that the path of a projectile *in vacuo* is a parabola, we suppose that it is acted upon with the same force and in the same direction through its whole path by gravity. This is not intuitively known, nor is it demonstrable; and in the demonstration we reason from the laws of motion, which are principles not capable of demonstration, but grounded on a different kind of evidence.

Ideas in the sense above explained are creatures of the mind; they are fabricated by its rational powers; we know their nature and their essence — for they are nothing more than they are conceived to be; — and, because they

<sup>1</sup> It should be noted that, while accepting the subject-predicate analysis of all propositions, Reid insists that in the case of relational propositions *all* the terms between which the relation is said (or denied) to hold are subjects.

are perfectly known, we can reason about them with the highest degree of evidence.

† And as they are not things that exist, but things conceived, they neither have place nor time, nor are they liable to change.

When we say that they are in the mind, this can mean no more but that they are conceived by the mind, or that they are objects of thought. The act of conceiving them is, no doubt, in the mind; the things conceived have no place, because they have not existence. Thus a circle, considered abstractly, is said figuratively to be in the mind of him that conceives it, but in no other sense than the city of London or the kingdom of France is said to be in his mind when he thinks of those objects.

Place and time belong to finite things that exist, but not to things that are barely conceived. They may be objects of conception to intelligent beings in every place and at all times. Hence the Pythagoreans and Platonists were led to think that they are eternal and omnipresent. If they had existence, they must be so, for they have no relation to any one place or time which they have not to every place and to every time.

The natural prejudice of mankind, that what we conceive must have existence, led those ancient philosophers to attribute existence to ideas; and by this they were led into all the extravagant and mysterious parts of their system. When it is purged of these, I apprehend it to be the only intelligible and rational system concerning ideas.

I agree with them, therefore, that ideas are immutably the same in all times and places, for this means no more but that a circle is always a circle, and a square always a square.

I agree with them that ideas are the patterns or exemplars by which everything was made that had a beginning, for an intelligent artificer must conceive his work before it is made; he makes it according to that conception; and the thing conceived, before it exists, can only be an idea.

I agree with them that every species of things, considered

abstractly, is an idea, and that the idea of the species is in every individual of the species, without division or multiplication. This indeed is expressed somewhat mysteriously, according to the manner of the sect, but it may easily be explained.

Every idea is an attribute, and it is a common way of speaking to say that the attribute is in every subject of which it may truly be affirmed. Thus, *to be above fifty years of age* is an attribute or idea. This attribute may be in, or affirmed of, fifty different individuals, and be the same in all, without division or multiplication.

I think that not only every species, but every genus higher or lower, and every attribute considered abstractly, is an idea. These are things conceived without regard to existence ; they are universals, and therefore ideas, according to the ancient meaning of that word.

Simple attributes, species and genera lower or higher, are all things conceived without regard to existence ; they are universals ; they are expressed by general words, and have an equal title to be called by the name of *ideas*.

I likewise agree with those ancient philosophers that ideas are the object, and the sole object, of science strictly so called — that is, of demonstrative reasoning.

And as ideas are immutable, so their agreements and disagreements, and all their relations and attributes, are immutable. All mathematical truths are immutably true. Like the ideas about which they are conversant, they have no relation to time or place, no dependence upon existence or change. That the angles of a plane triangle are equal to two right angles always was, and always will be, true, though no triangle had ever existed.

The same may be said of all abstract truths : on that account they have often been called eternal truths, and for the same reason the Pythagoreans ascribed eternity to the ideas about which they are conversant. They may very properly be called necessary truths, because it is impossible they should not be true at all times and in all places.

Such is the nature of all truth that can be discovered by perceiving the agreements and disagreements of *ideas*,

when we take that word in its primitive sense. And that Mr. Locke, in his definition of knowledge, had chiefly in his view abstract truths, we may be led to think from the examples he gives to illustrate it.

But there is another great class of truths which are not abstract and necessary, and, therefore, cannot be perceived in the agreements and disagreements of ideas. These are all the truths we know concerning the real existence of things — the truth of our own existence — of the existence of other things, inanimate, animal, and rational, and of their various attributes and relations.

These truths may be called contingent truths. I except only the existence and attributes of the Supreme Being, which is the only necessary truth I know regarding existence.

All other beings that exist depend for their existence, and all that belong to it, upon the will and power of the first cause; therefore neither their existence, nor their nature, nor anything that befalls them, is necessary, but contingent.

But although the existence of the Deity be necessary, I apprehend we can only deduce it from contingent truths. The only arguments for the existence of a Deity which I am able to comprehend are grounded upon the knowledge of my own existence and the existence of other finite beings. But these are contingent truths.

I believe, therefore, that by perceiving agreements and disagreements of ideas no contingent truth whatsoever can be known, nor the real existence of anything, not even our own existence, nor the existence of a Deity, which is a necessary truth. Thus I have endeavoured to show what knowledge may, and what cannot, be attained by perceiving the agreements and disagreements of ideas, when we take that word in its primitive sense.

- We are, in the *next* place, to consider whether knowledge consists in perceiving the agreement or disagreement of ideas, taking *ideas* in any of the senses in which the word is used by Mr. Locke and other modern philosophers.

1. Very often the word *idea* is used so that to have the idea of anything is a *periphrasis* for conceiving it. In this sense an idea is not an object of thought, it is thought itself. It is the act of the mind by which we conceive any object. And it is evident that this could not be the meaning which Mr. Locke had in view in his definition of knowledge.

2. A second meaning of the word *idea* is that which Mr. Locke gives in the introduction to his *Essay*, when he is making an apology for the frequent use of it: "It being that term, I think, which serves best to stand for whatsoever is the object of the understanding when a man thinks, or whatever it is which a man can be employed about in thinking".

By this definition, indeed, everything that can be the object of thought is an idea. The objects of our thoughts may, I think, be reduced to two classes.

The first class comprehends all those objects which we not only can think of, but which we believe to have a real existence, such as the Creator of all things, and all his creatures that fall within our notice. I can think of the sun and moon, the earth and sea, and of the various animal, vegetable, and inanimate productions with which it hath pleased the bountiful Creator to enrich our globe. I can think of myself, of my friends and acquaintance. I think of the author of the *Essay* with high esteem. These, and such as these, are objects of the understanding which we believe to have real existence.

A second class of objects of the understanding which a man may be employed about in thinking, are things which we either believe never to have existed or which we think of without regard to their existence.

Thus, I can think of Don Quixote, of the Island of Laputa, of Oceana, and of Utopia, which I believe never to have existed. Every attribute, every species, and every genus of things, considered abstractly, without any regard to their existence or non-existence, may be an object of the understanding.

To this second class of objects of the understanding the name of idea does very properly belong, according to the

primitive sense of the word, and I have already considered what knowledge does and what does not consist in perceiving the agreements and disagreements of such ideas.

But if we take the word *idea* in so extensive a sense as to comprehend, not only the second, but also the first class of objects of the understanding, it will undoubtedly be true that all knowledge consists in perceiving the agreements and disagreements of ideas ; for it is impossible that there can be any knowledge, any judgment, any opinion, true or false, which is not employed about the objects of the understanding. But whatsoever is an object of the understanding is an idea, according to this second meaning of the word.

Yet I am persuaded that Mr. Locke, in his definition of knowledge, did not mean that the word *idea* should extend to all those things which we commonly consider as objects of the understanding.

Though Bishop Berkeley believed that sun, moon, and stars, and all material things, are ideas, and nothing but ideas, Mr. Locke nowhere professes this opinion. He believed that we have ideas of bodies, but not that bodies are ideas. In like manner he believed that we have ideas of minds, but not that minds are ideas. When he inquired so carefully into the origin of all our ideas, he did not surely mean to find the origin of whatsoever may be the object of the understanding, nor to resolve the origin of everything that may be an object of understanding into sensation and reflection.

3. Setting aside, therefore, the two meanings of the word *idea* before mentioned, as meanings which Mr. Locke could not have in his view in the definition he gives of knowledge, the only meaning that could be intended in this place is that which I before called the philosophical meaning of the word *idea*,<sup>1</sup> which hath a reference to the theory commonly received about the manner in which the mind perceives external objects, and in which it remembers and conceives objects that are not present to it. It is a very ancient opinion, and has been very generally received

<sup>1</sup> Cf. p. 12

among philosophers, that we cannot perceive or think of such objects immediately, but by the medium of certain images or representatives of them really existing in the mind at the time.

To those images the ancients gave the name of species and phantasms. Modern philosophers have given them the name of ideas. "'Tis evident", says Mr. Locke (Bk. IV. ch. 4), "the mind knows not things immediately, but only by the intervention of the ideas it has of them." And in the same paragraph he puts this question: "How shall the mind, when it perceives nothing but its own ideas, know that they agree with things themselves?"

This theory I have already considered in treating of perception,<sup>1</sup> of memory,<sup>2</sup> and of conception.<sup>3</sup> The reader will there find the reasons that lead me to think that it has no solid foundation in reason, or in attentive reflection upon those operations of our minds; that it contradicts the immediate dictates of our natural faculties, which are of higher authority than any theory; that it has taken its rise from the same prejudices which led all the ancient philosophers to think that the Deity could not make this world without some eternal matter to work upon, and which led the Pythagoreans and Platonists to think that he could not conceive the plan of the world he was to make without eternal ideas really existing as patterns to work by; and that this theory, when its necessary consequences are fairly pursued, leads to absolute scepticism, though those consequences were not seen by most of the philosophers who have adopted it.

I have no intention to repeat what has before been said upon those points, but only, taking ideas in this sense, to make some observations upon the definition which Mr. Locke gives of knowledge.

*First*, If all knowledge consists in perceiving the agreements and disagreements of ideas — that is, of representative images of things existing in the mind — it obviously follows that, if there be no such ideas, there can be no knowledge. So that if there should be found good reason

<sup>1</sup> Pp. 134 *seq.*

<sup>2</sup> Pp. 222 *seq.*

<sup>3</sup> Pp. 244 *seq.*

for giving up this philosophical hypothesis, all knowledge must go along with it.

I hope, however, it is not so ; and that though this hypothesis, like many others, should totter and fall to the ground, knowledge will continue to stand firm upon a more permanent basis.

The cycles and epicycles of the ancient astronomers were for a thousand years thought absolutely necessary to explain the motions of the heavenly bodies. Yet now, when all men believe them to have been mere fictions, astronomy has not fallen with them, but stands upon a more rational foundation than before. Ideas, or images of things existing in the mind, have for a longer time been thought necessary for explaining the operations of the understanding. If they should likewise at last be found to be fictions, human knowledge and judgment would suffer nothing by being disengaged from an unwieldy hypothesis. Mr. Locke surely did not look upon the existence of ideas as a philosophical hypothesis. He thought that we are conscious of their existence, otherwise he would not have made the existence of all our knowledge to depend upon the existence of ideas.

*Secondly*, Supposing this hypothesis to be true, I agree with Mr. Locke that it is an evident and necessary consequence that our knowledge can be conversant about ideas only, and must consist in perceiving their attributes and relations. For nothing can be more evident than this, that all knowledge, and all judgment and opinion, must be about things which are or may be immediate objects of our thought. What cannot be the object of thought, or the object of the mind in thinking, cannot be the object of knowledge or of opinion.

Everything we can know of any object must be either some attribute of the object or some relation it bears to some other object or objects. By the agreements and disagreements of objects I apprehend Mr. Locke intended to express both their attributes and their relations. If ideas then be the only objects of thought, the consequence is necessary that they must be the only objects of knowledge,

and all knowledge must consist in perceiving their agreements and disagreements — that is, their attributes and relations.

The use I would make of this consequence is to show that the hypothesis must be false, from which it necessarily follows. For if we have any knowledge of things that are not ideas, it will follow no less evidently that ideas are not the only objects of our thoughts.

Mr. Locke has pointed out the extent and limits of human knowledge, in his fourth book, with more accuracy and judgment than any philosopher had done before ; but he has not confined it to the agreements and disagreements of ideas. And I cannot help thinking that a great part of that book is an evident refutation of the principles laid down in the beginning of it.

Mr. Locke did not believe that he himself was an idea ; that his friends and acquaintance were ideas ; that the Supreme Being, to speak with reverence, is an idea ; or that the sun and moon, the earth and the sea, and other external objects of sense, are ideas. He believed that he had some certain knowledge of all those objects. His knowledge, therefore, did not consist solely in perceiving the agreements and disagreements of his ideas, for surely to perceive the existence, the attributes, and relations of things which are not ideas is not to perceive the agreements and disagreements of ideas. And if things which are not ideas be objects of knowledge, they must be objects of thought. On the contrary, if ideas be the only objects of thought, there can be no knowledge either of our own existence, or of the existence of external objects, or of the existence of a Deity.

This consequence, as far as concerns the existence of external objects of sense, was afterwards deduced from the theory of ideas by Bishop Berkeley with the clearest evidence, and that author chose rather to adopt the consequence than to reject the theory on which it was grounded. But with regard to the existence of our own minds, of other minds, and of a Supreme Mind, the Bishop, that he might avoid the consequence, rejected a part of the theory and

maintained that we can think of minds, of their attributes and relations, without ideas.

Mr. Hume saw very clearly the consequences of this theory and adopted them in his speculative moments, but candidly acknowledges that, in the common business of life, he found himself under a necessity of believing with the vulgar.<sup>1</sup> His *Treatise of Human Nature* is the only system to which the theory of ideas leads, and in my apprehension is, in all its parts, the necessary consequence of that theory.

Mr. Locke, however, did not see all the consequences of that theory ; he adopted it without doubt or examination, carried along by the stream of philosophers that went before him ; and his judgment and good sense have led him to say many things, and to believe many things, that cannot be reconciled to it.

He not only believed his own existence, the existence of external things, and the existence of a Deity, but he has shown very justly how we come by the knowledge of these existences.

It might here be expected that he should have pointed out the agreements and disagreements of ideas from which these existences are deduced ; but this is impossible, and he has not even attempted it.

Our own existence, he observes, *we know intuitively*,<sup>2</sup> but this intuition is not a perception of the agreement or disagreement of ideas ; for the subject of the proposition, *I exist*, is not an idea but a person.

The knowledge of external objects of sense, he observes, *we can have only by sensation*.<sup>3</sup> *This sensation* he afterwards expresses more clearly by *the testimony of our senses, which are the proper and sole judges of this thing ; whose testimony is the greatest assurance we can possibly have, and to which our faculties can attain*. This is perfectly agreeable to the common sense of mankind, and is perfectly understood by those who never heard of the theory of ideas. Our senses testify immediately the existence, and many of the attributes and relations of external material beings, and,

<sup>1</sup> *V. esp. Treatise*, I. 4. 7.

<sup>2</sup> *Essay*, IV. 9. 3.

<sup>3</sup> *Ib.* IV. 11. 1.

by our constitution, we rely with assurance upon their testimony without seeking a reason for doing so. This assurance, Mr. Locke acknowledges, deserves the name of knowledge. But those external things are not ideas, nor are their attributes and relations the agreements and disagreements of ideas, but the agreements and disagreements of things which are not ideas.

To reconcile this to the theory of ideas, Mr. Locke says, *That it is the actual receiving of ideas from without that gives us notice of the existence of those external things.*<sup>1</sup>

This, if understood literally, would lead us back to the doctrine of Aristotle, that our ideas or species come from without from the external objects, and are the image or form of those objects. But Mr. Locke, I believe, meant no more by it but that our ideas of sense must have a cause, and that we are not the cause of them ourselves.

Bishop Berkeley acknowledges all this, and shows very clearly that it does not afford the least shadow of reason for the belief of any material object<sup>2</sup> — nay, that there can be nothing external that has any resemblance to our ideas but the ideas of other minds.

It is evident, therefore, that the agreements and disagreements of ideas can give us no knowledge of the existence of any material thing. If any knowledge can be attained of things which are not ideas, that knowledge is a perception of agreements and disagreements; not of ideas, but of things that are not ideas.

As to the existence of a Deity, though Mr. Locke was aware that Descartes, and many after him, had attempted to prove it merely from the agreements and disagreements of ideas, yet “he thought it an ill way of establishing that truth, and silencing Atheists, to lay the whole stress of so important a point upon that sole foundation”.<sup>3</sup> And, therefore, he proves this point, with great strength and solidity, from our own existence, and the existence of the sensible parts of the universe. By memory, Mr. Locke says, we have the knowledge of the past existence of several things. But all conception of past existence, as well as of

<sup>1</sup> *Ib.* IV. 11. 2.

<sup>2</sup> *V.* esp. *Principles*, 18.

<sup>3</sup> *Essay*, IV. 10. 7.

external existence, is irreconcilable to the theory of ideas, because it supposes that there may be immediate objects of thought, which are not ideas presently existing in the mind.

I conclude, therefore, that if we have any knowledge of our own existence, or of the existence of what we see about us, or of the existence of a Supreme Being, or if we have any knowledge of things past by memory, that knowledge cannot consist in perceiving the agreements and disagreements of ideas.

This conclusion, indeed, is evident of itself. For if knowledge consists solely in the perception of the agreement or disagreement of ideas, there can be no knowledge of any proposition which does not express some agreement or disagreement of ideas ; consequently, there can be no knowledge of any proposition which expresses either the existence, or the attributes or relations of things, which are not ideas. If, therefore, the theory of ideas be true, there can be no knowledge of anything but of ideas. And, on the other hand, if we have any knowledge of anything besides ideas, that theory must be false.

That a man of Mr. Locke's judgment and penetration did not perceive a consequence so evident seems indeed very strange, and I know no other account that can be given of it but this — that the ambiguity of the word *idea* has misled him in this as in several other instances. Having at first defined ideas to be whatsoever is the object of the understanding when we think, he takes it very often in that unlimited sense ; and so everything that can be an object of thought is an idea. At other times he uses the word to signify certain representative images of things in the mind which philosophers have supposed to be immediate objects of thought. At other times things conceived abstractly, without regard to their existence, are called ideas. Philosophy is much indebted to Mr. Locke for his observations on the abuse of words. It is pity he did not apply these observations to the word *idea*, the ambiguity and abuse of which has very much hurt his excellent *Essay*.

## CHAPTER 4

## OF FIRST PRINCIPLES IN GENERAL

ONE of the most important distinctions of our judgments is that some of them are intuitive, others grounded on argument.

It is not in our power to judge as we will. The judgment is carried along necessarily by the evidence, real or seeming, which appears to us at the time. But in propositions that are submitted to our judgment there is this great difference — some are of such a nature that a man of ripe understanding may apprehend them distinctly, and perfectly understand their meaning, without finding himself under any necessity of believing them to be true or false, probable or improbable. The judgment remains in suspense until it is inclined to one side or another by reasons or arguments.

But there are other propositions which are no sooner understood than they are believed. The judgment follows the apprehension of them necessarily, and both are equally the work of nature and the result of our original powers. There is no searching for evidence, no weighing of arguments; the proposition is not deduced or inferred from another; it has the light of truth in itself, and has no occasion to borrow it from another.

Propositions of the last kind, when they are used in matters of science, have commonly been called *axioms*; and on whatever occasion they are used, are called *first principles*, *principles of common sense*, *common notions*, *self-evident truths*. Cicero calls them *naturae judicia*, *judicia communibus hominum sensibus infixæ*.<sup>1</sup> Lord Shaftesbury expresses them by the words *natural knowledge*, *fundamental reason*, and *common sense*.<sup>2</sup>

What has been said, I think, is sufficient to distinguish first principles, or intuitive judgments, from those which

<sup>1</sup> Cf. *De Deorum Natura*, II. 5.

<sup>2</sup> *V.* p. 333.

may be ascribed to the power of reasoning ; nor is it a just objection against this distinction that there may be some judgments concerning which we may be dubious to which class they ought to be referred. There is a real distinction between persons within the house and those that are without, yet it may be dubious to which the man belongs that stands upon the threshold.

The power of reasoning — that is, of drawing a conclusion from a chain of premises — may with some propriety be called an art. "All reasoning", says Mr. Locke, "is search and casting about, and requires pains and application."<sup>1</sup> It resembles the power of walking, which is acquired by use and exercise. Nature prompts to it, and has given the power of acquiring it, but must be aided by frequent exercise before we are able to walk. After repeated efforts, much stumbling, and many falls, we learn to walk ; and it is in a similar manner that we learn to reason.

But the power of judging in self-evident propositions, which are clearly understood, may be compared to the power of swallowing our food. It is purely natural, and therefore common to the learned and the unlearned, to the trained and the untrained. It requires ripeness of understanding and freedom from prejudice, but nothing else.

I take it for granted that there are self-evident principles. Nobody, I think, denies it. And if any man were so sceptical as to deny that there is any proposition that is self-evident, I see not how it would be possible to convince him by reasoning.

But yet there seems to be great difference of opinions among philosophers about first principles. What one takes to be self-evident, another labours to prove by arguments, and a third denies altogether.

Thus, before the time of Descartes, it was taken for a first principle that there is a sun and a moon, an earth and sea, which really exist whether we think of them or not. Descartes thought that the existence of those things ought to be proved by argument, and in this he has been followed

<sup>1</sup> *Essay*, I. 2. 10.

by Malebranche, Arnauld, and Locke. They have all laboured to prove, by very weak reasoning, the existence of external objects of sense, and Berkeley and Hume, sensible of the weakness of their arguments, have been led to deny their existence altogether.

The ancient philosophers granted that all knowledge must be grounded on first principles and that there is no reasoning without them. The Peripatetic philosophy was redundant rather than deficient in first principles. Perhaps the abuse of them in that ancient system may have brought them into discredit in modern times ; for as the best things may be abused, so that abuse is apt to give a disgust to the thing itself ; and as one extreme often leads into the opposite, this seems to have been the case in the respect paid to first principles in ancient and modern times.

Descartes thought one principle, expressed in one word, *cogito*, a sufficient foundation for his whole system, and asked no more.<sup>1</sup>

Mr. Locke seems to think first principles of very small use. Knowledge consisting, according to him, in the perception of the agreement or disagreement of our ideas ; when we have clear ideas, and are able to compare them together, we may always fabricate first principles as often as we have occasion for them. Such differences we find among philosophers about first principles.

It is likewise a question of some moment whether the differences among men about first principles can be brought to any issue. When in disputes one man maintains that to be a first principle which another denies, commonly both parties appeal to common sense, and so the matter rests. Now, is there no way of discussing this appeal ? Is there no mark or criterion whereby first principles that are truly such may be distinguished from those that assume the character without a just title ? I shall humbly offer in the following propositions what appears to me to be agreeable to truth in these matters, always ready to change my opinion upon conviction.

<sup>1</sup> V. p. 94 n.

1. *First*, I hold it to be certain, and even demonstrable, that all knowledge got by reasoning must be built upon first principles.

When we examine in the way of analysis the evidence of any proposition, either we find it self-evident or it rests upon one or more propositions that support it. The same thing may be said of the propositions that support it, and of those that support them, as far back as we can go. But we cannot go back in this track to infinity. Where then must this analysis stop? It is evident that it must stop only when we come to propositions which support all that are built upon them, but are themselves supported by none — that is, to self-evident propositions.

Let us again consider a synthetical proof of any kind where we begin with the premises, and pursue a train of consequences until we come to the last conclusion or thing to be proved. Here we must begin either with self-evident propositions or with such as have been already proved. When the last is the case, the proof of the propositions thus assumed is a part of our proof, and the proof is deficient without it. Suppose then the deficiency supplied, and the proof completed, is it not evident that it must set out with self-evident propositions and that the whole evidence must rest upon them? So that it appears to be demonstrable that, without first principles, analytical reasoning could have no end, and synthetical reasoning could have no beginning; and that every conclusion got by reasoning must rest with its whole weight upon first principles, as the building does upon its foundation.

2. A *second* proposition is, That some first principles yield conclusions that are certain, others such as are probable, in various degrees, from the highest probability to the lowest.

In just reasoning, the strength or weakness of the conclusion will always correspond to that of the principles on which it is grounded.

In a matter of testimony it is self-evident that the testimony of two is better than that of one, supposing them equal in character and in their means of knowledge, yet

the simple testimony may be true and that which is preferred to it may be false.

When an experiment has succeeded in several trials, and the circumstances have been marked with care, there is a self-evident probability of its succeeding in a new trial ; but there is no certainty. The probability in some cases is much greater than in others, because in some cases it is much easier to observe all the circumstances that may have influence upon the event than in others. And it is possible that, after many experiments made with care, our expectation may be frustrated in a succeeding one by the variation of some circumstance that has not, or perhaps could not be observed.

Sir Isaac Newton has laid it down as a first principle in natural philosophy that a property which has been found in all bodies upon which we have had access to make experiments, and which has always been found in its quantity to be in exact proportion to the quantity of matter in every body, is to be held as a universal property of matter.<sup>1</sup>

This principle, as far as I know, has never been called in question. The evidence we have, that all matter is divisible, movable, solid, and inert, is resolvable into this principle ; and, if it be not true, we cannot have any rational conviction that all matter has those properties. From the same principle that great man has shown that we have reason to conclude that all bodies gravitate towards each other.

This principle, however, has not that kind of evidence which mathematical axioms have. It is not a necessary truth whose contrary is impossible ; nor did Sir Isaac ever conceive it to be such. And if it should ever be found, by just experiments, that there is any part in the composition of some bodies which has not gravity, the fact, if duly ascertained, must be admitted as an exception to the general law of gravitation.

In games of chance it is a first principle that every side of a die has an equal chance to be turned up, and that in a lottery every ticket has an equal chance of being drawn

<sup>1</sup> *Principia*, Bk. 3, *Reg.* 3.

out. From such first principles as these, which are the best we can have in such matters, we may deduce by demonstrative reasoning the precise degree of probability of every event in such games.

But the principles of all this accurate and profound reasoning can never yield a certain conclusion, it being impossible to supply a defect in the first principles by any accuracy in the reasoning that is grounded upon them. As water by its gravity can rise no higher in its course than the fountain, however artfully it be conducted, so no conclusion of reasoning can have a greater degree of evidence than the first principles from which it is drawn.

From these instances it is evident that as there are some first principles that yield conclusions of absolute certainty, so there are others that can only yield probable conclusions, and that the lowest degree of probability must be grounded on first principles as well as absolute certainty.

3. A *third* proposition is, That it would contribute greatly to the stability of human knowledge, and consequently to the improvement of it, if the first principles upon which the various parts of it are grounded were pointed out and ascertained.

We have ground to think so, both from facts and from the nature of the thing.

There are two branches of human knowledge in which this method has been followed — to wit, mathematics and natural philosophy ; in mathematics, as far back as we have books. It is in this science only that, for more than two thousand years since it began to be cultivated, we find no sects, no contrary systems, and hardly any disputes ; or if there have been disputes, they have ended as soon as the animosity of parties subsided and have never been again revived. The science, once firmly established upon the foundation of a few axioms and definitions, as upon a rock, has grown from age to age, so as to become the loftiest and the most solid fabric that human reason can boast.

Natural philosophy, till less than two hundred years ago, remained in the same fluctuating state with the other sciences. Every new system pulled up the old by the roots.

The system-builders indeed were always willing to accept of the aid of first principles, when they were of their side ; but, finding them insufficient to support the fabric which their imagination had raised, they were only brought in as auxiliaries, and so intermixed with conjectures and with lame inductions that their systems were like Nebuchadnezzar's image, whose feet were partly of iron and partly of clay.

Lord Bacon first delineated the only solid foundation on which natural philosophy can be built ; and Sir Isaac Newton reduced the principles laid down by Bacon into three or four axioms, which he calls *regulae philosophandi*. From these, together with the phenomena observed by the senses, which he likewise lays down as first principles, he deduces by strict reasoning the propositions contained in the third book of his *Principia*, and in his *Optics* ; and by this means has raised a fabric in those two branches of natural philosophy which is not liable to be shaken by doubtful disputation, but stands immovable upon the basis of self-evident principles.<sup>1</sup>

This fabric has been carried on by the accession of new discoveries, but is no more subject to revolutions.

The disputes about *materia prima*, substantial forms, nature's abhorring a vacuum, and bodies having no gravitation in their proper place, are now no more. The builders in this work are not put to the necessity of holding a weapon in one hand while they build with the other ; their whole employment is to carry on the work.

Yet it seems to be very probable that, if natural philosophy had not been reared upon this solid foundation of self-evident principles, it would have been to this day a field of battle wherein every inch of ground would have been disputed, and nothing fixed and determined.

I acknowledge that mathematics and natural philosophy, especially the former, have this advantage of most other sciences, that it is less difficult to form distinct and determinate conceptions of the objects about which they are employed ; but, as this difficulty is not insuperable, it affords a good reason indeed why other sciences should

<sup>1</sup> Cf. p. 1 n. 1.

have a longer infancy, but no reason at all why they may not at last arrive at maturity by the same steps as those of quicker growth.

But, laying aside facts, the nature of the thing leads to the same conclusion.

For when any system is grounded upon first principles and deduced regularly from them, we have a thread to lead us through the labyrinth. The judgment has a distinct and determinate object. The heterogeneous parts being separated can be examined each by itself.

The whole system is reduced to axioms, definitions, and deductions. These are materials of very different nature, and to be measured by a very different standard ; and it is much more easy to judge of each, taken by itself, than to judge of a mass wherein they are kneaded together without distinction. Let us consider how we judge of each of them.

*First*, As to definitions, the matter is very easy. They relate only to words,<sup>1</sup> and differences about them may produce different ways of speaking, but can never produce different ways of thinking, while every man keeps to his own definitions.

But as there is not a more plentiful source of fallacies in reasoning than men's using the same word sometimes in one sense and at other times in another, the best means of preventing such fallacies, or of detecting them when they are committed, is definitions of words as accurate as can be given.

*Secondly*, As to deductions drawn from principles granted on both sides, I do not see how they can long be a matter of dispute among men who are not blinded by prejudice or partiality, for the rules of reasoning by which inferences may be drawn from premises have been for two thousand years fixed with great unanimity. No man pretends to dispute the rules of reasoning laid down by Aristotle and repeated by every writer in dialectics.

And we may observe by the way that the reason why logicians have been so unanimous in determining the rules

<sup>1</sup> Cf. p. 20 n. and pp. 268 *seq.*

of reasoning, from Aristotle down to this day, seems to be that they were by that great genius raised, in a scientific manner, from a few definitions and axioms. It may further be observed that, when men differ about a deduction, whether it follows from certain premises, this I think is always owing to their differing about some first principle. I shall explain this by an example.

Suppose that, from a thing having begun to exist, one man infers that it must have had a cause ; another man does not admit the inference. Here it is evident that the first takes it for a self-evident principle, that everything which begins to exist must have a cause. The other does not allow this to be self-evident. Let them settle this point and the dispute will be at an end.

Thus I think it appears that in matters of science, if the terms be properly explained, the first principles upon which the reasoning is grounded be laid down and exposed to examination, and the conclusions regularly deduced from them, it might be expected that men of candour and capacity, who love truth and have patience to examine things coolly, might come to unanimity with regard to the force of the deductions, and that their differences might be reduced to those they may have about first principles.

4. A *fourth* proposition is, That nature hath not left us destitute of means whereby the candid and honest part of mankind may be brought to unanimity when they happen to differ about first principles.

When men differ about things that are taken to be first principles or self-evident truths, reasoning seems to be at an end. Each party appeals to common sense. When one man's common sense gives one determination, another man's a contrary determination, there seems to be no remedy but to leave every man to enjoy his own opinion. This is a common observation, and I believe a just one, if it be rightly understood.

It is in vain to reason with a man who denies the first principles on which the reasoning is grounded. Thus, it would be in vain to attempt the proof of a proposition in Euclid to a man who denies the axioms. Indeed we ought

never to reason with men who deny first principles from obstinacy and unwillingness to yield to reason.

But is it not possible that men who really love truth, and are open to conviction, may differ about first principles?

I think it is possible, and that it cannot, without great want of charity, be denied to be possible.

A man of candour and humanity will in such a case very naturally suspect his own judgment, so far as to be desirous to enter into a serious examination, even of what he has long held as a first principle. He will think it not impossible that, although his heart be upright, his judgment may have been perverted by education, by authority, by party zeal, or by some other of the common causes of error, from the influence of which neither parts nor integrity exempt the human understanding.

It is true that in other controversies the process by which the truth of a proposition is discovered, or its falsehood detected, is by showing its necessary connection with first principles or its repugnancy to them. It is true likewise that, when the controversy is whether a proposition be itself a first principle, this process cannot be applied. The truth, therefore, in controversies of this kind labours under a peculiar disadvantage. But it has advantages of another kind to compensate this.

1. For, in the *first* place, in such controversies every man is a competent judge, and therefore it is difficult to impose upon mankind.

To judge of first principles requires no more than a sound mind free from prejudice and a distinct conception of the question.

In matters beyond the reach of common understanding the many are led by the few, and willingly yield to their authority. But in matters of common sense the few must yield to the many when local and temporary prejudices are removed. No man is now moved by the subtle arguments of Zeno against motion, though perhaps he knows not how to answer them.

The modern scepticism, I mean that of Mr. Hume, is built upon principles which were very generally maintained

by philosophers, though they did not see that they led to scepticism. Mr. Hume, by tracing with great acuteness and ingenuity the consequences of principles commonly received, has shown that they overturn all knowledge, and at last overturn themselves and leave the mind in perfect suspense.

2. *Secondly*, We may observe that opinions which contradict first principles are distinguished from other errors by this : That they are not only false but absurd ; and, to discountenance absurdity, nature hath given us a particular emotion — to wit, that of ridicule — which seems intended for this very purpose of putting out of countenance what is absurd, either in opinion or practice.

This weapon, when properly applied, cuts with as keen an edge as argument. Nature hath furnished us with the first to expose absurdity, as with the last to refute error. Both are well fitted for their several offices and are equally friendly to truth when properly used.

Both may be abused to serve the cause of error, but the same degree of judgment which serves to detect the abuse of argument in false reasoning serves to detect the abuse of ridicule when it is wrong directed.

But it must be acknowledged that the emotion of ridicule, even when most natural, may be stifled by an emotion of a contrary nature and cannot operate till that is removed.

Thus, if the notion of sanctity is annexed to an object, it is no longer a laughable matter, and this visor must be pulled off before it appears ridiculous.

But if ever we are able to view it naked, and stripped of those adventitious circumstances from which it borrowed its importance and authority, the natural emotion of ridicule will exert its force. An absurdity can be entertained by men of sense no longer than it wears a mask. When any man is found who has the skill or the boldness to pull off the mask, it can no longer bear the light ; it slinks into dark corners for a while, and then is no more heard of but as an object of ridicule.

3. *Thirdly*, It may be observed that although it is contrary to the nature of first principles to admit of direct

or *apodictical* proof, yet there are certain ways of reasoning even about them by which those that are just and solid may be confirmed, and those that are false may be detected. It may here be proper to mention some of the topics from which we may reason in matters of this kind.

*First*, It is a good argument *ad hominem* if it can be shown that a first principle which a man rejects stands upon the same footing with others which he admits ; for when this is the case, he must be guilty of an inconsistency who holds the one and rejects the other.

*Secondly*, A first principle may admit of a proof *ad absurdum*.

In this kind of proof, which is very common in mathematics, we suppose the contradictory proposition to be true. We trace the consequences of that supposition in a train of reasoning, and if we find any of its necessary consequences to be manifestly absurd, we conclude the supposition from which it followed to be false, and therefore its contradictory to be true.

*Thirdly*, I conceive that the consent of ages and nations, of the learned and unlearned, ought to have great authority with regard to first principles where every man is a competent judge.

Our ordinary conduct in life is built upon first principles as well as our speculations in philosophy, and every motive to action supposes some belief. When we find a general agreement among men in principles that concern human life, this must have great authority with every sober mind that loves truth.

It is pleasant to observe the fruitless pains which Bishop Berkeley takes to show that his system of the non-existence of a material world did not contradict the sentiments of the vulgar, but those only of the philosophers.<sup>1</sup>

With good reason he dreaded more to oppose the authority of vulgar opinion in a matter of this kind than all the schools of philosophers.

Here perhaps it will be said, What has authority to do in matters of opinion ? Is truth to be determined by most

<sup>1</sup> Cf. *Principles*, 35 : contrast 4.

votes ? Or is authority to be again raised out of its grave to tyrannise over mankind ?

I am aware that in this age an advocate for authority has a very unfavourable plea, but I wish to give no more to authority than is its due.

Most justly do we honour the names of those benefactors to mankind who have contributed more or less to break the yoke of that authority which deprives men of the natural, the unalienable right of judging for themselves ; but, while we indulge a just animosity against this authority and against all who would subject us to its tyranny, let us remember how common the folly is of going from one faulty extreme into the opposite.

Authority, though a very tyrannical mistress to private judgment, may yet on some occasions be a useful hand-maid. This is all she is entitled to, and this is all I plead in her behalf.

The justice of this plea will appear by putting a case in a science in which, of all sciences, authority is acknowledged to have least weight.

Suppose a mathematician has made a discovery in that science which he thinks important, that he has put his demonstration in just order, and, after examining it with an attentive eye, has found no flaw in it, I would ask, Will there not be still in his breast some diffidence, some jealousy, lest the ardour of invention may have made him overlook some false step ? This must be granted.

He commits his demonstration to the examination of a mathematical friend whom he esteems a competent judge, and waits with impatience the issue of his judgment. Here I would ask again whether the verdict of his friend, according as it is favourable or unfavourable, will not greatly increase or diminish his confidence in his own judgment. Most certainly it will, and it ought.

If the judgment of his friend agree with his own,, especially if it be confirmed by two or three able judges, he rests secure of his discovery without further examination ; but if it be unfavourable, he is brought back into a kind of suspense until the part that is suspected undergoes

a new and a more rigorous examination.

In a matter of common sense every man is no less a competent judge than a mathematician is in a mathematical demonstration, and there must be a great presumption that the judgment of mankind in such a matter is the natural issue of those faculties which God hath given them. Such a judgment can be erroneous only when there is some cause of the error as general as the error is. When this can be shown to be the case, I acknowledge it ought to have its due weight. But to suppose a general deviation from truth among mankind in things self-evident, of which no cause can be assigned, is highly unreasonable.

There are other opinions that appear to be universal from what is common in the structure of all languages.

Language is the express image and picture of human thoughts, and from the picture we may draw some certain conclusions concerning the original.

We find in all languages the same parts of speech ; we find nouns, substantive and adjective ; verbs, active and passive, in their various tenses, numbers, and moods. Some rules of syntax are the same in all languages.

Now what is common in the structure of languages indicates a uniformity of opinion in those things upon which that structure is grounded.

The distinction between substances and the qualities belonging to them, between thought and the being that thinks, between thought and the objects of thought, is to be found in the structure of all languages. And, therefore, systems of philosophy which abolish those distinctions wage war with the common sense of mankind.

We are apt to imagine that those who formed languages were no metaphysicians ; but the first principles of all sciences are the dictates of common sense, and lie open to all men, and every man who has considered the structure of language in a philosophical light will find infallible proofs that those who have framed it, and those who use it with understanding, have the power of making accurate distinctions and of forming general conceptions as well as philosophers. Nature has given those powers to all men,

and they can use them when occasions require it, but they leave it to the philosophers to give names to them and to descant upon their nature. In like manner nature has given eyes to all men, and they can make good use of them ; but the structure of the eye, and the theory of vision, is the business of philosophers.

*Fourthly*, Opinions that appear so early in the minds of men that they cannot be the effect of education or of false reasoning, have a good claim to be considered as first principles. Thus the belief we have that the persons about us are living and intelligent beings is a belief for which, perhaps, we can give some reason, when we are able to reason ; but we had this belief before we could reason, and before we could learn it by instruction. It seems, therefore, to be an immediate effect of our constitution.

The *last topic* I shall mention is when an opinion is so necessary in the conduct of life that, without the belief of it, a man must be led into a thousand absurdities in practice ; such an opinion, when we can give no other reason for it, may safely be taken for a first principle.

Thus I have endeavoured to show that, although first principles are not capable of direct proof, yet differences that may happen with regard to them among men of candour are not without remedy ; that nature has not left us destitute of means by which we may discover errors of this kind ; and that there are ways of reasoning, with regard to first principles, by which those that are truly such may be distinguished from vulgar errors or prejudices.

## CHAPTER 5

### THE FIRST PRINCIPLES OF CONTINGENT TRUTHS

“ SURELY ”, says Bishop Berkeley, “ it is a work well deserving our pains to make a strict inquiry concerning the first principles of knowledge ; to sift and examine

them on all sides." <sup>1</sup> What was said in the last chapter is intended both to show the importance of this inquiry and to make it more easy.

But in order that such an inquiry may be actually made, it is necessary that the first principles of knowledge be distinguished from other truths, and presented to view, that they may be sifted and examined on all sides. In order to this end I shall attempt a detail of those I take to be such, and of the reasons why I think them entitled to that character.

The truths that fall within the compass of human knowledge, whether they be self-evident or deduced from those that are self-evident, may be reduced to two classes. They are either necessary and immutable truths whose contrary is impossible, or they are contingent and mutable, depending upon some effect of will and power which had a beginning, and may have an end.

That a cone is the third part of a cylinder of the same base and the same altitude is a necessary truth. It depends not upon the will and power of any being. It is immutably true, and the contrary impossible. That the sun is the centre about which the earth and the other planets of our system perform their revolutions, is a truth ; but it is not a necessary truth. It depends upon the power and will of that Being who made the sun and all the planets, and who gave them those motions that seemed best to him.

If all truths were necessary truths there would be no occasion for different tenses in the verbs by which they are expressed. What is true in the present time would be true in the past and future, and there would be no change or variation of anything in nature.

We use the present tense in expressing necessary truths, but it is only because there is no flexion of the verb which includes all times. When I say that three is the half of six, I use the present tense only ; but I mean to express not only what now is, but what always was, and always will be ; and so every proposition is to be understood by which we mean to express a necessary truth. Contingent truths

<sup>1</sup> *Principles*, Introd. 4.

are of another nature. As they are mutable, they may be true at one time and not at another, and, therefore, the expression of them must include some point or period of time.<sup>1</sup>

The distinction commonly made between abstract truths and those that express matters of fact, or real existences, coincides in a great measure, but not altogether, with that between necessary and contingent truths. The necessary truths that fall within our knowledge are for the most part abstract truths. We must except the existence and nature of the Supreme Being, which is necessary. Other existences are the effects of will and power. They had a beginning, and are mutable. Their nature is such as the Supreme Being was pleased to give them. Their attributes and relations must depend upon the nature God has given them, the powers with which he has endowed them, and the situation in which he hath placed them.

The conclusions deduced by reasoning from first principles will commonly be necessary or contingent, according as the principles are from which they are drawn. On the one hand, I take it to be certain that whatever can, by just reasoning, be inferred from a principle that is necessary must be a necessary truth, and that no contingent truth can be inferred from principles that are necessary.

Thus, as the axioms in mathematics are all necessary truths, so are all the conclusions drawn from them; that is, the whole body of that science. But from no mathematical truth can we deduce the existence of anything, not even of the objects of the science.

On the other hand, I apprehend there are very few

<sup>1</sup> Reid is somewhat confused here. Because a necessary universal proposition does not have any time-reference (or rather, any specific time-reference), and because many contingent general propositions do have such a reference, it does not follow that *all* contingent general propositions must have it, nor even that all *true* contingent general propositions must have it. Reid has failed to distinguish between a proposition's containing a specific time-reference and its being applicable to a certain limited time. A contingent proposition might in fact contain no time-reference, and might also be true at any time: i.e. "a contingent truth must always contain some specific time-reference" is not, as Reid seems to think, itself a necessary truth.

cases in which we can, from principles that are contingent, deduce truths that are necessary. I can only recollect one instance of this kind — namely, that from the existence of things contingent and mutable we can infer the existence of an immutable and eternal cause of them.

As the minds of men are occupied much more about truths that are contingent than about those that are necessary, I shall first endeavour to point out the principles of the former kind.

1. *First*, then, I hold, as a first principle, the existence of everything of which I am conscious.

Consciousness is an operation of the understanding of its own kind and cannot be logically defined.<sup>1</sup> The objects of it are our present pains, our pleasures, our hopes, our fears, our desires, our doubts, our thoughts of every kind ; in a word, all the passions and all the actions and operations of our own minds while they are present. We may remember them when they are past, but we are conscious of them only while they are present.

When a man is conscious of pain he is certain of its existence ; when he is conscious that he doubts or believes, he is certain of the existence of those operations.

But the irresistible conviction he has of the reality of those operations is not the effect of reasoning ; it is immediate and intuitive. The existence therefore of those passions and operations of our minds of which we are conscious is a first principle which nature requires us to believe upon her authority.

If I am asked to prove that I cannot be deceived by consciousness — to prove that it is not a fallacious sense — I can find no proof. I cannot find any antecedent truth from which it is deduced or upon which its evidence depends. It seems to disdain any such derived authority and to claim my assent in its own right.

• If any man could be found so frantic as to deny that he thinks, while he is conscious of it, I may wonder, I may laugh, or I may pity him, but I cannot reason the matter with him. We have no common principles from which we

<sup>1</sup> *V.* p. 80, and n.

may reason, and therefore can never join issue in an argument.

I cannot reconcile this immediate knowledge of the operations of our own minds with Mr. Locke's theory that all knowledge consists in perceiving the agreement and disagreement of ideas. What are the ideas from whose comparison the knowledge of our own thoughts results? Or what are the agreements or disagreements which convince a man that he is in pain when he feels it?

Neither can I reconcile it with Mr. Hume's theory that to believe the existence of anything is nothing else than to have a strong and lively conception of it, or, at most, that belief is only some modification of the idea which is the object of belief. For, not to mention that propositions, not ideas, are the object of belief, in all that variety of thoughts and passions of which we are conscious we believe the existence of the weak as well as of the strong, the faint as well as the lively. No modification of the operations of our minds disposes us to the least doubt of their real existence.

As, therefore, the real existence of our thoughts, and of all the operations and feelings of our own minds, is believed by all men — as we find ourselves incapable of doubting it, and as incapable of offering any proof of it — it may justly be considered as a first principle, or dictate of common sense.

But although this principle rests upon no other, a very considerable and important branch of human knowledge rests upon it.

For from this source of consciousness is derived all that we know, and indeed all that we can know, of the structure and of the powers of our own minds; from which we may conclude that there is no branch of knowledge that stands upon a firmer foundation, for surely no kind of evidence can go beyond that of consciousness.

How does it come to pass, then, that in this branch of knowledge there are so many and so contrary systems? so many subtle controversies that are never brought to an issue? and so little fixed and determined? Is it possible

that philosophers should differ most where they have the surest means of agreement — where everything is built upon a species of evidence which all men acquiesce in and hold to be the most certain ?

This strange phenomenon may, I think, be accounted for if we distinguish between consciousness and reflection, which are often improperly confounded.<sup>1</sup>

The first is common to all men at all times, but is insufficient of itself to give us clear and distinct notions of the operations of which we are conscious, and of their mutual relations and minute distinctions. The second — to wit, attentive reflection upon those operations, making them objects of thought, surveying them attentively, and examining them on all sides — is so far from being common to all men that it is the lot of very few. The greatest part of men, either through want of capacity or from other causes, never reflect attentively upon the operations of their own minds. The habit of this reflection, even in those whom nature has fitted for it, is not to be attained without much pains and practice.

2. Another first principle, I think, is, That the thoughts of which I am conscious are the thoughts of a being which I call *myself*, my *mind*, my *person*.

The thoughts and feelings of which we are conscious are continually changing, and the thought of this moment is not the thought of the last ; but something which I call myself remains under this change of thought. This self has the same relation to all the successive thoughts I am conscious of — they are all my thoughts ; and every thought which is not my thought must be the thought of some other person.

If any man asks a proof of this, I confess I can give none ; there is an evidence in the proposition itself which I am unable to resist. Shall I think that thought can stand by itself without a thinking being ? or that ideas can feel pleasure or pain ? My nature dictates to me that it is impossible.

Here we must leave Mr. Hume, who conceives it to be

<sup>1</sup> Cf. pp. 41, 78.

a vulgar error that, besides the thoughts we are conscious of, there is a mind which is the subject of those thoughts. If the mind be anything else than impressions and ideas, it must be a word without a meaning. The mind therefore, according to this philosopher, is a word which signifies a bundle of perceptions ; or, when he defines it more accurately — “ It is that succession of related ideas and impressions of which we have an intimate memory and consciousness ”.<sup>1</sup>

I am therefore that succession of related ideas and impressions of which I have the intimate memory and consciousness.

But who is the *I* that has this memory and consciousness of a succession of ideas and impressions ? Why, it is nothing but that succession itself.

Hence, I learn that this succession of ideas and impressions intimately remembers and is conscious of itself. I would wish to be further instructed whether the impressions remember and are conscious of the ideas, or the ideas remember and are conscious of the impressions, or if both remember and are conscious of both, and whether the ideas remember those that come after them as well as those that were before them. These are questions naturally arising from this system that have not yet been explained.

This, however, is clear, that this succession of ideas and impressions not only remembers and is conscious, but that it judges, reasons, affirms, denies — nay, that it eats and drinks and is sometimes merry and sometimes sad.

If these things can be ascribed to a succession of ideas and impressions, in a consistency with common sense, I should be very glad to know what is nonsense.

3. Another first principle I take to be — That those things did really happen which I distinctly remember. ‘

This has one of the surest marks of a first principle, for no man ever pretended to prove it, and yet no man in his wits calls it in question : the testimony of memory, like

<sup>1</sup> *Treatise*, II. 1. 2.

that of consciousness, is immediate ; it claims our assent upon its own authority.

Mr. Hume has not, as far as I remember, directly called in question the testimony of memory, but he has laid down the premises by which its authority is overturned, leaving it to his reader to draw the conclusion.<sup>1</sup>

Indeed the theory concerning ideas, so generally received by philosophers, destroys all the authority of memory as well as the authority of the senses. Descartes, Malebranche, and Locke were aware that this theory made it necessary for them to find out arguments to prove the existence of external objects which the vulgar believe upon the bare authority of their senses ; but those philosophers were not aware that this theory made it equally necessary for them to find arguments to prove the existence of things past which we remember, and to support the authority of memory.

All the arguments they advanced to support the authority of our senses were easily refuted by Bishop Berkeley and Mr. Hume, being indeed very weak and inconclusive. And it would have been as easy to answer every argument they could have brought, consistent with their theory, to support the authority of memory.

For, according to that theory the immediate object of memory, as well as of every other operation of the understanding, is an idea present in the mind. And from the present existence of this idea of memory I am left to infer, by reasoning, that six months or six years ago there did exist an object similar to this idea.

But what is there in the idea that can lead me to this conclusion ? What mark does it bear of the date of its archetype ? Or what evidence have I that it had an archetype and that it is not the first of its kind ?

Perhaps it will be said that this idea or image in the mind must have had a cause.

I admit that if there is such an image in the mind, it must have had a cause, and a cause able to produce the effect ; but what can we infer from its having a cause ? Does it

<sup>1</sup> Cf. pp. 222 *seq.*

follow that the effect is a type, an image, a copy of its cause? Then it will follow that a picture is an image of the painter, and a coach of the coachmaker.

A past event may be known by reasoning; but that is not remembering it. When I remember a thing distinctly, I disdain equally to hear reasons for it or against it. And so I think does every man in his senses.

4. Another first principle is, Our own personal identity and continued existence, as far back as we remember anything distinctly.

This we know immediately, and not by reasoning. It seems, indeed, to be a part of the testimony of memory. Everything we remember has such a relation to ourselves as to imply necessarily our existence at the time remembered. And there cannot be a more palpable absurdity than that a man should remember what happened before he existed. He must therefore have existed as far back as he remembers anything distinctly, if his memory be not fallacious. This principle, therefore, is so connected with the last mentioned that it may be doubtful whether both ought not to be included in one. Let everyone judge of this as he sees reason. The proper notion of identity, and the sentiments of Mr. Locke on this subject, have been considered before under the head of Memory.<sup>1</sup>

5. Another first principle is, That those things do really exist which we distinctly perceive by our senses, and are what we perceive them to be.

It is too evident to need proof that all men are by nature led to give implicit faith to the distinct testimony of their senses, long before they are capable of any bias from prejudices of education or of philosophy.

How came we at first to know that there are certain beings about us whom we call father, and mother, and sisters, and brothers, and nurse? Was it not by the testimony of our senses? How did these persons convey to us any information or instruction? Was it not by means of our senses?

<sup>1</sup> Pp. 200 *seq.*, 212 *seq.*

It is evident we can have no communication, no correspondence or society with any created being but by means of our senses. And until we rely upon their testimony, we must consider ourselves as being alone in the universe, without any fellow-creature, living or inanimate, and be left to converse with our own thoughts.

Bishop Berkeley surely did not duly consider that it is by means of the material world that we have any correspondence with thinking beings, or any knowledge of their existence ; and that, by depriving us of the material world, he deprived us at the same time of family, friends, country, and every human creature ; of every object of affection, esteem, or concern, except ourselves.

When I consider myself as speaking to men who hear me, and can judge of what I say, I feel that respect which is due to such an audience. I feel an enjoyment in a reciprocal communication of sentiments with candid and ingenious friends, and my soul blesses the Author of my being, who has made me capable of this manly and rational entertainment.

But the Bishop shows me that this is all a dream ; that I see not a human face ; that all the objects I see, and hear, and handle, are only the ideas of my own mind ; ideas are my only companions. Cold company indeed ! Every social affection freezes at the thought !

This dismal system, which, if it could be believed, would deprive men of every social comfort, a very good Bishop, by strict and accurate reasoning, deduced from the principles commonly received by philosophers concerning ideas. The fault is not in the reasoning, but in the principles from which it is drawn.

All the arguments urged by Berkeley and Hume against the existence of a material world are grounded upon this principle — that we do not perceive external objects themselves, but certain images or ideas in our own minds. But this is no dictate of common sense, but directly contrary to the sense of all who have not been taught it by philosophy.

We have before examined <sup>1</sup> the reasons given by philosophers to prove that ideas, and not external objects, are the immediate objects of perception, and the instances given to prove the senses fallacious. Without repeating what has before been said upon those points, we shall only here observe that, if external objects be perceived immediately, we have the same reason to believe their existence as philosophers have to believe the existence of ideas, while they hold them to be the immediate objects of perception.

6. Another first principle, I think, is, That we have some degree of power over our actions, and the determinations of our will.

All power must be derived from the fountain of power, and of every good gift. Upon his good pleasure its continuance depends, and it is always subject to his control.

Beings to whom God has given any degree of power, and understanding to direct them to the proper use of it, must be accountable to their Maker. But those who are entrusted with no power can have no account to make ; for all good conduct consists in the right use of power, all bad conduct in the abuse of it.

It is not easy to say in what way we first get the notion or idea of *power*. It is neither an object of sense nor of consciousness. We see events, one succeeding another ; but we see not the power by which they are produced. We are conscious of the operations of our minds ; but power is not an operation of mind. If we had no notions but such as are furnished by the external senses and by consciousness, it seems to be impossible that we should ever have any conception of power. Accordingly Mr. Hume, who has reasoned the most accurately upon this hypothesis, denies that we have any idea of power, and clearly refutes the account given by Mr. Locke of the origin of this idea.

But it is in vain to reason from a hypothesis against a fact the truth of which every man may see by attending to his own thoughts. It is evident that all men, very early

<sup>1</sup> Pp. 86 *seq.*

in life, not only have an idea of power, but a conviction that they have some degree of it in themselves ; for this conviction is necessarily implied in many operations of mind which are familiar to every man, and without which no man can act the part of a reasonable being.

*First*, It is implied in every act of volition. " Volition, it is plain," says Mr. Locke, " is an act of the mind, knowingly exerting that dominion which it takes itself to have over any part of the man, by employing it in, or withholding it from, any particular action." <sup>1</sup> Every volition, therefore, implies a conviction of power to do the action willed. A man may desire to make a visit to the moon, or to the planet Jupiter, but nothing but insanity could make him will to do so. And if even insanity produced this effect, it must be by making him think it to be in his power.

<sup>2</sup> *Secondly*, This conviction is implied in all deliberation, for no man in his wits deliberates whether he shall do what he believes not to be in his power. *Thirdly*, The same conviction is implied in every resolution or purpose formed in consequence of deliberation. A man may as well form a resolution to pull the moon out of her sphere as to do the most insignificant action which he believes not to be in his power. The same thing may be said of every promise or contract wherein a man plights his faith, for he is not an honest man who promises what he does not believe he has power to perform.

As these operations imply a belief of some degree of power in ourselves, so there are others equally common and familiar which imply a like belief with regard to others.

When we impute to a man any action or omission as a ground of approbation or of blame, we must believe he had power to do otherwise. The same is implied in all advice, exhortation, command, and rebuke, and in every case in which we rely upon his fidelity in performing any engagement of executing any trust.

7. Another first principle is, That the natural faculties, by which we distinguish truth from error, are not fallacious.

<sup>1</sup> *Essay*, II. 21. 15.

If any man should demand a proof of this, it is impossible to satisfy him. For suppose it should be mathematically demonstrated, this would signify nothing in this case, because, to judge of a demonstration, a man must trust his faculties, and take for granted the very thing in question.

If a man's honesty were called in question, it would be ridiculous to refer it to the man's own word whether he be honest or not. The same absurdity there is in attempting to prove by any kind of reasoning, probable or demonstrative, that our reason is not fallacious, since the very point in question is whether reasoning may be trusted.

How then come we to be assured of this fundamental truth on which all others rest? Perhaps evidence, as in many other respects it resembles light, so in this also — that, as light, which is the discoverer of all visible objects, discovers itself at the same time, so evidence, which is the voucher for all truth, vouches for itself at the same time.

This, however, is certain, that such is the constitution of the human mind that evidence discerned by us forces a corresponding degree of assent. And a man who perfectly understood a just syllogism, without believing that the conclusion follows from the premises, would be a greater monster than a man born without hands or feet.

We may here take notice of a property of the principle under consideration that seems to be common to it with many other first principles, and which can hardly be found in any principle that is built solely upon reasoning; and that is, that in most men it produces its effect without ever being attended to, or made an object of thought. No man ever thinks of this principle unless when he considers the grounds of scepticism; yet it invariably governs his opinions. When a man in the common course of life gives credit to the testimony of his senses, his memory, or his reason, he does not put the question to himself whether these faculties may deceive him, yet the trust he reposes in them supposes an inward conviction that, in that instance at least, they do not deceive him.

It is another property of this and of many first principles,

that they force assent in particular instances more powerfully than when they are turned into a general proposition. Many sceptics have denied every general principle of science, excepting perhaps the existence of our present thoughts ; yet these men reason, and refute, and prove, they assent and dissent in particular cases. They use reasoning to overturn all reasoning, and judge that they ought to have no judgment, and see clearly that they are blind. Many have in general maintained that the senses are fallacious, yet there never was found a man so sceptical as not to trust his senses in particular instances when his safety required it ; and it may be observed of those who have professed scepticism that their scepticism lies in generals, while in particulars they are no less dogmatical than others.

8. Another first principle relating to existence is, That there is life and intelligence in our fellow-men with whom we converse.

As soon as children are capable of asking a question or of answering a question, as soon as they show the signs of love, of resentment, or of any other affection, they must be convinced that those with whom they have this intercourse are intelligent beings.

It is evident they are capable of such intercourse long before they can reason. Everyone knows that there is a social intercourse between the nurse and the child before it is a year old. It can at that age understand many things that are said to it.

It can by signs ask and refuse, threaten and supplicate. It clings to its nurse in danger, enters into her grief and joy, is happy in her soothing and caresses, and unhappy in her displeasure. That these things cannot be without a conviction in the child that the nurse is an intelligent being, I think must be granted.

, Now I would ask how a child of a year old comes by this conviction ? Not by reasoning surely, for children do *not* reason at that age. Nor is it by external senses, for life and intelligence are not objects of the external senses.

By what means, or upon what occasions, nature first

gives this information to the infant mind is not easy to determine. We are not capable of reflecting upon our own thoughts at that period of life, and before we attain this capacity we have quite forgot how or on what occasion we first had this belief ; we perceive it in those who are born blind and in others who are born deaf ; and therefore nature has not connected it solely either with any object of sight or with any object of hearing. When we grow up to the years of reason and reflection, this belief remains. No man thinks of asking himself what reason he has to believe that his neighbour is a living creature. He would be not a little surprised if another person should ask him so absurd a question, and perhaps could not give any reason which would not equally prove a watch or a puppet to be a living creature.

But though you should satisfy him of the weakness of the reasons he gives for his belief, you cannot make him in the least doubtful. This belief stands upon another foundation than that of reasoning, and therefore, whether a man can give good reasons for it or not, it is not in his power to shake it off.

Setting aside this natural conviction, I believe the best reason we can give to prove that other men are living and intelligent is that their words and actions indicate like powers of understanding as we are conscious of in ourselves. The very same argument applied to the works of nature leads us to conclude that there is an intelligent Author of nature, and appears equally strong and obvious in the last case as in the first ; so that it may be doubted whether men, by the mere exercise of reasoning, might not as soon discover the existence of a Deity as that other men have life and intelligence.

9. Another first principle I take to be, That certain features of the countenance, sounds of the voice, and gestures of the body, indicate certain thoughts and dispositions of mind.

That many operations of the mind have their natural signs in the countenance, voice, and gesture, I suppose every man will admit. The only question is whether we

understand the signification of those signs by the constitution of our nature, by a kind of natural perception similar to the perceptions of sense; or whether we gradually learn the signification of such signs from experience, as we learn that smoke is a sign of fire or that freezing of water is a sign of cold. I take the first to be the truth.

It seems to me incredible that the notions men have of the expression of features, voice, and gesture are entirely the fruit of experience. Children, almost as soon as born, may be frightened and thrown into fits by a threatening or angry tone of voice.

The countenance and gesture have an expression no less strong and natural than the voice. The first time one sees a stern and fierce look, a contracted brow, and a menacing posture, he concludes that the person is inflamed with anger. Shall we say that, previous to experience, the most hostile countenance has as agreeable an appearance as the most gentle and benign? This surely would contradict all experience, for we know that an angry countenance will fright a child in the cradle. Who has not observed that children, very early, are able to distinguish what is said to them in jest from what is said in earnest, by the tone of the voice and the features of the face? They judge by these natural signs, even when they seem to contradict the artificial.

If it were by experience that we learn the meaning of features, and sound, and gesture, it might be expected that we should recollect the time when we first learned those lessons, or at least some of such a multitude.

Those who give attention to the operations of children can easily discover the time when they have their earliest notices from experience — such as that flame will burn or that knives will cut. But no man is able to recollect in himself, or to observe in others, the time when the expression of the face, voice, and gesture were learned.

Nay, I apprehend that it is impossible that this should be learned from experience.

When we see the sign, and see the thing signified always conjoined with it, experience may be the instructor

and teach us how that sign is to be interpreted. But how shall experience instruct us when we see the sign only, when the thing signified is invisible? Now, this is the case here: the thoughts and passions of the mind, as well as the mind itself, are invisible, and therefore their connection with any sensible sign cannot be first discovered by experience; there must be some earlier source of this knowledge.

Nature seems to have given to men a faculty or sense by which this connection is perceived. And the operation of this sense is very analogous to that of the external senses.

When I grasp an ivory ball in my hand, I feel a certain sensation of touch. In the sensation there is nothing external, nothing corporeal. The sensation is neither round nor hard; it is an act of feeling of the mind from which I cannot, by reasoning, infer the existence of any body. But by the constitution of my nature, the sensation carries along with it the conception and belief of a round hard body really existing in my hand.

In like manner when I see the features of an expressive face, I see only figure and colour variously modified. But by the constitution of my nature the visible object brings along with it the conception and belief of a certain passion or sentiment in the mind of the person.

In the former case a sensation of touch is the sign, and the hardness and roundness of the body I grasp is signified by that sensation. In the latter case the features of the person is the sign, and the passion or sentiment is signified by it.

10. Another first principle appears to me to be, That there is a certain regard due to human testimony in matters of fact, and even to human authority in matters of opinion.<sup>1</sup>

11. There are many events depending upon the will of man in which there is a self-evident probability, greater or less, according to circumstances.

There may be in some individuals such a degree of frenzy and madness that no man can say what they may or may not do. Such persons we find it necessary to

<sup>1</sup> Cf. previous chapter.

put under restraint, that as far as possible they may be kept from doing harm to themselves or to others. They are not considered as reasonable creatures or members of society. But as to men who have a sound mind, we depend upon a certain degree of regularity in their conduct, and could put a thousand different cases wherein we could venture ten to one that they will act in such a way and not in the contrary.

If we had no confidence in our fellow-men that they will act such a part in such circumstances, it would be impossible to live in society with them. For that which makes men capable of living in society, and uniting in a political body under government, is that their actions will always be regulated, in a great measure, by the common principles of human nature.

. It may always be expected that they will regard their own interest and reputation, and that of their families and friends ; that they will repel injuries, and have some sense of good offices ; and that they will have some regard to truth and justice, so far at least as not to swerve from them without temptation.

It is upon such principles as these that all political reasoning is grounded. Such reasoning is never demonstrative, but it may have a very great degree of probability, especially when applied to great bodies of men.

12. The last principle of contingent truths I mention is, That, in the phenomena of nature, what is to be will probably be like to what has been in similar circumstances.<sup>1</sup>

We must have this conviction as soon as we are capable of learning anything from experience, for all experience is grounded upon a belief that the future will be like the past. Take away this principle and the experience of a hundred years makes us no wiser with regard to what is to come.

This is one of those principles which, when we grow up and observe the course of nature, we can confirm by reasoning. We perceive that nature is governed by fixed

<sup>1</sup> For Reid's fuller statement of the inductive principle *v. Inquiry*, VI. 24.

laws, and that, if it were not so, there could be no such thing as prudence in human conduct ; there would be no fitness in any means to promote an end, and what on one occasion promoted it might as probably on another occasion obstruct it.

But the principle is necessary for us before we are able to discover it by reasoning, and therefore is made a part of our constitution and produces its effects before the use of reason.

This principle remains in all its force when we come to the use of reason, but we learn to be more cautious in the application of it. We observe more carefully the circumstances on which the past event depended, and learn to distinguish them from those which were accidentally conjoined with it.

In order to this, a number of experiments, varied in their circumstances, is often necessary. Sometimes a single experiment is thought sufficient to establish a general conclusion. Thus, when it was once found that, in a certain degree of cold, quicksilver became a hard and malleable metal, there was good reason to think that the same degree of cold will always produce this effect to the end of the world.

I need hardly mention that the whole fabric of natural philosophy is built upon this principle, and if it be taken away, must tumble down to the foundation.

Therefore the great Newton lays it down as an axiom, or as one of his laws of philosophising, in these words, *Effectuum naturalium ejusdem generis easdem esse causas*.<sup>1</sup> This is what every man assents to, as soon as he understands it, and no man asks a reason for it. It has, therefore, the most genuine marks of a first principle.

It is very remarkable that, although all our expectation of what is to happen in the course of nature is derived from the belief of this principle, yet no man thinks of asking what is the ground of this belief.

Mr. Hume, I think, was the first who put this question ; and he has shown clearly and invincibly that it is neither

<sup>1</sup> *Principia*, Bk. 3, Reg. 2.

grounded upon reasoning nor has that kind of intuitive evidence which mathematical axioms have.<sup>1</sup> It is not a necessary truth.

He has endeavoured to account for it upon his own principles. It is not my business, at present, to examine the account he has given of this universal belief of mankind ; because, whether his account of it be just or not (and I think it is not), yet as this belief is universal among mankind, and is not grounded upon any antecedent reasoning but upon the constitution of the mind itself, it must be acknowledged to be a first principle in the sense in which I use that word.

I do not at all affirm that those I have mentioned are all the first principles from which we may reason concerning contingent truths. Such enumerations, even when made after much reflection, are seldom perfect.

## CHAPTER 6

### FIRST PRINCIPLES OF NECESSARY TRUTHS

ABOUT most of the first principles of necessary truths there has been no dispute, and therefore it is the less necessary to dwell upon them. It will be sufficient to divide them into different classes, to mention some by way of specimen in each class, and to make some remarks on those of which the truth has been called in question.

They may, I think, most properly be divided according to the sciences to which they belong.

1. There are some first principles that may be called grammatical : such as, That every adjective in a sentence must belong to some substantive expressed or understood ; That every complete sentence must have a verb.

Those who have attended to the structure of language and formed distinct notions of the nature and use of the

<sup>1</sup> *V. Treatise*, I. 3. 6.

various parts of speech perceive, without reasoning that these, and many other such principles, are necessarily true.

2. There are logical axioms: such as, That any contexture of words which does not make a proposition is neither true nor false; That every proposition is either true or false; That no proposition can be both true and false at the same time; That reasoning in a circle proves nothing; That whatever may be truly affirmed of a genus may be truly affirmed of all the species, and all the individuals belonging to that genus.

3. Everyone knows there are mathematical axioms. Mathematicians have, from the days of Euclid, very wisely laid down the axioms or first principles on which they reason. And the effect which this appears to have had upon the stability and happy progress of this science, gives no small encouragement to attempt to lay the foundation of other sciences in a similar manner, as far as we are able.

Mr. Hume hath discovered, as he apprehends, a weak side even in mathematical axioms, and thinks that it is not strictly true, for instance, that two right lines can cut one another in one point only.<sup>1</sup>

The principle he reasons from is, That every simple idea is a copy of a preceding impression, and therefore in its precision and accuracy can never go beyond its original. From which he reasons in this manner: No man ever saw or felt a line so straight that it might not cut another, equally straight, in two or more points. Therefore, there can be no idea of such a line.

The ideas that are most essential to geometry — such as those of equality, of a straight line, and of a square surface — are far, he says, from being distinct and determinate, and the definitions destroy the pretended demonstrations. Thus, mathematical demonstration is found to be a rope of sand.

Every theory that is inconsistent with our having accurate notions of mathematical lines, surfaces, and solids

<sup>1</sup> *Treatise*, I. 2. 4

must be false. Therefore it follows that they are not copies of our impressions.<sup>1</sup>

The Medicean Venus is not a copy of the block of marble from which it was made. It is true that the elegant statue was formed out of the rude block, and that, too, by a manual operation which, in a literal sense, we may call abstraction. Mathematical notions are formed in the understanding by an abstraction of another kind, out of the rude perceptions of our senses.

As the truths of natural philosophy are not necessary truths, but contingent, depending upon the will of the Maker of the world, the principles from which they are deduced must be of the same nature and, therefore, belong not to this class.

4. I think there are axioms even in matters of taste. Notwithstanding the variety found among men in taste, there are, I apprehend, some common principles even in matters of this kind. I never heard of any man who thought it a beauty in a human face to want a nose, or an eye, or to have the mouth on one side. How many ages have passed since the days of Homer! Yet in this long tract of ages there never was found a man who took Thersites for a beauty.

There is a taste that is acquired and a taste that is natural. This holds with respect both to the external sense of taste and the internal. Habit and fashion have a powerful influence upon both.

Of tastes that are natural there are some that may be called rational, others that are merely animal.

Children are delighted with brilliant and gaudy colours, with romping and noisy mirth, with feats of agility, strength, or cunning; and savages have much the same taste as children.

But there are tastes that are more intellectual. It is the dictate of our rational nature that love and admiration are misplaced when there is no intrinsic worth in the object.

In those operations of taste which are rational we

<sup>1</sup> *V.* pp. 325-6.

judge of the real worth and excellence of the object, and our love or admiration is guided by that judgment. In such operations there is judgment as well as feeling, and the feeling depends upon the judgment we form of the object.

I do not maintain that taste, so far as it is acquired or so far as it is merely animal, can be reduced to principles. But as far as it is founded on judgment, it certainly may.

The virtues, the graces, the muses, have a beauty that is intrinsic. It lies not in the feelings of the spectator but in the real excellence of the object. If we do not perceive their beauty, it is owing to the defect or to the perversion of our faculties.

That taste which we may call rational is that part of our constitution by which we are made to receive pleasure from the contemplation of what we conceive to be excellent in its kind, the pleasure being annexed to this judgment and regulated by it. This taste may be true or false, according as it is founded on a true or false judgment. And if it may be true or false, it must have first principles.

5. There are also first principles in morals.

That an unjust action has more demerit than an ungenerous one ; That a generous action has more merit than a merely just one ; That no man ought to be blamed for what it was not in his power to hinder ; That we ought not to do to others what we would think unjust or unfair to be done to us in like circumstances. These are moral axioms, and many others might be named which appear to me to have no less evidence than those of mathematics.

Some perhaps may think that our determinations either in matters of taste or in morals ought not to be accounted necessary truths ; That they are grounded upon the constitution of that faculty which we call taste, and of that which we call the moral sense or conscience, which faculties might have been so constituted as to have given determinations different, or even contrary to those

they now give ; That as there is nothing sweet or bitter in itself but according as it agrees or disagrees with the external sense called taste, so there is nothing beautiful or ugly in itself but according as it agrees or disagrees with the internal sense which we also call taste ; and nothing morally good or ill in itself but according as it agrees or disagrees with our moral sense.

This indeed is a system with regard to morals and taste which hath been supported in modern times by great authorities.<sup>1</sup> And if this system be true, the consequence must be that there can be no principles, either of taste or of morals, that are necessary truths. For according to this system all our determinations, both with regard to matters of taste and with regard to morals, are reduced to matters of fact — I mean to such as these, that by our constitution we have on such occasions certain agreeable feelings, and on other occasions certain disagreeable feelings.

But I cannot help being of a contrary opinion, being persuaded that a man who determined that polite behaviour has great deformity, and that there is great beauty in rudeness and ill-breeding, would judge wrong whatever his feelings were.

In like manner, I cannot help thinking that a man who determined that there is more moral worth in cruelty, perfidy, and injustice than in generosity, justice, prudence, and temperance would judge wrong whatever his constitution was.

And if it be true that there is judgment in our determinations of taste and of morals, it must be granted that

<sup>1</sup> The reference here is to Hutcheson and Hume, the two chief exponents of the Moral Sense theory whom Reid attacks in his *Essays on the Active Powers of Man*. His criticism has often been repeated since : if all judgments of moral goodness or badness are really statements of feeling (whether the judger's, or of all men, or of most men, etc.), then all such judgments must be empirical. But they are obviously not empirical, because when, e.g., I judge that "cruelty is bad" I am not asserting a proposition for which I suppose there is inductive evidence (i.e. the past reactions of either myself or others in situations of cruelty), but which might by further evidence be upset ; I am obviously asserting a necessary proposition which is not analytic. Whether moral *concepts* are empirical or not does not matter here, as long as moral principles are admitted to be *a priori* ; that would be enough to refute the Moral Sense theory.

what is true or false in morals, or in matters of taste, is necessarily so. For this reason I have ranked the first principles of morals and of taste under the class of necessary truths.

6. The last class of first principles I shall mention we may call metaphysical.

I shall particularly consider three of these, because they have been called in question by Mr. Hume.

The *first* is, That the qualities which we perceive by our senses must have a subject which we call body, and that the thoughts we are conscious of must have a subject which we call mind.<sup>1</sup>

It is not more evident that two and two make four than it is that figure cannot exist unless there be something that is figured, nor motion without something that is moved. I not only perceive figure and motion, but I perceive them to be qualities. They have a necessary relation to something in which they exist as their subject. The difficulty which some philosophers have found in admitting this is entirely owing to the theory of ideas. A subject of the sensible qualities which we perceive by our senses is not an idea either of sensation or of consciousness ; therefore say they, we have no such idea. Or, in the style of Mr. Hume, from what impression is the idea of substance derived ? It is not a copy of any impression, therefore there is no such idea.

The distinction between sensible qualities and the substance to which they belong, and between thought and the mind that thinks, is not the invention of philosophers ; it is found in the structure of all languages, and therefore must be common to all men who speak with understanding. And I believe no man, however sceptical he may be in speculation, can talk on the common affairs of life for half an hour without saying things that imply his belief of the reality of these distinctions.

Mr. Locke acknowledges " That we cannot conceive how simple ideas of sensible qualities should subsist alone ; and therefore we suppose them to exist in, and to be

<sup>1</sup> *Treatise*, I. 4. 3, 5, and 6.

supported by, some common subject " <sup>1</sup> In his *Essay*, indeed, some of his expressions seem to leave it dubious whether this belief, that sensible qualities must have a subject, be a true judgment or a vulgar prejudice. But in his first letter to the Bishop of Worcester he removes this doubt, and quotes many passages of the *Essay* to show that he neither denied nor doubted of the existence of substances, both thinking and material; and that he believed their existence on the same ground the Bishop did — to wit, "on the repugnancy to our conceptions that modes and accidents should subsist by themselves". <sup>2</sup> He offers no proof of this repugnancy; nor, I think, can any proof of it be given, because it is a first principle.

It were to be wished that Mr. Locke, who inquired so accurately and so laudably into the origin, certainty, and extent of human knowledge, had turned his attention more particularly to the origin of these two opinions which he firmly believed; to wit, that sensible qualities must have a subject which we call body, and that thought must have a subject which we call mind. A due attention to these two opinions which govern the belief of all men, even of sceptics in the practice of life, would probably have led him to perceive that sensation and consciousness are not the only sources of human knowledge, and that there are principles of belief in human nature of which we can give no other account but that they necessarily result from the constitution of our faculties; and that, if it were in our power to throw off their influence upon our practice and conduct, we could neither speak nor act like reasonable men.

We cannot give a reason why we believe even our sensations to be real and not fallacious; why we believe what we are conscious of; why we trust any of our natural faculties. We say it must be so, it cannot be otherwise. This expresses only a strong belief which is indeed the voice of nature, and which therefore in vain we attempt to resist. But if, in spite of nature, we resolve to go deeper and not to trust our faculties without a reason

<sup>1</sup> *Essay*, II. 23. 4.

<sup>2</sup> *First Letter to Stillingfleet*.

to show that they cannot be fallacious, I am afraid that, seeking to become wise and to be as gods, we shall become foolish and, being unsatisfied with the lot of humanity, we shall throw off common sense.

The *second* metaphysical principle I mention is, That whatever begins to exist must have a cause which produced it.<sup>1</sup>

Philosophy is indebted to Mr. Hume in this respect among others, that by calling in question many of the first principles of human knowledge he hath put speculative men upon inquiring more carefully than was done before into the nature of the evidence upon which they rest. Truth can never suffer by a fair inquiry ; it can bear to be seen naked and in the fullest light, and the strictest examination will always turn out in the issue to its advantage. I believe Mr. Hume was the first who ever called in question whether things that begin to exist must have a cause.

With regard to this point we must hold one of these three things, either That it is an opinion for which we have no evidence, and which men have foolishly taken up without ground ; or, *secondly*, That it is capable of direct proof by argument ; or, *thirdly*, That it is self-evident and needs no proof, but ought to be received as an axiom which cannot, by reasonable men, be called in question.

The first of these suppositions would put an end to all philosophy, to all religion, to all reasoning that would carry us beyond the objects of sense, and to all prudence in the conduct of life.

As to the second supposition, that this principle may be proved by direct reasoning, I am afraid we shall find the proof extremely difficult, if not altogether impossible.

I know only of three or four arguments that have been urged by philosophers, in the way of abstract reasoning, to prove that things which begin to exist must have a cause.

<sup>1</sup> *Treatise*, I. 3. 3. Hume did not question the truth of the proposition that every beginning of existence must have a cause ; what he did deny was that the proposition was a principle of reason, known by intuition or demonstration.

One is offered by Mr. Hobbes, another by Dr. Samuel Clarke, another by Mr. Locke. Mr. Hume in his *Treatise of Human Nature* has examined them all, and in my opinion has shown that they take for granted the thing to be proved ; a kind of false reasoning which men are very apt to fall into when they attempt to prove what is self-evident.<sup>1</sup>

It has been thought that, although this principle does not admit of proof from abstract reasoning, it may be proved from experience, and may be justly drawn by induction from instances that fall within our observation.

I conceive this method of proof will leave us in great uncertainty, for these three reasons :

*1st*, Because the proposition to be proved is not a contingent but a necessary proposition. It is not that things which begin to exist commonly have a cause, or even that they always in fact have a cause, but that they must have a cause and cannot begin to exist without a cause.

Propositions of this kind, from their nature, are incapable of proof by induction. Experience informs us only of what is or has been, not of what must be ; and the conclusion must be of the same nature with the premises.

For this reason no mathematical proposition can be proved by induction. Though it should be found by experience in a thousand cases that the area of a plane triangle is equal to the rectangle under the altitude and half the base, this would not prove that it must be so in all cases, and cannot be otherwise ; which is what the mathematician affirms.

In like manner, though we had the most ample experimental proof that things which have begun to exist had a cause, this would not prove that they must have a cause. Experience may show us what is the established course of nature, but can never show what connections of things are in their nature necessary.

*2ndly*, General maxims, grounded on experience, have only a degree of probability proportioned to the extent of our experience, and ought always to be understood so as

<sup>1</sup> *Ibid.*

to leave room for exceptions if future experience shall discover any such.

The law of gravitation has as full a proof from experience and induction as any principle can be supposed to have. Yet if any philosopher should, by clear experiment, show that there is a kind of matter in some bodies which does not gravitate, the law of gravitation ought to be limited by that exception.

Now it is evident that men have never considered the principle of the necessity of cause as a truth of this kind which may admit of limitation or exception, and therefore it has not been received upon this kind of evidence.

*3rdly*, I do not see that experience could satisfy us that every change in nature actually has a cause.

In the far greatest part of the changes in nature that fall within our observation the causes are unknown, and therefore, from experience, we cannot know whether they have causes or not.

Causation is not an object of sense. The only experience we can have of it is in the consciousness we have of exerting some power in ordering our thoughts and actions. But this experience is surely too narrow a foundation for a general conclusion that all things that have had or shall have a beginning must have a cause.

For these reasons this principle cannot be drawn from experience any more than from abstract reasoning.

The *third* supposition is, That it is to be admitted as a first or self-evident principle. Two reasons may be urged for this.

1. The universal consent of mankind, not of philosophers only, but of the rude and unlearned vulgar.

Mr. Hume, as far as I know, was the first that ever expressed any doubt of this principle. And when we consider that he has rejected every principle of human knowledge, excepting that of consciousness, and has not even spared the axioms of mathematics, his authority is of small weight.

"It is", says he, "a maxim in philosophy that whatever begins to exist must have a cause of existence. This

is commonly taken for granted in all reasonings, without any proof given or demanded. It is supposed to be founded on intuition, and to be one of those maxims which, though they may be denied with the lips, it is impossible for men in their hearts really to doubt of. But if we examine this maxim by the idea of knowledge above explained, we shall discover in it no mark of such intuitive certainty.”<sup>1</sup> The meaning of this seems to be that it did not suit with his theory of intuitive certainty, and therefore he excludes it from that privilege.

The vulgar adhere to this maxim as firmly and universally as the philosophers. Their superstitions have the same origin as the systems of philosophers — to wit, a desire to know the causes of things. *Felix qui potuit rerum cognoscere causas* is the universal sense of men, but to say that anything can happen without a cause shocks the common sense of a savage.

This universal belief of mankind is easily accounted for, if we allow that the necessity of a cause of every event is obvious to the rational powers of a man. But it is impossible to account for it otherwise. It cannot be ascribed to education, to systems of philosophy, or to priestcraft. One would think that a philosopher who takes it to be a general delusion or prejudice would endeavour to show from what causes in human nature such a general error may take its rise. But I forget that Mr. Hume might answer upon his own principles that since things may happen without a cause — this error and delusion of men may be universal without any cause.

2. A second reason why I conceive this to be a first principle is, That mankind not only assent to it in speculation, but that the practice of life is grounded upon it in the most important matters, even in cases where experience leaves us doubtful ; and it is impossible to act with common prudence if we set it aside.

Suppose a man to be found dead on the highway, his skull fractured, his body pierced with deadly wounds, his watch and money carried off. The coroner’s jury sits

<sup>1</sup> *Treatise*, 1. 3. 3.

upon the body, and the question is put, What was the cause of this man's death? — was it accident, or *felo de se*, or murder by persons unknown? Let us suppose an adept in Mr. Hume's philosophy to make one of the jury, and that he insists upon the previous question, whether there was any cause of the event, and whether it happened without a cause.

Surely upon Mr. Hume's principles a great deal might be said upon this point, and if the matter is to be determined by past experience, it is dubious on which side the weight of argument might stand. But we may venture to say that, if Mr. Hume had been of such a jury, he would have laid aside his philosophical principles and acted according to the dictates of common prudence.

Many passages might be produced, even in Mr. Hume's philosophical writings, in which he, unawares, betrays the same inward conviction of the necessity of causes which is common to other men. I shall mention only one, in the *Treatise of Human Nature*, and in that part of it where he combats this very principle: "As to those impressions", says he, "which arise from the senses, their ultimate cause is, in my opinion, perfectly inexplicable by human reason; and it will always be impossible to decide with certainty whether they arise immediately from the object, or are produced by the creative power of the mind, or are derived from the Author of our being".<sup>1</sup>

Among these alternatives he never thought of their not arising from any cause.

The *last* metaphysical principle I mention, which is opposed by the same author, is, That design and intelligence in the cause may be inferred, with certainty, from marks or signs of it in the effect.<sup>2</sup>

<sup>1</sup> *Treatise*, I. 3. 5.

<sup>2</sup> Hume devoted much thought to the argument from design. Although it does not occur in the *Treatise*, it is discussed in the *Enquiry* 11, and it is the primary problem of the *Dialogues concerning Natural Religion*. But his conclusions were not quite what Reid (who later, pp. 404-5, modifies his attack) here suggests: Hume holds that the argument from design cannot prove the existence of God, because it violates the general principle that one may not infer unobserved causes from observed effects, unless one has on at least some occasions observed *both* the causes *and* the effects; which, in

Intelligence, design, and skill, are not objects of the external senses, nor can we be conscious of them in any person but ourselves. Even in ourselves we cannot with propriety be said to be conscious of the natural or acquired talents we possess. We are conscious only of the operations of mind in which they are exerted. Indeed a man comes to know his own mental abilities, just as he knows another man's, by the effects they produce, when there is occasion to put them to exercise.

A man's wisdom is known to us only by the signs of it in his conduct, his eloquence by the signs of it in his speech. In the same manner we judge of his virtue, of his fortitude, and of all his talents and virtues.

Yet it is to be observed that we judge of men's talents with as little doubt or hesitation as we judge of the immediate objects of sense.

One person, we are sure, is a perfect idiot ; another, who feigns idiocy to screen himself from punishment, is found, upon trial, to have the understanding of a man and to be accountable for his conduct. We perceive one man to be open, another cunning ; one to be ignorant, another very knowing ; one to be slow of understanding, another quick. Every man forms such judgments of those he converses with, and the common affairs of life depend upon such judgments. We can as little avoid them as we can avoid seeing what is before our eyes.

From this it appears that it is no less a part of the human constitution to judge of men's characters, and of

the case of God, one cannot do. But, in the case of other finite minds, that is possible, for the condition of sometimes observing both cause and effect is fulfilled. Reid in fact agrees with Hume that the argument from design cannot be established empirically, and for precisely the same reason (p. 406), and he goes on to deny (pp. 407-8) that it can be applied even to other finite minds, because we cannot directly observe another mind designing. Hume would presumably agree here : all he needs to maintain is that we can observe finite bodies behaving *apparently* purposively, as well as observe the effects ; on other occasions when we observe events similar to the latter, we infer they are effects of apparently purposive bodily behaviour, similar to the former. Hume's conclusion that it is impossible to prove the existence of God simply from observing what might be the effects of his activity is inconsistent with his footnote to the passage in the Appendix to the *Treatise* to be inserted in I. 3. 14.

their intellectual powers, from the signs of them in their actions and discourse, than to judge of corporeal objects by our senses ; that such judgments are common to the whole human race that are endowed with understanding ; and that they are absolutely necessary in the conduct of life.

Now every judgment of this kind we form is only a particular application of the general principle that intelligence, wisdom, and other mental qualities in the cause may be inferred from their marks or signs in the effect.

The actions and discourses of men are effects of which the actors and speakers are the causes. The effects are perceived by our senses, but the causes are behind the scene. We only conclude their existence and their degrees from our observation of the effects.

From wise conduct we infer wisdom in the cause, from brave actions we infer courage ; and so in other cases.

This inference is made with perfect security by all men. We cannot avoid it ; it is necessary in the ordinary conduct of life ; it has therefore the strongest marks of being a first principle.

Perhaps some may think that this principle may be learned either by reasoning or by experience, and therefore that there is no ground to think it a first principle.

If it can be shown to be got by reasoning by all, or the greater part, of those who are governed by it, I shall very readily acknowledge that it ought not to be esteemed a first principle. But I apprehend the contrary appears from very convincing arguments.

*First*, The principle is too universal to be the effect of reasoning. It is common to philosophers and to the vulgar, to the learned and to the most illiterate, to the civilised and to the savage. And of those who are governed by it not one in ten thousand can give a reason for it.

*Secondly*, We find philosophers, ancient and modern, who can reason excellently in subjects that admit of reasoning when they have occasion to defend this principle, not offering reasons for it, or any *medium* of proof, but *appealing to the common sense of mankind ; mentioning*

particular instances to make the absurdity of the contrary opinion more apparent, and sometimes using the weapons of wit and ridicule, which are very proper weapons for refuting absurdities, but altogether improper in points that are to be determined by reasoning.<sup>1</sup>

We are next to consider whether we may not learn this truth from experience, That effects which have all the marks and tokens of design must proceed from a designing cause.

I apprehend that we cannot learn this truth from experience for two reasons.

*First*, Because it is a necessary truth, not a contingent one. It agrees with the experience of mankind since the beginning of the world, that the area of a triangle is equal to half the rectangle under its base and perpendicular. It agrees no less with experience that the sun rises in the east and sets in the west. So far as experience goes, these truths are upon an equal footing. But every man perceives this distinction between them — that the first is a necessary truth, and that it is impossible it should not be true; but the last is not necessary, but contingent, depending upon the will of him who made the world. As we cannot learn from experience that twice three must necessarily make six, so neither can we learn from experience that certain effects must proceed from a designing and intelligent cause. Experience informs us only of what has been, but never of what must be.

*Secondly*, It may be observed that experience can show a connection between a sign and the thing signified by it, in those cases only where both the sign and thing signified are perceived and have always been perceived in conjunction. But if there be any case where the sign only is perceived, experience can never show its connection with the thing signified. Thus, for example, thought is a sign of a thinking principle or mind. But how do we know that thought cannot be without a mind? If any

<sup>1</sup> Reid supports himself by two lengthy quotations, omitted from this edition, from Cicero, *De Divinatione*, l. 3, and from Archbishop Tillotson's *Sermons*, No. 1.

man should say that he knows this by experience, he deceives himself. It is impossible he can have any experience of this, because, though we have an immediate knowledge of the existence of thought in ourselves by consciousness, yet we have no immediate knowledge of a mind. The mind is not an immediate object either of sense or of consciousness. We may, therefore, justly conclude that the necessary connection between thought and a mind, or thinking being, is not learned from experience.

The same reasoning may be applied to the connection between a work excellently fitted for some purpose, and design in the author or cause of that work. One of these — to wit, the work — may be an immediate object of perception. But the design and purpose of the author cannot be an immediate object of perception, and, therefore, experience can never inform us of any connection between the one and the other, far less of a necessary connection.

Thus I think it appears that the principle we have been considering — to wit, that from certain signs or indications in the effect we may infer that there must have been intelligence, wisdom, or other intellectual or moral qualities in the cause — is a principle which we get neither by reasoning nor by experience, and therefore, if it be a true principle, it must be a first principle. There is in the human understanding a light by which we see immediately the evidence of it when there is occasion to apply it.

Of how great importance this principle is in common life we have already observed, and I need hardly mention its importance in natural theology.

I know of no person who ever called in question the principle now under our consideration, when it is applied to the actions and discourses of men. For this would be to deny that we have any means of discerning a wise man from an idiot, or a man that is illiterate in the highest degree from a man of knowledge and learning, which no man has the effrontery to deny.

But in all ages, those who have been unfriendly to the principles of religion have made attempts to weaken the

force of the argument for the existence and perfections of the Deity which is founded on this principle.

The most direct attack has been made upon this principle by Mr. Hume, who puts an argument in the mouth of an Epicurean on which he seems to lay great stress.<sup>1</sup>

The argument is, That the universe is a singular effect and, therefore, we can draw no conclusion from it, whether it may have been made by wisdom or not.

If I understand the force of this argument, it amounts to this, That if we had been accustomed to see worlds produced, some by wisdom and others without it, and had observed that such a world as this which we inhabit was always the effect of wisdom, we might then, from past experience, conclude that this world was made by wisdom ; but having no such experience, we have no means of forming any conclusion about it.

That this is the strength of the argument appears, because if the marks of wisdom seen in one world be no evidence of wisdom, the like marks seen in ten thousand will give as little evidence, unless in time past we perceived wisdom itself conjoined with the tokens of it ; and from their perceived conjunction in time past, conclude that, although in the present world we see only one of the two, the other must accompany it.

Whence it appears that this reasoning of Mr. Hume is built on the supposition that our inferring design from the strongest marks of it is entirely owing to our past experience of having always found these two things conjoined. But I hope I have made it evident that this is not the case. And indeed it is evident that, according to this reasoning, we can have no evidence of mind or design in any of our fellow-men.

How do I know that any man of my acquaintance has understanding ? I never saw his understanding. I see only certain effects which my judgment leads me to conclude to be marks and tokens of it.

But, says the sceptical philosopher, you can conclude

<sup>1</sup> *Enquiry concerning Human Understanding*, § 11.

nothing from these tokens unless past experience has informed you that such tokens are always joined with understanding. Alas! sir, it is impossible I can ever have this experience. The understanding of another man is no immediate object of sight, or of any other faculty which God hath given me, and unless I can conclude its existence from tokens that are visible, I have no evidence that there is understanding in any man.

It seems, then, that the man who maintains that there is no force in the argument from final causes, must, if he will be consistent, see no evidence of the existence of any intelligent being but himself.

[CHAPTER 7. OPINIONS, ANCIENT AND MODERN,  
ABOUT FIRST PRINCIPLES]

CHAPTER 8

OF PREJUDICES, THE CAUSES OF ERROR

OUR intellectual powers are wisely fitted by the Author of our nature for the discovery of truth, as far as suits our present state. Error is not their natural issue any more than disease is of the natural structure of the body. Yet as we are liable to various diseases of body from accidental causes, external and internal, so we are, from like causes, liable to wrong judgments.

Medical writers have endeavoured to enumerate the diseases of the body and to reduce them to a system under the name of nosology, and it were to be wished that we had also a nosology of the human understanding.

When we know a disorder of the body, we are often at a loss to find the proper remedy, but in most cases the dis-

orders of the understanding point out their remedies so plainly that he who knows the one must know the other.

Many authors have furnished useful materials for this purpose, and some have endeavoured to reduce them to a system. I like best the general division given of them by Lord Bacon in his fifth book, *De Augmentis Scientiarum*, and more fully treated in his *Novum Organum*. He divides them into four classes — *idola tribus*, *idola specus*, *idola fori*, and *idola theatri*. The names are perhaps fanciful, but I think the division judicious, like most of the productions of that wonderful genius. And as this division was first made by him, he may be indulged the privilege of giving names to its several members.

I propose in this chapter to explain the several members of this division according to the meaning of the author, and to give instances of each without confining myself to those which Lord Bacon has given, and without pretending to a complete enumeration.

To every bias of the understanding by which a man may be misled in judging or drawn into error, Lord Bacon gives the name of an idol. The understanding in its natural and best state pays its homage to truth only. The causes of error are considered by him as so many false deities who receive the homage which is due only to truth.

The first class are the *idola tribus*. These are such as beset the whole human species, so that every man is in danger from them. They arise from principles of the human constitution which are highly useful and necessary in our present state, but, by their excess or defect, or wrong direction, may lead us into error.

As the active principles of the human frame are wisely contrived by the Author of our being for the direction of our actions, and yet, without proper regulation and restraint, are apt to lead us wrong, so it is also with regard to those parts of our constitution that have influence upon our opinions. Of this we may take the following instances :—

1. *First*, Men are prone to be led too much by authority in their opinions.<sup>1</sup>

<sup>1</sup> Cf. pp. 369-70.

In the first part of life we have no other guide, and without a disposition to receive implicitly what we are taught, we should be incapable of instruction and incapable of improvement.

When judgment is ripe there are many things in which we are incompetent judges. In such matters it is most reasonable to rely upon the judgment of those whom we believe to be competent and disinterested. The highest court of judicature in the nation relies upon the authority of lawyers and physicians in matters belonging to their respective professions.

Even in matters which we have access to know, authority always will have, and ought to have, more or less weight in proportion to the evidence on which our own judgment rests, and the opinion we have of the judgment and candour of those who differ from us or agree with us. The modest man, conscious of his own fallibility in judging, is in danger of giving too much to authority ; the arrogant of giving too little.

In all matters belonging to our cognizance every man must be determined by his own final judgment, otherwise he does not act the part of a rational being. Authority may add weight to one scale ; but the man holds the balance, and judges what weight he ought to allow to authority.

If a man should even claim infallibility, we must judge of his title to that prerogative. If a man pretend to be an ambassador from heaven, we must judge of his credentials. No claim can deprive us of this right or excuse us for neglecting to exercise it.

2. A *second* general prejudice arises from a disposition to measure things less known and less familiar by those that are better known and more familiar.

This is the foundation of analogical reasoning, to which we have a great proneness by nature, and to it indeed we owe a great part of our knowledge. It would be absurd to lay aside this kind of reasoning altogether, and it is difficult to judge how far we may venture upon it. The bias of human nature is to judge from too slight analogies.

The objects of sense engross our thoughts in the first

part of life, and are most familiar through the whole of it. Hence, in all ages men have been prone to attribute the human figure and human passions and frailties to superior intelligences, and even to the Supreme Being.

There is a disposition in men to materialise everything, if I may be allowed the expression ; that is, to apply the notions we have of material objects to things of another nature. Thought is considered as analogous to motion in a body, and as bodies are put in motion by impulses and by impressions made upon them by contiguous objects, we are apt to conclude that the mind is made to think by impressions made upon it, and that there must be some kind of contiguity between it and the objects of thought. Hence the theories of ideas and impressions have so generally prevailed.

• 3. Men are often led into error by the love of simplicity, which disposes us to reduce things to few principles and to conceive a greater simplicity in nature than there really is.<sup>1</sup>

To love simplicity, and to be pleased with it wherever we find it, is no imperfection, but the contrary. It is the result of good taste. We cannot but be pleased to observe that all the changes of motion produced by the collision of bodies, hard, soft, or elastic, are reducible to three simple laws of motion which the industry of philosophers has discovered.

When we consider what a prodigious variety of effects depend upon the law of gravitation ; how many phenomena in the earth, sea, and air, which in all preceding ages had tortured the wits of philosophers and occasioned a thousand vain theories, are shown to be the necessary consequences of this one law ; how the whole system of sun, moon, planets, primary and secondary, and comets, are kept in order by it and their seeming irregularities accounted for and reduced to accurate measure — the simplicity of the cause, and the beauty and variety of the effects, must give pleasure to every contemplative mind.

There is without doubt, in every work of nature, all the beautiful simplicity that is consistent with the end for which

<sup>1</sup> Cf. *Inquiry*, VII. 3.

it was made. But if we hope to discover how nature brings about its ends merely from this principle, that it operates in the simplest and best way, we deceive ourselves, and forget that the wisdom of nature is more above the wisdom of man than man's wisdom is above that of a child.

We may learn something of the way in which nature operates from fact and observation, but if we conclude that it operates in such a manner only because to our understanding that appears to be the best and simplest manner, we shall always go wrong.

It was believed for many ages that all the variety of concrete bodies we find on this globe is reducible to four elements, of which they are compounded and into which they may be resolved. It was the simplicity of this theory, and not any evidence from fact, that made it to be so generally received ; for the more it is examined, we find the less ground to believe it.

It was long believed that all the qualities of bodies, and all their medical virtues, were reducible to four — moisture and dryness, heat and cold ; and that there are only four temperaments of the human body — the sanguine, the melancholy, the bilious, and the phlegmatic. The chemical system, of reducing all bodies to salt, sulphur, and mercury, was of the same kind. For how many ages did men believe that the division of all the objects of thought into ten categories, and of all that can be affirmed or denied of anything, into five universals or predicables, were perfect enumerations ?

The evidence from reason that could be produced for those systems was next to nothing, and bore no proportion to the ground they gained in the belief of men ; but they were simple and regular, and reduced things to a few principles ; and this supplied their want of evidence.

4. One of the most copious sources of error in philosophy is the misapplication of our noblest intellectual power to purposes for which it is incompetent.

Of all the intellectual powers of man that of invention bears the highest price. It resembles most the power of creation and is honoured with that name.

We admire the man who shows a superiority in the talent of finding the means of accomplishing an end ; who can, by a happy combination, produce an effect or make a discovery beyond the reach of other men ; who can draw important conclusions from circumstances that commonly pass unobserved ; who judges with the greatest sagacity of the designs of other men and the consequences of his own actions. To this superiority of understanding we give the name of genius, and look up with admiration to everything that bears the marks of it.

Yet this power, so highly valuable in itself and so useful in the conduct of life, may be misapplied, and men of genius in all ages have been prone to apply it to purposes for which it is altogether incompetent.

The works of men and the works of nature are not of the same order. The force of genius may enable a man perfectly to comprehend the former and see them to the bottom. What is contrived and executed by one man may be perfectly understood by another man. With great probability he may from a part conjecture the whole, or from the effects may conjecture the causes, because they are effects of a wisdom not superior to his own.

But the works of nature are contrived and executed by a wisdom and power infinitely superior to that of man, and when men attempt, by the force of genius, to discover the causes of the phenomena of nature, they have only the chance of going wrong more ingeniously. Their conjectures may appear very probable to beings no wiser than themselves, but they have no chance to hit the truth. They are like the conjectures of a child how a ship of war is built, and how it is managed at sea.

Let the man of genius try to make an animal, even the meanest ; to make a plant, or even a single leaf of a plant, or a feather of a bird : he will find that all his wisdom and sagacity can bear no comparison with the wisdom of nature, nor his power with the power of nature.

The experience of all ages shows how prone ingenious men have been to invent hypotheses to explain the phenomena of nature ; how fond, by a kind of anticipation, to

discover her secrets. Instead of a slow and gradual ascent in the scale of natural causes by a just and copious induction, they would shorten the work and, by a flight of genius, get to the top at once. This gratifies the pride of human understanding, but it is an attempt beyond our force, like that of Phaeton to guide the chariot of the sun.

When a man has laid out all his ingenuity in fabricating a system, he views it with the eye of a parent ; he strains phenomena to make them tally with it and make it look like the work of nature.

The slow and patient method of induction, the only way to attain any knowledge of nature's work, was little understood until it was delineated by Lord Bacon, and has been little followed since. It humbles the pride of man, and puts him constantly in mind that his most ingenious conjectures with regard to the works of God are pitiful and childish.

In all the fine arts, whose end is to please, genius is deservedly supreme. In the conduct of human affairs it often does wonders, but in all inquiries into the constitution of nature it must act a subordinate part, ill-suited to the superiority it boasts. It may combine, but it must not fabricate. It may collect evidence, but must not supply the want of it by conjecture. It may display its powers by putting nature to the question in well-contrived experiments, but it must add nothing to her answers.

5. In avoiding one extreme men are very apt to rush into the opposite.

6. Men's judgments are often perverted by their affections and passions. This is so commonly observed and so universally acknowledged that it needs no proof nor illustration.

The second class of idols in Lord Bacon's division are the *idola specus*.

These are prejudices which have their origin, not from the constitution of human nature, but from something peculiar to the individual.

As in a cave objects vary in their appearance according to the form of the cave and the manner in which it receives

the light, Lord Bacon conceives the mind of every man to resemble a cave which has its particular form and its particular manner of being enlightened, and from these circumstances often gives false colours and a delusive appearance to objects seen in it.

For this reason he gives the name of *idola specus* to those prejudices which arise from the particular way in which a man has been trained, from his being addicted to some particular profession or from something particular in the turn of his mind.

A man whose thoughts have been confined to a certain track by his profession or manner of life is very apt to judge wrong when he ventures out of that track. He is apt to draw everything within the sphere of his profession, and to judge by its maxims of things that have no relation to it.

\* The mere mathematician is apt to apply measure and calculation to things which do not admit of it. Direct and inverse ratios have been applied by an ingenious author to measure human affections and the moral worth of actions. An eminent mathematician<sup>1</sup> attempted to ascertain by calculation the ratio in which the evidence of facts must decrease in the course of time, and fixed the period when the evidence of the facts on which Christianity is founded shall become evanescent, and when in consequence no faith shall be found on the earth. I have seen a philosophical dissertation, published by a very good mathematician,<sup>2</sup> wherein, in opposition to the ancient division of things into ten categories, he maintains that there are no more, and can be no more than two categories, to wit, *data* and *quaesita*.

Different persons, either from temper or from education, have different tendencies of understanding which by their excess are unfavourable to sound judgment.

Some have an undue admiration of antiquity and contempt of whatever is modern ; others go as far into the

<sup>1</sup> John Craig, *Theologiae Christianae Principia Mathematica* (1699).

<sup>2</sup> James Gregory, Reid's uncle, and Professor of Mathematics at Edinburgh, 1691-1725.

contrary extreme. It may be judged that the former are persons who value themselves upon their acquaintance with ancient authors, and the latter such as have little knowledge of this kind.

Some are afraid to venture a step out of the beaten track and think it safest to go with the multitude ; others are fond of singularities and of everything that has the air of paradox.

Some are desultory and changeable in their opinions, others unduly tenacious. Most men have a predilection for the tenets of their sect or party, and still more for their own inventions.

The *idola fori* are the fallacies arising from the imperfections and the abuse of language, which is an instrument of thought as well as of the communication of our thoughts.

Whether it be the effect of constitution or of habit, I will not take upon me to determine, but from one or both of these causes it happens that no man can pursue a train of thought or reasoning without the use of language. Words are the signs of our thoughts, and the sign is so associated with the thing signified that the last can hardly present itself to the imagination without drawing the other along with it.

A man who would compose in any language must think in that language. If he thinks in one language what he would express in another, he thereby doubles his labour ; and, after all, his expressions will have more the air of a translation than of an original.

This shows that our thoughts take their colour in some degree from the language we use, and that, although language ought always to be subservient to thought, yet thought must be, at some times and in some degree, subservient to language.

As a servant that is extremely useful and necessary to his master by degrees acquires an authority over him, so that the master must often yield to the servant, such is the case with regard to language. Its intention is to be a servant to the understanding, but it is so useful and so necessary that we cannot avoid being sometimes led by it

when it ought to follow. We cannot shake off this impediment — we must drag it along with us, and, therefore, must direct our course and regulate our pace as it permits.

Language must have many imperfections when applied to philosophy, because it was not made for that use. In the early periods of society, rude and ignorant men used certain forms of speech to express their wants, their desires, and their transactions with one another. Their language can reach no further than their speculations and notions, and if their notions be vague and ill-defined, the words by which they express them must be so likewise.

It was a grand and noble project of Bishop Wilkins<sup>1</sup> to invent a philosophical language which should be free from the imperfections of vulgar languages. Whether this attempt will ever succeed so far as to be generally useful, I shall not pretend to determine. The great pains taken by that excellent man in this design have hitherto produced no effect. Very few have ever entered minutely into his views; far less have his philosophical language and his real character been brought into use.

He founds his philosophical language and real character upon a systematical division and subdivision of all the things which may be expressed by language, and instead of the ancient division into ten categories, has made forty categories, or *summa genera*. But whether this division, though made by a very comprehensive mind, will always suit the various systems that may be introduced and all the real improvements that may be made in human knowledge, may be doubted. The difficulty is still greater in the subdivisions, so that it is to be feared that this noble attempt of a great genius will prove abortive until philosophers have the same opinions and the same systems in the various branches of human knowledge.

There is more reason to hope that the languages used by philosophers may be gradually improved in copiousness and in distinctness, and that improvements in knowledge and in language may go hand in hand and facilitate each other. But I fear the imperfections of language can never

<sup>1</sup> V. p. 289 and n.

be perfectly remedied while our knowledge is imperfect.

However this may be, it is evident that the imperfections of language, and much more the abuse of it, are the occasion of many errors, and that in many disputes which have engaged learned men the difference has been partly, and in some wholly, about the meaning of words.

Mr. Locke found it necessary to employ a fourth part of his *Essay on Human Understanding* about words, their various kinds, their imperfection and abuse, and the remedies of both, and has made many observations upon these subjects well worthy of attentive perusal.

The fourth class of prejudices are the *idola theatri*, by which are meant prejudices arising from the systems or sects in which we have been trained or which we have adopted.

A false system once fixed in the mind becomes, as it were, the medium through which we see objects ; they receive a tincture from it and appear of another colour than when seen by a pure light.

Upon the same subject a Platonist, a Peripatetic, and an Epicurean, will think differently not only in matters connected with his peculiar tenets, but even in things remote from them.

A judicious history of the different sects of philosophers and the different methods of philosophising which have obtained among mankind would be of no small use to direct men in the search of truth. In such a history, what would be of the greatest moment is not so much a minute detail of the *dogmata* of each sect as a just delineation of the spirit of the sect, and of that point of view in which things appeared to its founder. This was perfectly understood and, as far as concerns the theories of morals, is executed with great judgment and candour by Dr. Smith in his *Theory of Moral Sentiments*.<sup>1</sup>

A certain complexion of understanding may dispose a man to one system of opinions more than to another, and on the other hand a system of opinions, fixed in the mind

<sup>1</sup> Adam Smith, the political economist, was Reid's predecessor in the Chair of Moral Philosophy at Glasgow.

by education or otherwise, gives that complexion to the understanding which is suited to them.

It were to be wished that the different systems that have prevailed could be classed according to their spirit as well as named from their founders. Lord Bacon has distinguished false philosophy into the sophistical, the empirical, and the superstitious, and has made judicious observations upon each of these kinds. But I apprehend this subject deserves to be treated more fully by such a hand, if such a hand can be found.

## ESSAY VII

### OF REASONING

#### CHAPTER I

#### OF REASONING IN GENERAL, AND OF DEMONSTRATION

THE power of reasoning is very nearly allied to that of judging, and it is of little consequence in the common affairs of life to distinguish them nicely. On this account, the same name is often given to both. We include both under the name of reason. The assent we give to a proposition is called judgment, whether the proposition be self-evident or derive its evidence by reasoning from other propositions.

Yet there is a distinction between reasoning and judging. Reasoning is the process by which we pass from one judgment to another, which is the consequence of it. Accordingly our judgments are distinguished into intuitive, which are not grounded upon any preceding judgment, and discursive, which are deduced from some preceding judgment by reasoning.

In all reasoning, therefore, there must be a proposition inferred, and one or more from which it is inferred. And this power of inferring, or drawing a conclusion, is only another name for reasoning; the proposition inferred being called the *conclusion*, and the proposition or propositions from which it is inferred, the *premises*.

Reasoning may consist of many steps; the first conclusion being a premise to a second, that to a third, and so on, till we come to the last conclusion. A process consisting of many steps of this kind is so easily distinguished from judgment that it is never called by that name. But when there is only a single step to the conclusion, the

distinction is less obvious, and the process is sometimes called judgment, sometimes reasoning.

It is not strange that, in common discourse, judgment and reasoning should not be very nicely distinguished, since they are in some cases confounded even by logicians. We are taught in logic that judgment is expressed by one proposition, but that reasoning requires two or three. But so various are the modes of speech that what in one mode is expressed by two or three propositions may, in another mode, be expressed by one. Thus I may say, *God is good ; therefore good men shall be happy*. This is reasoning, of that kind which logicians call an enthymeme, consisting of an antecedent proposition and a conclusion drawn from it. But this reasoning may be expressed by one proposition, thus : *Because God is good, good men shall be happy*. This is what they call a causal proposition, and therefore expresses judgment ; yet the enthymeme, which is reasoning, expresses no more.

Reasoning as well as judgment must be true or false : both are grounded upon evidence which may be probable or demonstrative, and both are accompanied with assent or belief.

The power of reasoning is justly accounted one of the prerogatives of human nature, because by it many important truths have been and may be discovered which without it would be beyond our reach ; yet it seems to be only a kind of crutch to a limited understanding. We can conceive an understanding, superior to human, to which that truth appears intuitively, which we can only discover by reasoning. For this cause, though we must ascribe judgment to the Almighty, we do not ascribe reasoning to him, because it implies some defect or limitation of understanding. Even among men, to use reasoning in things that are self-evident is trifling ; like a

- man going upon crutches when he can walk upon his legs.

What reasoning is, can be understood only by a man who has reasoned and who is capable of reflecting upon this operation of his own mind. We can define it only by synonymous words or phrases such as inferring, drawing

a conclusion, and the like. The very notion of reasoning, therefore, can enter into the mind by no other channel than that of reflecting upon the operation of reasoning in our own minds; and the notions of premises and conclusion, of a syllogism and all its constituent parts, of an enthymeme, sorites, demonstration, paralogism, and many others, have the same origin.

In every chain of reasoning the evidence of the last conclusion can be no greater than that of the weakest link of the chain, whatever may be the strength of the rest.

The most remarkable distinction of reasonings is that some are probable, others demonstrative.

In every step of demonstrative reasoning the inference is necessary, and we perceive it to be impossible that the conclusion should not follow from the premises. In probable reasoning the connection between the premises and the conclusion is not necessary, nor do we perceive it to be impossible that the first should be true while the last is false.

Hence, demonstrative reasoning has no degrees, nor can one demonstration be stronger than another, though in relation to our faculties one may be more easily comprehended than another. Every demonstration gives equal strength to the conclusion and leaves no possibility of its being false.

It was, I think, the opinion of all the ancients that demonstrative reasoning can be applied only to truths that are necessary and not to those that are contingent. In this I believe they judged right. Of all created things, the existence, the attributes, and consequently the relations resulting from those attributes, are contingent. They depend upon the will and power of Him who made them. These are matters of fact and admit not of demonstration.

The field of demonstrative reasoning, therefore, is the various relations of things abstract, that is, of things which we conceive without regard to their existence. Of these, as they are conceived by the mind and are nothing but what they are conceived to be, we may have a clear and adequate comprehension. Their relations and attributes

are necessary and immutable. They are the things to which the Pythagoreans and Platonists gave the name of ideas. I would beg leave to borrow this meaning of the word *idea* from those ancient philosophers, and then I must agree with them that ideas are the only objects about which we can reason demonstratively.

The reasonings I have met with that can be called strictly demonstrative may, I think, be reduced to two classes. They are either metaphysical or they are mathematical.

In metaphysical reasoning the process is always short. The conclusion is but a step or two, seldom more, from the first principle or axiom on which it is grounded, and the different conclusions depend not one upon another.

It is otherwise in mathematical reasoning. Here the field has no limits. One proposition leads on to another, that to a third, and so on without end.

If it should be asked why demonstrative reasoning has so wide a field in mathematics, while in other abstract subjects it is confined within very narrow limits, I conceive this is chiefly owing to the nature of quantity, the object of mathematics.

Every quantity, as it has magnitude and is divisible into parts without end, so, in respect of its magnitude, it has a certain ratio to every quantity of the kind. The ratios of quantities are innumerable, such as a half, a third, a tenth, double, triple. All the powers of number are insufficient to express the variety of ratios. For there are innumerable ratios which cannot be perfectly expressed by numbers, such as the ratio of the side to the diagonal of a square, or of the circumference of a circle to the diameter. Of this infinite variety of ratios every one may be clearly conceived and distinctly expressed so as to be in no danger of being mistaken for any other.

Extended quantities, such as lines, surfaces, solids, besides the variety of relations they have in respect of magnitude, have no less variety in respect of figure, and every mathematical figure may be accurately defined so as to distinguish it from all others.

There is nothing of this kind in other objects of abstract reasoning. Some of them have various degrees ; but these are not capable of measure, nor can be said to have an assignable ratio to others of the kind. They are either simple or compounded of a few indivisible parts, and therefore, if we may be allowed the expression, can touch only in few points. But mathematical quantities being made up of parts without number, can touch in innumerable points and be compared in innumerable different ways.

There have been attempts made to measure the merit of actions by the ratios of the affections and principles of action from which they proceed. This may perhaps, in the way of analogy, serve to illustrate what was before known ; but I do not think any truth can be discovered in this way. There are no doubt degrees of benevolence, self-love, and other affections, but when we apply ratios to them I apprehend we have no distinct meaning.

Some demonstrations are called direct, others indirect. The first kind leads directly to the conclusion to be proved. Of the indirect, some are called demonstrations *ad absurdum*. In these the proposition contradictory to that which is to be proved is demonstrated to be false, or to lead to an absurdity ; whence it follows that its contradictory — that is, the proposition to be proved — is true. This inference is grounded upon an axiom in logic that of two contradictory propositions, if one be false, the other must be true.

Another kind of indirect demonstration proceeds by enumerating all the suppositions that can possibly be made concerning the proposition to be proved, and then demonstrating that all of them, excepting that which is to be proved, are false ; whence it follows that the excepted supposition is true. Thus, one line is proved to be equal to another by proving first that it cannot be greater, and then that it cannot be less, for it must be either greater, or less, or equal ; and two of these suppositions being demonstrated to be false, the third must be true.

All these kinds of demonstration are used in mathe-

matics, and perhaps some others. They have all equal strength. The direct demonstration is preferred where it can be had, for this reason only, as I apprehend, because it is the shortest road to the conclusion. The nature of the evidence, and its strength, is the same in all, only we are conducted to it by different roads.

## CHAPTER 2

### WHETHER MORALITY BE CAPABLE OF DEMONSTRATION

WHAT has been said of demonstrative reasoning may help us to judge of an opinion of Mr. Locke advanced in several places of his *Essay* — to wit, “That morality is capable of demonstration as well as mathematics”.

• In Bk. III. ch. 11, having observed that mixed modes, especially those belonging to morality, being such combinations of ideas as the mind puts together of its own choice, the signification of their names may be perfectly and exactly defined, he adds :—

Sett. 16 : “Upon this ground it is that I am bold to think that morality is capable of demonstration as well as mathematics ; since the precise real essence of the things moral words stand for may be perfectly known, and so the congruity or incongruity of the things themselves be certainly discovered, in which consists perfect knowledge. Nor let anyone object, That the names of substances are often to be made use of in morality, as well as those of modes, from which will arise obscurity ; for, as to substances, when concerned in moral discourses, their divers natures are not so much inquired into as supposed : *v.g.* When we say that man is subject to law, we mean nothing by man but a corporeal rational creature : what the real essence or other qualities of that creature are, in this case, is no way considered.”

From these passages <sup>1</sup> it appears that this opinion was not a transient thought, but what he had revolved in his mind on different occasions. He offers his reasons for it, illustrates it by examples, and considers at length the causes that have led men to think mathematics more capable of demonstration than the principles of morals.

Some of his learned correspondents, particularly his friend Mr. Molyneux, urged and importuned him to compose a system of morals according to the idea he had advanced in his *Essay*,<sup>2</sup> and in his answer to these solicitations he only pleads other occupations, without suggesting any change of his opinion, or any great difficulty in the execution of what was desired.

The reason he gives for this opinion is ingenious ; and his regard for virtue, the highest prerogative of the human species, made him fond of an opinion which seemed to be favourable to virtue and to have a just foundation in reason.

We need not, however, be afraid that the interest of virtue may suffer by a free and candid examination of this question, or indeed of any question whatever. For the interest of truth and of virtue can never be found in opposition. Darkness and error may befriend vice, but can never be favourable to virtue.

Those philosophers who think that our determinations in morals are not real judgments — that right and wrong in human conduct are only certain feelings or sensations in the person who contemplates the action — must reject Mr. Locke's opinion without examination. For if the principles of morals be not a matter of judgment, but of feeling only, there can be no demonstration of them ; nor can any other reason be given for them but that men are so constituted by the Author of their being as to contemplate with pleasure the actions we call virtuous, and with disgust those we call vicious.

It is not, therefore, to be expected that the philosophers of this class should think this opinion of Mr. Locke

<sup>1</sup> Reid had also quoted *Essay*, IV. 3. 18 and 12. 7 and 8.

<sup>2</sup> *Works*, ix. p. 291.

worthy of examination, since it is founded upon what they think a false hypothesis. But if our determinations in morality be real judgments, and like all other judgments be either true or false, it is not unimportant to understand upon what kind of evidence those judgments rest.

The argument offered by Mr. Locke to show that morality is capable of demonstration is, "That the precise real essence of the things moral words stand for may be perfectly known, and so the congruity or incongruity of the things themselves be perfectly discovered, in which consists perfect knowledge".<sup>1</sup>

It is true that the field of demonstration is the various relations of things conceived abstractly, of which we may have perfect and adequate conceptions. And Mr. Locke, taking all the things which moral words stand for to be of this kind, concluded that morality is as capable of demonstration as mathematics.

I acknowledge that the names of the virtues and vices, of right and obligation, of liberty and property, stand for things abstract, which may be accurately defined, or at least conceived as distinctly and adequately as mathematical quantities. And thence indeed it follows that their mutual relations may be perceived as clearly and certainly as mathematical truths.

Of this Mr. Locke gives two pertinent examples. The first — "Where there is no property there is no injustice, is", says he, "a proposition as certain as any demonstration in Euclid".<sup>2</sup>

When injustice is defined to be a violation of property, it is as necessary a truth that there can be no injustice where there is no property, as that you cannot take from a man that which he has not.

The second example is, "That no government allows absolute liberty".<sup>3</sup> This is a truth no less certain and necessary.

Such abstract truths I would call metaphysical rather than moral. We give the name of mathematical to truths that express the relations of quantities considered

<sup>1</sup> *Essay*, III. 11. 16.

<sup>2</sup> *Ib* IV. 3. 18.

<sup>3</sup> *Ibid*.

abstractly ; all other abstract truths may be called metaphysical. But if those mentioned by Mr. Locke are to be called moral truths, I agree with him that there are many such that are necessarily true, and that have all the evidence that mathematical truths can have.

It ought, however, to be remembered that, as was before observed,<sup>1</sup> the relations of things abstract, perceivable by us, excepting those of mathematical quantities, are few, and for the most part immediately discerned, so as not to require that train of reasoning which we call demonstration. Their evidence resembles more that of mathematical axioms than mathematical propositions.

This appears in the two propositions given as examples by Mr. Locke. The first follows immediately from the definition of injustice ; the second from the definition of government. Their evidence may more properly be called intuitive than demonstrative. And this I apprehend to be the case, or nearly the case, of all abstract truths that are not mathematical, for the reason given in the last chapter.

The propositions which I think are properly called moral are those that affirm some moral obligation to be or not to be incumbent on one or more individual persons. To such propositions Mr. Locke's reasoning does not apply, because the subjects of the proposition are not things whose real essence may be perfectly known. They are the creatures of God ; their obligation results from the constitution which God hath given them, and the circumstances in which he hath placed them. That an individual hath such a constitution and is placed in such circumstances is not an abstract and necessary, but a contingent truth. It is a matter of fact and, therefore, not capable of demonstrative evidence, which belongs only to necessary truths.

The evidence which every man hath of his own existence, though it be irresistible, is not demonstrative. And the same thing may be said of the evidence which every man hath that he is a moral agent, and under certain moral obligations. In like manner the evidence we have of the

<sup>1</sup> P. 423.

existence of other men is not demonstrative ; nor is the evidence we have of their being endowed with those faculties which make them moral and accountable agents.

If man had not the faculty given him by God of perceiving certain things in conduct to be right and others to be wrong, and of perceiving his obligations to do what is right and not to do what is wrong, he would not be a moral and accountable being.

If a man be endowed with such a faculty, there must be some things which by this faculty are immediately discerned to be right, and others to be wrong ; and, therefore, there must be in morals, as in other sciences, first principles which do not derive their evidence from any antecedent principles, but may be said to be intuitively discerned.

• Moral truths, therefore, may be divided into two classes — to wit, such as are self-evident to every man whose understanding and moral faculty are ripe, and such as are deduced by reasoning from those that are self-evident. If the first be not discerned without reasoning, the last never can be so by any reasoning.

If any man could say with sincerity that he is conscious of no obligation to consult his own present and future happiness, to be faithful to his engagements, to obey his Maker, to injure no man, I know not what reasoning, either probable or demonstrative, I could use to convince him of any moral duty. As you cannot reason in mathematics with a man who denies the axioms, as little can you reason with a man in morals who denies the first principles of morals. The man who does not, by the light of his own mind, perceive some things in conduct to be right and others to be wrong, is as incapable of reasoning about morals as a blind man is about colours. Such a man, if any such man ever was, would be no moral agent, nor capable of any moral obligation.

• Some first principles of morals must be immediately discerned, otherwise we have no foundation on which others can rest, or from which we can reason.

Every man knows certainly that what he approves in

other men he ought to do in like circumstances, and that he ought not to do what he condemns in other men. Every man knows that he ought, with candour, to use the best means of knowing his duty. To every man who has a conscience these things are self-evident. They are immediate dictates of our moral faculty, which is a part of the human constitution ; and every man condemns himself, whether he will or not, when he knowingly acts contrary to them. The evidence of these fundamental principles of morals, and of others that might be named, appears, therefore, to me to be intuitive rather than demonstrative.

Thus, I think it appears that every man of common understanding knows certainly, and without reasoning, the ultimate ends he ought to pursue, and that reasoning is necessary only to discover the most proper means of, attaining them ; and in this, indeed, a good man may often be in doubt.

Thus, a magistrate knows that it is his duty to promote the good of the community which hath entrusted him with authority, and to offer to prove this to him by reasoning would be to affront him. But whether such a scheme of conduct in his office, or another, may best serve that end, he may in many cases be doubtful. I believe in such cases he can very rarely have demonstrative evidence. His conscience determines the end he ought to pursue, and he has intuitive evidence that his end is good ; but prudence must determine the means of attaining that end, and prudence can very rarely use demonstrative reasoning but must rest in what appears most probable.

I apprehend that in every kind of duty we owe to God or man the case is similar — that is, that the obligation of the most general rules of duty is self-evident ; that the application of those rules to particular actions is often no less evident, and that when it is not evident but requires reasoning, that reasoning can very rarely be of the demonstrative but must be of the probable kind. Sometimes it depends upon the temper, and talents, and circumstances of the man himself ; sometimes upon the character and

circumstances of others ; sometimes upon both ; and these are things which admit not of demonstration.

In the common occurrences of life, a man of integrity who hath exercised his moral faculty in judging what is right and what is wrong, sees his duty without reasoning as he sees the highway. The cases that require reasoning are few compared with those that require none, and a man may be honest and virtuous who cannot reason and who knows not what demonstration means.

Upon the whole I agree with Mr. Locke that propositions expressing the congruities and incongruities of things abstract, which moral words stand for, may have all the evidence of mathematical truths. But this is not peculiar to things which moral words stand for. It is common to abstract propositions of every kind. For instance, you cannot take from a man what he has not. A man cannot be bound and perfectly free at the same time. I think no man will call these moral truths ; but they are necessary truths, and as evident as any in mathematics. Indeed, they are very nearly allied to the two which Mr. Locke gives as instances of moral propositions capable of demonstration. Of such abstract propositions I think it may more properly be said that they have the evidence of mathematical axioms than that they are capable of demonstration.

There are propositions of another kind which alone deserve the name of moral propositions. They are such as affirm something to be the duty of persons that really exist. These are not abstract propositions, and therefore Mr. Locke's reasoning does not apply to them. The truth of all such propositions depends upon the constitution and circumstances of the persons to whom they are applied.

Of such propositions there are some that are self-evident to every man that has a conscience, and these are the principles from which all moral reasoning must be drawn. They may be called the axioms of morals. But our reasoning from these axioms to any duty that is not self-evident can very rarely be demonstrative. Nor is

this any detriment to the cause of virtue, because to act against what appears most probable in a matter of duty is as real a trespass against the first principles of morality as to act against demonstration; and because he who has but one talent in reasoning, and makes the proper use of it, shall be accepted as well as he to whom God has given ten.

### CHAPTER 3

#### OF PROBABLE REASONING

THE field of demonstration, as has been observed,<sup>1</sup> is necessary truth: the field of probable reasoning is contingent truth — not what necessarily must be at all times, but what is, or was, or shall be.

No contingent truth is capable of strict demonstration, but necessary truths may sometimes have probable evidence.

Dr. Wallis<sup>2</sup> discovered many important mathematical truths by that kind of induction which draws a general conclusion from particular premises. This is not strict demonstration, but in some cases gives as full conviction as demonstration itself; and a man may be certain that a truth is demonstrable before it ever has been demonstrated. In other cases a mathematical proposition may have such probable evidence from induction or analogy as encourages the mathematician to investigate its demonstration. But still the reasoning proper to mathematical and other necessary truths is demonstration, and that which is proper to contingent truths is probable reasoning.

These two kinds of reasoning differ in other respects. In demonstrative reasoning one argument is as good as a

<sup>1</sup> P. 422.

<sup>2</sup> John Wallis (1616–1703), famous mathematician, and one of the founders of the Royal Society.

thousand. One demonstration may be more elegant than another ; it may be more easily comprehended, or it may be more subservient to some purpose beyond the present. On any of these accounts it may deserve a preference : but then it is sufficient by itself ; it needs no aid from another ; it can receive none. To add more demonstrations of the same conclusion would be a kind of tautology in reasoning, because one demonstration, clearly comprehended, gives all the evidence we are capable of receiving.

The strength of probable reasoning for the most part depends not upon any one argument but upon many, which unite their force and lead to the same conclusion. Any one of them by itself would be insufficient to convince, but the whole taken together may have a force that is irresistible, so that to desire more evidence would be absurd. Would any man seek new arguments to prove that there were such persons as King Charles I or Oliver Cromwell ?

That we may not be embarrassed by the ambiguity of words, it is proper to observe that there is a popular meaning of *probable evidence* which ought not to be confounded with the philosophical meaning above explained.

In common language probable evidence is considered as an inferior degree of evidence, and is opposed to certainty ; so that what is certain is more than probable, and what is only probable is not certain. Philosophers consider probable evidence not as a degree, but as a species of evidence which is opposed, not to certainty, but to another species of evidence called demonstration.

Demonstrative evidence has no degrees ; but probable evidence, taken in the philosophical sense, has all degrees from the very least to the greatest, which we call certainty.

That there is such a city as Rome I am as certain as of any proposition in Euclid ; but the evidence is not demonstrative, but of that kind which philosophers call probable. Yet in common language it would sound oddly to say it is probable there is such a city as Rome, because it would imply some degree of doubt or uncertainty.

Taking probable evidence, therefore, in the philosophical sense, as it is opposed to demonstrative, it may have any degrees of evidence from the least to the greatest.

I think in most cases we measure the degrees of evidence by the effect they have upon a sound understanding, when comprehended clearly and without prejudice. Every degree of evidence perceived by the mind produces a proportioned degree of assent or belief. The judgment may be in perfect suspense between two contradictory opinions when there is no evidence for either, or equal evidence for both. The least preponderancy on one side inclines the judgment in proportion. Belief is mixed with doubt, more or less, until we come to the highest degree of evidence, when all doubt vanishes and the belief is firm and immovable. This degree of evidence, the highest the human faculties can attain, we call certainty.

Probable evidence not only differs in kind from demonstrative, but is itself of different kinds. The chief of these I shall mention, without pretending to make a complete enumeration.

The first kind is that of human testimony, upon which the greatest part of human knowledge is built.

The faith of history depends upon it, as well as the judgment of solemn tribunals, with regard to men's acquired rights, and with regard to their guilt or innocence when they are charged with crimes. A great part of the business of the judge, of counsel at the bar, of the historian, the critic, and the antiquarian, is to canvass and weigh this kind of evidence, and no man can act with common prudence in the ordinary occurrences of life who has not some competent judgment of it.

The belief we give to testimony in many cases is not solely grounded upon the veracity of the testifier. In a single testimony we consider the motives a man might have to falsify. If there be no appearance of any such motive, much more if there be motives on the other side, his testimony has weight independent of his moral character. If the testimony be circumstantial, we consider how far the circumstances agree together and with things

that are known. It is so very difficult to fabricate a story which cannot be detected by a judicious examination of the circumstances that it acquires evidence by being able to bear such a trial. There is an art in detecting false evidence in judicial proceedings, well known to able judges and barristers ; so that I believe few false witnesses leave the bar without suspicion of their guilt.

When there is an agreement of many witnesses, in a great variety of circumstances, without the possibility of a previous concert, the evidence may be equal to that of demonstration.

A second kind of probable evidence is the authority of those who are good judges of the point in question.

A third kind of probable evidence is that by which we recognise the identity of things and persons of our acquaintance. That two swords, two horses, or two persons, may be so perfectly alike as not to be distinguishable by those to whom they are best known, cannot be shown to be impossible. But we learn either from nature or from experience that it never happens, or so very rarely that a person or thing well known to us is immediately recognised without any doubt, when we perceive the marks or signs by which we were in use to distinguish it from all other individuals of the kind.

This evidence we rely upon in the most important affairs of life, and by this evidence the identity both of things and of persons is determined in courts of judicature.

A fourth kind of probable evidence is that which we have of men's future actions and conduct, from the general principles of action in man, or from our knowledge of the individuals.

Such maxims with regard to human conduct are the foundation of all political reasoning and of common prudence in the conduct of life. Hardly can a man form any project in public or in private life which does not depend upon the conduct of other men as well as his own, and which does not go upon the supposition that men will act such a part in such circumstances. This evidence

may be probable in a very high degree, but can never be demonstrative. The best concerted project may fail, and wise counsels may be frustrated, because some individual acted a part which it would have been against all reason to expect.

Another kind of probable evidence, the counterpart of the last, is that by which we collect men's characters and designs from their actions, speech, and other external signs.

We see not men's hearts, nor the principles by which they are actuated ; but there are external signs of their principles and dispositions which, though not certain, may sometimes be more trusted than their professions ; and it is from external signs that we must draw all the knowledge we can attain of men's characters.

The next kind of probable evidence I mention is that, which mathematicians call the probability of chances.

We attribute some events to chance because we know only the remote cause which must produce some one event of a number, but know not the more immediate cause which determinates a particular event of that number in preference to the others.

I think all the chances about which we reason in mathematics are of this kind. Thus, in throwing a just die upon a table we say it is an equal chance which of the six sides shall be turned up, because neither the person who throws nor the bystanders know the precise measure of force and direction necessary to turn up any one side rather than another. There are here therefore six events, one of which must happen ; and as all are supposed to have equal probability, the probability of any one side being turned up, the ace for instance, is as one to the remaining number, five.

The probability of turning up two aces with two dice is as one to thirty-five, because here there are thirty-six events each of which has equal probability.

Upon such principles as these the doctrine of chance has furnished a field of demonstrative reasoning of great extent, although the events about which this reasoning

is employed be not necessary, but contingent, and be not certain, but probable.

This may seem to contradict a principle before advanced, that contingent truths are not capable of demonstration ; but it does not : for in the mathematical reasonings about chance the conclusion demonstrated is not that such an event shall happen, but that the probability of its happening bears such a ratio to the probability of its failing ; and this conclusion is necessary upon the suppositions on which it is grounded.

The last kind of probable evidence I shall mention is that by which the known laws of nature have been discovered, and the effects which have been produced by them in former ages, or which may be expected in time to come.

The laws of nature are the rules by which the Supreme Being governs the world. We deduce them only from facts that fall within our own observation, or are properly attested by those who have observed them.

The knowledge of some of the laws of nature is necessary to all men in the conduct of life. These are soon discovered even by savages. They know that fire burns, that water drowns, that bodies gravitate towards the earth. They know that day and night, summer and winter, regularly succeed each other. As far back as their experience and information reach, they know that these have happened regularly ; and upon this ground they are led, by the constitution of human nature, to expect that they will happen in time to come in like circumstances.

The knowledge which the philosopher attains of the laws of nature differs from that of the vulgar, not in the first principles on which it is grounded, but in its extent and accuracy. He collects with care the phenomena that lead to the same conclusion, and compares them with those that seem to contradict or to limit it. He observes the circumstances on which every phenomenon depends, and distinguishes them carefully from those that are accidentally conjoined with it. He puts natural bodies in various situations, and applies them to one another in various

ways, on purpose to observe the effect ; and thus acquires from his senses a more extensive knowledge of the course of nature in a short time than could be collected by casual observation in many ages.

But what is the result of his laborious researches ? It is that, as far as he has been able to observe, such things have always happened in such circumstances, and such bodies have always been found to have such properties. These are matters of fact attested by sense, memory, and testimony, just as the few facts which the vulgar know are attested to them.

And what conclusions does the philosopher draw from the facts he has collected ? They are that like events have happened in former times in like circumstances, and will happen in time to come ; and these conclusions are built on the very same ground on which the simple rustic concludes that the sun will rise to-morrow.

Facts reduced to general rules, and the consequences of those general rules, are all that we really know of the material world. And the evidence that such general rules have no exceptions, as well as the evidence that they will be the same in time to come as they have been in time past, can never be demonstrative. It is only that species of evidence which philosophers call probable. General rules may have exceptions or limitations which no man ever had occasion to observe. The laws of nature may be changed by him who established them. But we are led by our constitution to rely upon their continuance with as little doubt as if it was demonstrable.

I pretend not to have made a complete enumeration of all the kinds of probable evidence ; but those I have mentioned are sufficient to show, that the far greatest part, and the most interesting part of our knowledge, must rest upon evidence of this kind, and that many things are certain for which we have only that kind of evidence which philosophers call probable.

## CHAPTER 4

OF MR. HUME'S SCEPTICISM WITH REGARD  
TO REASON

IN the *Treatise of Human Nature*, Bk. I. Part IV. § 1, the author undertakes to prove two points: *First*, That all that is called human knowledge (meaning demonstrative knowledge) is only probability; and *secondly*, That this probability, when duly examined, evanishes by degrees, and leaves at last no evidence at all: so that, in the issue, there is no ground to believe any one proposition rather than its contrary; and "all those are certainly fools who reason or believe anything".

According to this account, reason, that boasted prerogative of man, and the light of his mind, is an *ignis fatuus* which misleads the wandering travellers and leaves him at last in absolute darkness.

How unhappy is the condition of man, born under a necessity of believing contradictions and of trusting to a guide who confesses himself to be a false one!

It is some comfort that this doctrine can never be seriously adopted by any man in his senses. And after this author had shown that "all the rules of logic require a total extinction of all belief and evidence", he himself, and all men that are not insane, must have believed many things, and yielded assent to the evidence which he had extinguished.

This indeed he is so candid as to acknowledge. "He finds himself absolutely and necessarily determined to live and talk and act like other people in the common affairs of life. And since reason is incapable of dispelling these clouds, most fortunately it happens that nature herself suffices to that purpose, and cures him of this philosophical melancholy and delirium." See § 7.

This was surely a very kind and friendly interposition of nature, for the effects of this philosophical delirium, if

carried into life, must have been very melancholy.

It may, however, not be improper to inquire whether, as the author thinks, it was produced by a just application of the rules of logic or, as others may be apt to think, by the misapplication and abuse of them.

*First*, Because we are fallible, the author infers that all knowledge degenerates into probability.

That man, and probably every created being, is fallible; and that a fallible being cannot have that perfect comprehension and assurance of truth which an infallible being has — I think ought to be granted. It becomes a fallible being to be modest, open to new light, and sensible that, by some false bias or by rash judging, he may be misled. If this be called a degree of scepticism, I cannot help approving of it, being persuaded that the man who makes the best use he can of the faculties which God has given him, without thinking them more perfect than they really are, may have all the belief that is necessary in the conduct of life, and all that is necessary to his acceptance with his Maker.

It is granted, then, that human judgments ought always to be formed with a humble sense of our fallibility in judging.

This is all that can be inferred by the rules of logic from our being fallible. And if this be all that is meant by our knowledge degenerating into probability, I know no person of a different opinion.

But it may be observed that the author here uses the word probability in a sense for which I know no authority but his own. Philosophers understand probability as opposed to demonstration, the vulgar as opposed to certainty; but this author understands it as opposed to infallibility, which no man claims.

One who believes himself to be fallible may still hold it to be certain that two and two make four, and that two contradictory propositions cannot both be true. He may believe some things to be probable only, and other things to be demonstrable, without making any pretence to infallibility.

If we use words in their proper meaning, it is impossible that demonstration should degenerate into probability from the imperfection of our faculties. Our judgment cannot change the nature of the things about which we judge. What is really demonstration will still be so, whatever judgment we form concerning it. It may likewise be observed that, when we mistake that for demonstration which really is not, the consequence of this mistake is not that demonstration degenerates into probability, but that what we took to be demonstration is no proof at all; for one false step in a demonstration destroys the whole, but cannot turn it into another kind of proof.

Upon the whole, then, this first conclusion of our author, That the fallibility of human judgment turns all knowledge into probability, if understood literally, is absurd; but if it be only a figure of speech, and means no more but that in all our judgments we ought to be sensible of our fallibility, and ought to hold our opinions with that modesty that becomes fallible creatures — which I take to be what the author meant — this I think nobody denies, nor was it necessary to enter into a laborious proof of it.

One is never in greater danger of transgressing against the rules of logic than in attempting to prove what needs no proof. Of this we have an instance in this very case, for the author begins his proof that all human judgments are fallible with affirming that some are infallible.

“In all demonstrative sciences”, says he, “the rules are certain and infallible; but when we apply them, our fallible and uncertain faculties are very apt to depart from them, and fall into error.”

He had forgot, surely, that the rules of demonstrative sciences are discovered by our fallible and uncertain faculties, and have no authority but that of human judgment. If they be infallible, some human judgments are infallible; and there are many in various branches of human knowledge which have as good a claim to infallibility as the rules of the demonstrative sciences.

We have reason here to find fault with our author for not being sceptical enough, as well as for a mistake in

reasoning, when he claims infallibility to certain decisions of the human faculties in order to prove that all their decisions are fallible.

The *second* point which he attempts to prove is, That this probability, when duly examined, suffers a continual diminution and at last a total extinction.

I examine the proof of a theorem of Euclid. It appears to me to be strict demonstration. But I may have overlooked some fallacy, therefore I examine it again and again, but can find no flaw in it. I find all that have examined it agree with me. I have now that evidence of the truth of the proposition which I and all men call demonstration, and that belief of it which we call certainty.

Here my sceptical friend interposes and assures me that the rules of logic reduce this demonstration to no evidence at all. I am willing to hear what step in it he thinks fallacious, and why. He makes no objection to any part of the demonstration, but pleads my fallibility in judging. I have made the proper allowance for this already, by being open to conviction. But, says he, there are two uncertainties, the first inherent in the subject, which I have already shown to have only probable evidence; the second arising from the weakness of the faculty that judges. I answer, it is the weakness of the faculty only that reduces this demonstration to what you call probability. You must not therefore make it a second uncertainty, for it is the same with the first. To take credit twice in an account for the same article is not agreeable to the rules of logic. Hitherto, therefore, there is but one uncertainty — to wit, my fallibility in judging.

But, says my friend, you are obliged by reason to add a new uncertainty, derived from the possibility of error in the estimation you make of the truth and fidelity of your faculties. I answer —

This estimation is ambiguously expressed; it may either mean an estimation of my liableness to err by the misapplication and abuse of my faculties, or it may mean an estimation of my liableness to err by conceiving my faculties to be true and faithful, while they may be false

and fallacious in themselves, even when applied in the best manner. I shall consider this estimation in each of these senses.

If the first be the estimation meant, it is true that reason directs us, as fallible creatures to carry along with us in all our judgment a sense of our fallibility. It is true also that we are in greater danger of erring in some cases and less in others, and that this danger of erring may, according to the circumstances of the case, admit of an estimation which we ought likewise to carry along with us in every judgment we form.

When a demonstration is short and plain ; when the point to be proved does not touch our interest or our passions ; when the faculty of judging, in such cases, has acquired strength by much exercise — there is less danger of erring ; when the contrary circumstances take place, there is more.

In the present case every circumstance is favourable to the judgment I have formed. There cannot be less danger of erring in any case, excepting perhaps when I judge of a self-evident axiom.

The Sceptic further urges that this decision, though favourable to my first judgment, being founded only on probability, must still weaken the evidence of that judgment.

Here I cannot help being of a quite contrary opinion ; nor can I imagine how an ingenious author could impose upon himself so grossly, for surely he did not intend to impose upon his reader.

After repeated examination of a proposition of Euclid, I judge it to be strictly demonstrated ; this is my first judgment. But as I am liable to err from various causes, I consider how far I may have been misled by any of these causes in this judgment. My decision upon this second point is favourable to my first judgment, and therefore, as I apprehend, must strengthen it. To say that this decision, because it is only probable, must weaken the first evidence seems to me contrary to all rules of logic and to common sense.

The first judgment may be compared to the testimony of a credible witness ; the second, after a scrutiny into the character of the witness, wipes off every objection that can be made to it, and therefore surely must confirm and not weaken his testimony.

But let us suppose that in another case I examine my first judgment upon some point, and find that it was attended with unfavourable circumstances, what, in reason, and according to the rules of logic, ought to be the effect of this discovery ?

The effect surely will be, and ought to be, to make me less confident in my first judgment, until I examine the point anew in more favourable circumstances. If it be a matter of importance, I return to weigh the evidence of my first judgment. If it was precipitate before, it must now be deliberate in every point. If at first I was in passion, I must now be cool. If I had an interest in the decision, I must place the interest on the other side.

It is evident that this review of the subject may confirm my first judgment notwithstanding the suspicious circumstances that attended it. Though the judge was biassed or corrupted, it does not follow that the sentence was unjust. The rectitude of the decision does not depend upon the character of the judge but upon the nature of the case. From that only it must be determined whether the decision be just. The circumstances that rendered it suspicious are mere presumptions which have no force against direct evidence.

Thus, I have considered the effect of this estimation of our liableness to err in our first judgment, and have allowed to it all the effect that reason and the rules of logic permit. In the case I first supposed, and in every case where we can discover no cause of error, it affords a presumption in favour of the first judgment. In other cases it may afford a presumption against it. But the rules of logic require that we should not judge by presumption where we have direct evidence. The effect of an unfavourable presumption should only be, to make us examine the evidence with the greater care.

The sceptic urges, in the last place, that this estimation must be subjected to another estimation, that to another, and so on *in infinitum*; and as every new estimation takes away from the evidence of the first judgment, it must at last be totally annihilated.

I answer, *first*, It has been shown above that the first estimation, supposing it unfavourable, can only afford a presumption against the first judgment; the second, upon the same supposition, will be only the presumption of a presumption; and the third, the presumption that there is a presumption of a presumption. This infinite series of presumptions resembles an infinite series of quantities, decreasing in geometrical proportion, which amounts only to a finite sum.

*Secondly*, I have shown that the estimation of our first judgment may strengthen it; and the same thing may be said of all the subsequent estimations. It would, therefore, be as reasonable to conclude that the first judgment will be brought to infallible certainty when this series of estimations is wholly in its favour, as that its evidence will be brought to nothing by such a series supposed to be wholly unfavourable to it. But in reality one serious and cool re-examination of the evidence by which our first judgment is supported, has, and in reason ought to have, more force to strengthen or weaken it than an infinite series of such estimations as our author requires.

*Thirdly*, I know no reason nor rule in logic that requires that such a series of estimations should follow every particular judgment.

A wise man who has practised reasoning knows that he is fallible and carries this conviction along with him in every judgment he forms. He knows likewise that he is more liable to err in some cases than in others. He has a scale in his mind by which he estimates his lability to err, and by this he regulates the degree of his assent in his first judgment upon any point.

The author's reasoning supposes that a man, when he forms his first judgment, conceives himself to be infallible; that by a second and subsequent judgment he discovers

that he is not infallible ; and that by a third judgment, subsequent to the second, he estimates his liableness to err in such a case as the present.

If the man proceed in this order, I grant that his second judgment will with good reason bring down the first from supposed infallibility to fallibility, and that his third judgment will in some degree either strengthen or weaken the first, as it is corrected by the second.

But every man of understanding proceeds in a contrary order. When about to judge in any particular point, he knows already that he is not infallible. He knows what are the cases in which he is most or least liable to err. The conviction of these things is always present to his mind, and influences the degree of his assent in his first judgment, as far as to him appears reasonable.

If he should afterwards find reason to suspect his first judgment, and desires to have all the satisfaction his faculties can give, reason will direct him not to form such a series of estimations upon estimations, as this author requires, but to examine the evidence of his first judgment carefully and coolly ; and this review may very reasonably, according to its result, either strengthen or weaken, or totally overturn his first judgment.

This infinite series of estimations, therefore, is not the method that reason directs, in order to form our judgment in any case. It is introduced without necessity, without any use but to puzzle the understanding, and to make us think that to judge, even in the simplest and plainest cases, is a matter of insurmountable difficulty and endless labour ; just as the ancient Sceptic, to make a journey of two thousand paces appear endless, divided it into an infinite number of stages.

But we observed that the estimation which our author requires may admit of another meaning which indeed is more agreeable to the expression, but inconsistent with what he advanced before.

By the possibility of error in the estimation of the truth and fidelity of our faculties may be meant that we may err by esteeming our faculties true and faithful while they

may be false and fallacious, even when used according to the rules of reason and logic.

If this be meant, I answer, *first*, That the truth and fidelity of our faculty of judging is, and must be, taken for granted in every judgment and in every estimation.

If the sceptic can seriously doubt of the truth and fidelity of his faculty of judging when properly used, and suspend his judgment upon that point till he finds proof his scepticism admits of no cure by reasoning, and he must even continue in it until he have new faculties given him which shall have authority to sit in judgment upon the old. Nor is there any need of an endless succession of doubts upon this subject, for the first puts an end to all judgment and reasoning and to the possibility of conviction by that means. The sceptic has here got possession of a stronghold which is impregnable to reasoning, and we must leave him in possession of it till nature, by other means, makes him give it up.

*Secondly*, I observe that this ground of scepticism from the supposed infidelity of our faculties contradicts what the author before advanced in this very argument — to wit, that “the rules of the demonstrative sciences are certain and infallible, and that truth is the natural effect of reason, and that error arises from the irruption of other causes”.

But perhaps he made these concessions unwarily. He is therefore at liberty to retract them, and to rest his scepticism upon this sole foundation, That no reasoning can prove the truth and fidelity of our faculties. Here he stands upon firm ground, for it is evident that every argument offered to prove the truth and fidelity of our faculties takes for granted the thing in question, and is therefore that kind of sophism which logicians call *petitio principii*.

All we would ask of this kind of sceptic is that he would be uniform and consistent, and that his practice in life do not belie his profession of scepticism with regard to the fidelity of his faculties; for the want of faith, as well as faith itself, is best shown by works. If a sceptic avoid

the fire as much as those who believe it dangerous to go into it, we can hardly avoid thinking his scepticism to be feigned, and not real.

Upon the whole, I see only two conclusions that can be fairly drawn from this profound and intricate reasoning against reason. The first is, That we are fallible in all our judgments and in all our reasonings. The second, That the truth and fidelity of our faculties can never be proved by reasoning, and therefore our belief of it cannot be founded on reasoning. If the last be what the author calls his hypothesis, I subscribe to it, and think it not an hypothesis but a manifest truth ; though I conceive it to be very improperly expressed, by saying that belief is more properly an act of the sensitive than of the cogitative part of our nature.

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