

# АРТУР ШОПЕНГАУЭР

THE WORLD AS WILL  
AND IDEA (VOL. 1 OF 3)

Arthur Schopenhauer

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and Idea (Vol. 1 of 3)**

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**Schopenhauer A.**

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# Arthur Schopenhauer

## The World as Will and Idea (Vol. 1 of 3)

### Translators' Preface

The style of “Die Welt als Wille und Vorstellung” is sometimes loose and involved, as is so often the case in German philosophical treatises. The translation of the book has consequently been a matter of no little difficulty. It was found that extensive alteration of the long and occasionally involved sentences, however likely to prove conducive to a satisfactory English style, tended not only to obliterate the form of the original but even to imperil the meaning. Where a choice has had to be made, the alternative of a somewhat slavish adherence to Schopenhauer's *ipsissima verba* has accordingly been preferred to that of inaccuracy. The result is a piece of work which leaves much to be desired, but which has yet consistently sought to reproduce faithfully the spirit as well as the letter of the original.

As regards the rendering of the technical terms about which there has been so much controversy, the equivalents used have only been adopted after careful consideration of their meaning in the theory of knowledge. For example, “Vorstellung” has been rendered by “idea,” in preference to “representation,” which is neither accurate, intelligible, nor elegant. “Idee,” is translated by the same word, but spelled with a capital, – “Idea.” Again, “Anschauung” has been rendered according to the context, either by “perception” simply, or by “intuition or perception.”

Notwithstanding statements to the contrary in the text, the book is probably quite intelligible in itself, apart from the treatise “On the Fourfold Root of the Principle of Sufficient Reason.” It has, however, been considered desirable to add an abstract of the latter work in an appendix to the third volume of this translation.

R. B. H.

J. K.

## Preface To The First Edition

I propose to point out here how this book must be read in order to be thoroughly understood. By means of it I only intend to impart a single thought. Yet, notwithstanding all my endeavours, I could find no shorter way of imparting it than this whole book. I hold this thought to be that which has very long been sought for under the name of philosophy, and the discovery of which is therefore regarded by those who are familiar with history as quite as impossible as the discovery of the philosopher's stone, although it was already said by Pliny: *Quam multa fieri non posse, priusquam sint facta, judicantur?* (Hist. nat. 7, 1.)

According as we consider the different aspects of this one thought which I am about to impart, it exhibits itself as that which we call metaphysics, that which we call ethics, and that which we call æsthetics; and certainly it must be all this if it is what I have already acknowledged I take it to be.

A *system of thought* must always have an architectonic connection or coherence, that is, a connection in which one part always supports the other, though the latter does not support the former, in which ultimately the foundation supports all the rest without being supported by it, and the apex is supported without supporting. On the other hand, a *single thought*, however comprehensive it may be, must preserve the most perfect unity. If it admits of being broken up into parts to facilitate its communication, the connection of these parts must yet be organic, *i. e.*, it must be a connection in which every part supports the whole just as much as it is supported by it, a connection in which there is no first and no last, in which the whole thought gains distinctness through every part, and even the smallest part cannot be completely understood unless the whole has already been grasped. A book, however, must always have a first and a last line, and in this respect will always remain very unlike an organism, however like one its content may be: thus form and matter are here in contradiction.

It is self-evident that under these circumstances no other advice can be given as to how one may enter into the thought explained in this work than *to read the book twice*, and the first time with great patience, a patience which is only to be derived from the belief, voluntarily accorded, that the beginning presupposes the end almost as much as the end presupposes the beginning, and that all the earlier parts presuppose the later almost as much as the later presuppose the earlier. I say "almost;" for this is by no means absolutely the case, and I have honestly and conscientiously done all that was possible to give priority to that which stands least in need of explanation from what follows, as indeed generally to everything that can help to make the thought as easy to comprehend and as distinct as possible. This might indeed to a certain extent be achieved if it were not that the reader, as is very natural, thinks, as he reads, not merely of what is actually said, but also of its possible consequences, and thus besides the many contradictions actually given of the opinions of the time, and presumably of the reader, there may be added as many more which are anticipated and imaginary. That, then, which is really only misunderstanding, must take the form of active disapproval, and it is all the more difficult to recognise that it is misunderstanding, because although the laboriously-attained clearness of the explanation and distinctness of the expression never leaves the immediate sense of what is said doubtful, it cannot at the same time express its relations to all that remains to be said. Therefore, as we have said, the first perusal demands patience, founded on confidence that on a second perusal much, or all, will appear in an entirely different light. Further, the earnest endeavour to be more completely and even more easily comprehended in the case of a very difficult subject, must justify occasional repetition. Indeed the structure of the whole, which is organic, not a mere chain, makes it necessary sometimes to touch on the same point twice. Moreover this construction, and the very close connection of all the parts, has not left open to me the division into chapters and paragraphs which I should otherwise have regarded as very important, but has obliged me to rest satisfied with four principal divisions, as it were four aspects of one thought. In each of these four books it is especially important to guard against losing sight, in the details which must necessarily be discussed,

of the principal thought to which they belong, and the progress of the whole exposition. I have thus expressed the first, and like those which follow, unavoidable demand upon the reader, who holds the philosopher in small favour just because he himself is a philosopher.

The second demand is this, that the introduction be read before the book itself, although it is not contained in the book, but appeared five years earlier under the title, “*Ueber die vierfache Wurzel des Satzes vom zureichenden Grunde: eine philosophische Abhandlung*” (On the fourfold root of the principle of sufficient reason: a philosophical essay). Without an acquaintance with this introduction and propaedeutic it is absolutely impossible to understand the present work properly, and the content of that essay will always be presupposed in this work just as if it were given with it. Besides, even if it had not preceded this book by several years, it would not properly have been placed before it as an introduction, but would have been incorporated in the first book. As it is, the first book does not contain what was said in the earlier essay, and it therefore exhibits a certain incompleteness on account of these deficiencies, which must always be supplied by reference to it. However, my disinclination was so great either to quote myself or laboriously to state again in other words what I had already said once in an adequate manner, that I preferred this course, notwithstanding the fact that I might now be able to give the content of that essay a somewhat better expression, chiefly by freeing it from several conceptions which resulted from the excessive influence which the Kantian philosophy had over me at the time, such as – categories, outer and inner sense, and the like. But even there these conceptions only occur because as yet I had never really entered deeply into them, therefore only by the way and quite out of connection with the principal matter. The correction of such passages in that essay will consequently take place of its own accord in the mind of the reader through his acquaintance with the present work. But only if we have fully recognised by means of that essay what the principle of sufficient reason is and signifies, what its validity extends to, and what it does not extend to, and that that principle is not before all things, and the whole world merely in consequence of it, and in conformity to it, a corollary, as it were, of it; but rather that it is merely the form in which the object, of whatever kind it may be, which is always conditioned by the subject, is invariably known so far as the subject is a knowing individual: only then will it be possible to enter into the method of philosophy which is here attempted for the first time, and which is completely different from all previous methods.

But the same disinclination to repeat myself word for word, or to say the same thing a second time in other and worse words, after I have deprived myself of the better, has occasioned another defect in the first book of this work. For I have omitted all that is said in the first chapter of my essay “On Sight and Colour,” which would otherwise have found its place here, word for word. Therefore the knowledge of this short, earlier work is also presupposed.

Finally, the third demand I have to make on the reader might indeed be tacitly assumed, for it is nothing but an acquaintance with the most important phenomenon that has appeared in philosophy for two thousand years, and that lies so near us: I mean the principal writings of Kant. It seems to me, in fact, as indeed has already been said by others, that the effect these writings produce in the mind to which they truly speak is very like that of the operation for cataract on a blind man: and if we wish to pursue the simile further, the aim of my own work may be described by saying that I have sought to put into the hands of those upon whom that operation has been successfully performed a pair of spectacles suitable to eyes that have recovered their sight – spectacles of whose use that operation is the absolutely necessary condition. Starting then, as I do to a large extent, from what has been accomplished by the great Kant, I have yet been enabled, just on account of my earnest study of his writings, to discover important errors in them. These I have been obliged to separate from the rest and prove to be false, in order that I might be able to presuppose and apply what is true and excellent in his doctrine, pure and freed from error. But not to interrupt and complicate my own exposition by a constant polemic against Kant, I have relegated this to a special appendix. It follows then, from what has been said, that my work presupposes a knowledge of this appendix just as much as it presupposes

a knowledge of the philosophy of Kant; and in this respect it would therefore be advisable to read the appendix first, all the more as its content is specially related to the first book of the present work. On the other hand, it could not be avoided, from the nature of the case, that here and there the appendix also should refer to the text of the work; and the only result of this is, that the appendix, as well as the principal part of the work, must be read twice.

The philosophy of Kant, then, is the only philosophy with which a thorough acquaintance is directly presupposed in what we have to say here. But if, besides this, the reader has lingered in the school of the divine Plato, he will be so much the better prepared to hear me, and susceptible to what I say. And if, indeed, in addition to this he is a partaker of the benefit conferred by the Vedas, the access to which, opened to us through the Upanishads, is in my eyes the greatest advantage which this still young century enjoys over previous ones, because I believe that the influence of the Sanscrit literature will penetrate not less deeply than did the revival of Greek literature in the fifteenth century: if, I say, the reader has also already received and assimilated the sacred, primitive Indian wisdom, then is he best of all prepared to hear what I have to say to him. My work will not speak to him, as to many others, in a strange and even hostile tongue; for, if it does not sound too vain, I might express the opinion that each one of the individual and disconnected aphorisms which make up the Upanishads may be deduced as a consequence from the thought I am going to impart, though the converse, that my thought is to be found in the Upanishads, is by no means the case.

But most readers have already grown angry with impatience, and burst into reproaches with difficulty kept back so long. How can I venture to present a book to the public under conditions and demands the first two of which are presumptuous and altogether immodest, and this at a time when there is such a general wealth of special ideas, that in Germany alone they are made common property through the press, in three thousand valuable, original, and absolutely indispensable works every year, besides innumerable periodicals, and even daily papers; at a time when especially there is not the least deficiency of entirely original and profound philosophers, but in Germany alone there are more of them alive at the same time, than several centuries could formerly boast of in succession to each other? How is one ever to come to the end, asks the indignant reader, if one must set to work upon a book in such a fashion?

As I have absolutely nothing to advance against these reproaches, I only hope for some small thanks from such readers for having warned them in time, so that they may not lose an hour over a book which it would be useless to read without complying with the demands that have been made, and which should therefore be left alone, particularly as apart from this we might wager a great deal that it can say nothing to them, but rather that it will always be only *pancorum hominum*, and must therefore quietly and modestly wait for the few whose unusual mode of thought may find it enjoyable. For apart from the difficulties and the effort which it requires from the reader, what cultured man of this age, whose knowledge has almost reached the august point at which the paradoxical and the false are all one to it, could bear to meet thoughts almost on every page that directly contradict that which he has yet himself established once for all as true and undeniable? And then, how disagreeably disappointed will many a one be if he finds no mention here of what he believes it is precisely here he ought to look for, because his method of speculation agrees with that of a great living philosopher,<sup>1</sup> who has certainly written pathetic books, and who only has the trifling weakness that he takes all he learned and approved before his fifteenth year for inborn ideas of the human mind. Who could stand all this? Therefore my advice is simply to lay down the book.

But I fear I shall not escape even thus. The reader who has got as far as the preface and been stopped by it, has bought the book for cash, and asks how he is to be indemnified. My last refuge is now to remind him that he knows how to make use of a book in several ways, without exactly reading it. It may fill a gap in his library as well as many another, where, neatly bound, it will certainly look

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<sup>1</sup> F. H. Jacobi.



well. Or he can lay it on the toilet-table or the tea-table of some learned lady friend. Or, finally, what certainly is best of all, and I specially advise it, he can review it.

And now that I have allowed myself the jest to which in this two-sided life hardly any page can be too serious to grant a place, I part with the book with deep seriousness, in the sure hope that sooner or later it will reach those to whom alone it can be addressed; and for the rest, patiently resigned that the same fate should, in full measure, befall it, that in all ages has, to some extent, befallen all knowledge, and especially the weightiest knowledge of the truth, to which only a brief triumph is allotted between the two long periods in which it is condemned as paradoxical or disparaged as trivial. The former fate is also wont to befall its author. But life is short, and truth works far and lives long: let us speak the truth.

*Written at Dresden in August 1818.*

## Preface To The Second Edition

Not to my contemporaries, not to my compatriots – to mankind I commit my now completed work in the confidence that it will not be without value for them, even if this should be late recognised, as is commonly the lot of what is good. For it cannot have been for the passing generation, engrossed with the delusion of the moment, that my mind, almost against my will, has uninterruptedly stuck to its work through the course of a long life. And while the lapse of time has not been able to make me doubt the worth of my work, neither has the lack of sympathy; for I constantly saw the false and the bad, and finally the absurd and senseless,<sup>2</sup> stand in universal admiration and honour, and I bethought myself that if it were not the case those who are capable of recognising the genuine and right are so rare that we may look for them in vain for some twenty years, then those who are capable of producing it could not be so few that their works afterwards form an exception to the perishableness of earthly things; and thus would be lost the reviving prospect of posterity which every one who sets before himself a high aim requires to strengthen him.

Whoever seriously takes up and pursues an object that does not lead to material advantages, must not count on the sympathy of his contemporaries. For the most part he will see, however, that in the meantime the superficial aspect of that object becomes current in the world, and enjoys its day; and this is as it should be. The object itself must be pursued for its own sake, otherwise it cannot be attained; for any design or intention is always dangerous to insight. Accordingly, as the whole history of literature proves, everything of real value required a long time to gain acceptance, especially if it belonged to the class of instructive, not entertaining, works; and meanwhile the false flourished. For to combine the object with its superficial appearance is difficult, when it is not impossible. Indeed that is just the curse of this world of want and need, that everything must serve and slave for these; and therefore it is not so constituted that any noble and sublime effort, like the endeavour after light and truth, can prosper unhindered and exist for its own sake. But even if such an endeavour has once succeeded in asserting itself, and the conception of it has thus been introduced, material interests and personal aims will immediately take possession of it, in order to make it their tool or their mask. Accordingly, when Kant brought philosophy again into repute, it had soon to become the tool of political aims from above, and personal aims from below; although, strictly speaking, not philosophy itself, but its ghost, that passes for it. This should not really astonish us; for the incredibly large majority of men are by nature quite incapable of any but material aims, indeed they can conceive no others. Thus the pursuit of truth alone is far too lofty and eccentric an endeavour for us to expect all or many, or indeed even a few, faithfully to take part in. If yet we see, as for example at present in Germany, a remarkable activity, a general moving, writing, and talking with reference to philosophical subjects, we may confidently assume that, in spite of solemn looks and assurances, only real, not ideal aims, are the actual *primum mobile*, the concealed motive of such a movement; that it is personal, official, ecclesiastical, political, in short, material ends that are really kept in view, and consequently that mere party ends set the pens of so many pretended philosophers in such rapid motion. Thus some design or intention, not the desire of insight, is the guiding star of these disturbers of the peace, and truth is certainly the last thing that is thought of in the matter. It finds no partisans; rather, it may pursue its way as silently and unheeded through such a philosophical riot as through the winter night of the darkest century bound in the rigid faith of the church, when it was communicated only to a few alchemists as esoteric learning, or entrusted it may be only to the parchment. Indeed I might say that no time can be more unfavourable to philosophy than that in which it is shamefully misused, on the one hand to further political objects, on the other as a means of livelihood. Or is it believed that somehow, with such effort and such a turmoil, the truth, at which it by no means aims, will also

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<sup>2</sup> The Hegelian Philosophy.

be brought to light? Truth is no prostitute, that throws herself away upon those who do not desire her; she is rather so coy a beauty that he who sacrifices everything to her cannot even then be sure of her favour.

If Governments make philosophy a means of furthering political ends, learned men see in philosophical professorships a trade that nourishes the outer man just like any other; therefore they crowd after them in the assurance of their good intentions, that is, the purpose of subserving these ends. And they keep their word: not truth, not clearness, not Plato, not Aristotle, but the ends they were appointed to serve are their guiding star, and become at once the criterion of what is true, valuable, and to be respected, and of the opposites of these. Whatever, therefore, does not answer these ends, even if it were the most important and extraordinary things in their department, is either condemned, or, when this seems hazardous, suppressed by being unanimously ignored. Look only at their zeal against pantheism; will any simpleton believe that it proceeds from conviction? And, in general, how is it possible that philosophy, degraded to the position of a means of making one's bread, can fail to degenerate into sophistry? Just because this is infallibly the case, and the rule, "I sing the song of him whose bread I eat," has always held good, the making of money by philosophy was regarded by the ancients as the characteristic of the sophists. But we have still to add this, that since throughout this world nothing is to be expected, can be demanded, or is to be had for gold but mediocrity, we must be contented with it here also. Consequently we see in all the German universities the cherished mediocrity striving to produce the philosophy which as yet is not there to produce, at its own expense and indeed in accordance with a predetermined standard and aim, a spectacle at which it would be almost cruel to mock.

While thus philosophy has long been obliged to serve entirely as a means to public ends on the one side and private ends on the other, I have pursued the course of my thought, undisturbed by them, for more than thirty years, and simply because I was obliged to do so and could not help myself, from an instinctive impulse, which was, however, supported by the confidence that anything true one may have thought, and anything obscure one may have thrown light upon, will appeal to any thinking mind, no matter when it comprehends it, and will rejoice and comfort it. To such an one we speak as those who are like us have spoken to us, and have so become our comfort in the wilderness of this life. Meanwhile the object is pursued on its own account and for its own sake. Now it happens curiously enough with philosophical meditations, that precisely that which one has thought out and investigated for oneself, is afterwards of benefit to others; not that, however, which was originally intended for others. The former is confessedly nearest in character to perfect honesty; for a man does not seek to deceive himself, nor does he offer himself empty husks; so that all sophistication and all mere talk is omitted, and consequently every sentence that is written at once repays the trouble of reading it. Thus my writings bear the stamp of honesty and openness so distinctly on the face of them, that by this alone they are a glaring contrast to those of three celebrated sophists of the post-Kantian period. I am always to be found at the standpoint of *reflection*, i. e., rational deliberation and honest statement, never at that of *inspiration*, called intellectual intuition, or absolute thought; though, if it received its proper name, it would be called empty bombast and charlatanism. Working then in this spirit, and always seeing the false and bad in universal acceptance, yea, bombast<sup>3</sup> and charlatanism<sup>4</sup> in the highest honour, I have long renounced the approbation of my contemporaries. It is impossible that an age which for twenty years has applauded a Hegel, that intellectual Caliban, as the greatest of the philosophers, so loudly that it echoes through the whole of Europe, could make him who has looked on at that desirous of its approbation. It has no more crowns of honour to bestow; its applause is prostituted, and its censure has no significance. That I mean what I say is attested by the fact that if I had in any way sought the approbation of my contemporaries, I would have had to

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<sup>3</sup> Fichte and Schelling.

<sup>4</sup> Hegel.

strike out a score of passages which entirely contradict all their opinions, and indeed must in part be offensive to them. But I would count it a crime to sacrifice a single syllable to that approbation. My guiding star has, in all seriousness, been truth. Following it, I could first aspire only to my own approbation, entirely averted from an age deeply degraded as regards all higher intellectual efforts, and a national literature demoralised even to the exceptions, a literature in which the art of combining lofty words with paltry significance has reached its height. I can certainly never escape from the errors and weaknesses which, in my case as in every one else's, necessarily belong to my nature; but I will not increase them by unworthy accommodations.

As regards this second edition, first of all I am glad to say that after five and twenty years I find nothing to retract; so that my fundamental convictions have only been confirmed, as far as concerns myself at least. The alterations in the first volume therefore, which contains the whole text of the first edition, nowhere touch what is essential. Sometimes they concern things of merely secondary importance, and more often consist of very short explanatory additions inserted here and there. Only the criticism of the Kantian philosophy has received important corrections and large additions, for these could not be put into a supplementary book, such as those which are given in the second volume, and which correspond to each of the four books that contain the exposition of my own doctrine. In the case of the latter, I have chosen this form of enlarging and improving them, because the five and twenty years that have passed since they were composed have produced so marked a change in my method of exposition and in my style, that it would not have done to combine the content of the second volume with that of the first, as both must have suffered by the fusion. I therefore give both works separately, and in the earlier exposition, even in many places where I would now express myself quite differently, I have changed nothing, because I desired to guard against spoiling the work of my earlier years through the carping criticism of age. What in this regard might need correction will correct itself in the mind of the reader with the help of the second volume. Both volumes have, in the full sense of the word, a supplementary relation to each other, so far as this rests on the fact that one age of human life is, intellectually, the supplement of another. It will therefore be found, not only that each volume contains what the other lacks, but that the merits of the one consist peculiarly in that which is wanting in the other. Thus, if the first half of my work surpasses the second in what can only be supplied by the fire of youth and the energy of first conceptions, the second will surpass the first by the ripeness and complete elaboration of the thought which can only belong to the fruit of the labour of a long life. For when I had the strength originally to grasp the fundamental thought of my system, to follow it at once into its four branches, to return from them to the unity of their origin, and then to explain the whole distinctly, I could not yet be in a position to work out all the branches of the system with the fulness, thoroughness, and elaborateness which is only reached by the meditation of many years – meditation which is required to test and illustrate the system by innumerable facts, to support it by the most different kinds of proof, to throw light on it from all sides, and then to place the different points of view boldly in contrast, to separate thoroughly the multifarious materials, and present them in a well-arranged whole. Therefore, although it would, no doubt, have been more agreeable to the reader to have my whole work in one piece, instead of consisting, as it now does, of two halves, which must be combined in using them, he must reflect that this would have demanded that I should accomplish at one period of life what it is only possible to accomplish in two, for I would have had to possess the qualities at one period of life that nature has divided between two quite different ones. Hence the necessity of presenting my work in two halves supplementary to each other may be compared to the necessity in consequence of which a chromatic object-glass, which cannot be made out of one piece, is produced by joining together a convex lens of flint glass and a concave lens of crown glass, the combined effect of which is what was sought. Yet, on the other hand, the reader will find some compensation for the inconvenience of using two volumes at once, in the variety and the relief which is afforded by the handling of the same subject, by the same mind, in the same spirit, but in very different years. However, it is very advisable that those who are not yet acquainted with

my philosophy should first of all read the first volume without using the supplementary books, and should make use of these only on a second perusal; otherwise it would be too difficult for them to grasp the system in its connection. For it is only thus explained in the first volume, while the second is devoted to a more detailed investigation and a complete development of the individual doctrines. Even those who should not make up their minds to a second reading of the first volume had better not read the second volume till after the first, and then for itself, in the ordinary sequence of its chapters, which, at any rate, stand in some kind of connection, though a somewhat looser one, the gaps of which they will fully supply by the recollection of the first volume, if they have thoroughly comprehended it. Besides, they will find everywhere the reference to the corresponding passages of the first volume, the paragraphs of which I have numbered in the second edition for this purpose, though in the first edition they were only divided by lines.

I have already explained in the preface to the first edition, that my philosophy is founded on that of Kant, and therefore presupposes a thorough knowledge of it. I repeat this here. For Kant's teaching produces in the mind of every one who has comprehended it a fundamental change which is so great that it may be regarded as an intellectual new-birth. It alone is able really to remove the inborn realism which proceeds from the original character of the intellect, which neither Berkeley nor Malebranche succeed in doing, for they remain too much in the universal, while Kant goes into the particular, and indeed in a way that is quite unexampled both before and after him, and which has quite a peculiar, and, we might say, immediate effect upon the mind in consequence of which it undergoes a complete undeception, and forthwith looks at all things in another light. Only in this way can any one become susceptible to the more positive expositions which I have to give. On the other hand, he who has not mastered the Kantian philosophy, whatever else he may have studied, is, as it were, in a state of innocence; that is to say, he remains in the grasp of that natural and childish realism in which we are all born, and which fits us for everything possible, with the single exception of philosophy. Such a man then stands to the man who knows the Kantian philosophy as a minor to a man of full age. That this truth should nowadays sound paradoxical, which would not have been the case in the first thirty years after the appearance of the Critique of Reason, is due to the fact that a generation has grown up that does not know Kant properly, because it has never heard more of him than a hasty, impatient lecture, or an account at second-hand; and this again is due to the fact that in consequence of bad guidance, this generation has wasted its time with the philosophemes of vulgar, uncalled men, or even of bombastic sophists, which are unwarrantably commended to it. Hence the confusion of fundamental conceptions, and in general the unspeakable crudeness and awkwardness that appears from under the covering of affectation and pretentiousness in the philosophical attempts of the generation thus brought up. But whoever thinks he can learn Kant's philosophy from the exposition of others makes a terrible mistake. Nay, rather I must earnestly warn against such accounts, especially the more recent ones; and indeed in the years just past I have met with expositions of the Kantian philosophy in the writings of the Hegelians which actually reach the incredible. How should the minds that in the freshness of youth have been strained and ruined by the nonsense of Hegelism, be still capable of following Kant's profound investigations? They are early accustomed to take the hollownest jingle of words for philosophical thoughts, the most miserable sophisms for acuteness, and silly conceits for dialectic, and their minds are disorganised through the admission of mad combinations of words to which the mind torments and exhausts itself in vain to attach some thought. No Critique of Reason can avail them, no philosophy, they need a *medicina mentis*, first as a sort of purgative, *un petit cours de senscommunologie*, and then one must further see whether, in their case, there can even be any talk of philosophy. The Kantian doctrine then will be sought for in vain anywhere else but in Kant's own works; but these are throughout instructive, even where he errs, even where he fails. In consequence of his originality, it holds good of him in the highest degree, as indeed of all true philosophers, that one can only come to know them from their own works, not from the accounts of others. For the thoughts of any extraordinary intellect cannot

stand being filtered through the vulgar mind. Born behind the broad, high, finely-arched brow, from under which shine beaming eyes, they lose all power and life, and appear no longer like themselves, when removed to the narrow lodging and low roofing of the confined, contracted, thick-walled skull from which dull glances steal directed to personal ends. Indeed we may say that minds of this kind act like an uneven glass, in which everything is twisted and distorted, loses the regularity of its beauty, and becomes a caricature. Only from their authors themselves can we receive philosophical thoughts; therefore whoever feels himself drawn to philosophy must himself seek out its immortal teachers in the still sanctuary of their works. The principal chapters of any one of these true philosophers will afford a thousand times more insight into their doctrines than the heavy and distorted accounts of them that everyday men produce, who are still for the most part deeply entangled in the fashionable philosophy of the time, or in the sentiments of their own minds. But it is astonishing how decidedly the public seizes by preference on these expositions at second-hand. It seems really as if elective affinities were at work here, by virtue of which the common nature is drawn to its like, and therefore will rather hear what a great man has said from one of its own kind. Perhaps this rests on the same principle as that of mutual instruction, according to which children learn best from children.

One word more for the professors of philosophy. I have always been compelled to admire not merely the sagacity, the true and fine tact with which, immediately on its appearance, they recognised my philosophy as something altogether different from and indeed dangerous to their own attempts, or, in popular language, something that would not suit their turn; but also the sure and astute policy by virtue of which they at once discovered the proper procedure with regard to it, the complete harmony with which they applied it, and the persistency with which they have remained faithful to it. This procedure, which further commended itself by the great ease of carrying it out, consists, as is well known, in altogether ignoring and thus in secreting – according to Goethe's malicious phrase, which just means the appropriating of what is of weight and significance. The efficiency of this quiet means is increased by the Corybantic shouts with which those who are at one reciprocally greet the birth of their own spiritual children – shouts which compel the public to look and note the air of importance with which they congratulate themselves on the event. Who can mistake the object of such proceedings? Is there then nothing to oppose to the maxim, *primum vivere, deinde philosophari*? These gentlemen desire to live, and indeed to live by philosophy. To philosophy they are assigned with their wives and children, and in spite of Petrarch's *povera e nuda vai filosofia*, they have staked everything upon it. Now my philosophy is by no means so constituted that any one can live by it. It lacks the first indispensable requisite of a well-paid professional philosophy, a speculative theology, which – in spite of the troublesome Kant with his Critique of Reason – should and must, it is supposed, be the chief theme of all philosophy, even if it thus takes on itself the task of talking straight on of that of which it can know absolutely nothing. Indeed my philosophy does not permit to the professors the fiction they have so cunningly devised, and which has become so indispensable to them, of a reason that knows, perceives, or apprehends immediately and absolutely. This is a doctrine which it is only necessary to impose upon the reader at starting, in order to pass in the most comfortable manner in the world, as it were in a chariot and four, into that region beyond the possibility of all experience, which Kant has wholly and for ever shut out from our knowledge, and in which are found immediately revealed and most beautifully arranged the fundamental dogmas of modern, Judaising, optimistic Christianity. Now what in the world has my subtle philosophy, deficient as it is in these essential requisites, with no intentional aim, and unable to afford a means of subsistence, whose pole star is truth alone the naked, unrewarded, unbefriended, often persecuted truth, and which steers straight for it without looking to the right hand or the left, – what, I say, has this to do with that *alma mater*, the good, well-to-do university philosophy which, burdened with a hundred aims and a thousand motives, comes on its course cautiously tacking, while it keeps before its eyes at all times the fear of the Lord, the will of the ministry, the laws of the established church, the wishes of the publisher, the attendance of the students, the goodwill of colleagues, the course of current politics, the

momentary tendency of the public, and Heaven knows what besides? Or what has my quiet, earnest search for truth in common with the noisy scholastic disputations of the chair and the benches, the inmost motives of which are always personal aims. The two kinds of philosophy are, indeed, radically different. Thus it is that with me there is no compromise and no fellowship, that no one reaps any benefit from my works but the man who seeks the truth alone, and therefore none of the philosophical parties of the day; for they all follow their own aims, while I have only insight into truth to offer, which suits none of these aims, because it is not modelled after any of them. If my philosophy is to become susceptible of professorial exposition, the times must entirely change. What a pretty thing it would be if a philosophy by which nobody could live were to gain for itself light and air, not to speak of the general ear! This must be guarded against, and all must oppose it as one man. But it is not just such an easy game to controvert and refute; and, moreover, these are mistaken means to employ, because they just direct the attention of the public to the matter, and its taste for the lucubrations of the professors of philosophy might be destroyed by the perusal of my writings. For whoever has tasted of earnest will not relish jest, especially when it is tiresome. Therefore the silent system, so unanimously adopted, is the only right one, and I can only advise them to stick to it and go on with it as long as it will answer, that is, until to ignore is taken to imply ignorance; then there will just be time to turn back. Meanwhile it remains open to every one to pluck out a small feather here and there for his own use, for the superfluity of thoughts at home should not be very oppressive. Thus the ignoring and silent system may hold out a good while, at least the span of time I may have yet to live, whereby much is already won. And if, in the meantime, here and there an indiscreet voice has let itself be heard, it is soon drowned by the loud talking of the professors, who, with important airs, know how to entertain the public with very different things. I advise, however, that the unanimity of procedure should be somewhat more strictly observed, and especially that the young men should be looked after, for they are sometimes so fearfully indiscreet. For even so I cannot guarantee that the commended procedure will last for ever, and cannot answer for the final issue. It is a nice question as to the steering of the public, which, on the whole, is good and tractable. Although we nearly at all times see the Gorgias and the Hippias uppermost, although the absurd, as a rule, predominates, and it seems impossible that the voice of the individual can ever penetrate through the chorus of the befooling and the befooled, there yet remains to the genuine works of every age a quite peculiar, silent, slow, and powerful influence; and, as if by a miracle, we see them rise at last out of the turmoil like a balloon that floats up out of the thick atmosphere of this globe into purer regions, where, having once arrived, it remains at rest, and no one can draw it down again.

*Written at Frankfort-on-the-Maine in February 1844.*

## **First Book. The World As Idea.**

### **First Aspect. The Idea Subordinated To The Principle Of Sufficient Reason: The Object Of Experience And Science**

*Sors de l'enfance, ami réveille toi!*  
– *Jean Jacques Rousseau.*

§ 1. “The world is my idea:” – this is a truth which holds good for everything that lives and knows, though man alone can bring it into reflective and abstract consciousness. If he really does this, he has attained to philosophical wisdom. It then becomes clear and certain to him that what he knows is not a sun and an earth, but only an eye that sees a sun, a hand that feels an earth; that the world which surrounds him is there only as idea, *i. e.*, only in relation to something else, the consciousness, which is himself. If any truth can be asserted *a priori*, it is this: for it is the expression of the most general form of all possible and thinkable experience: a form which is more general than time, or space, or causality, for they all presuppose it; and each of these, which we have seen to be just so many modes of the principle of sufficient reason, is valid only for a particular class of ideas; whereas the antithesis of object and subject is the common form of all these classes, is that form under which alone any idea of whatever kind it may be, abstract or intuitive, pure or empirical, is possible and thinkable. No truth therefore is more certain, more independent of all others, and less in need of proof than this, that all that exists for knowledge, and therefore this whole world, is only object in relation to subject, perception of a perceiver, in a word, idea. This is obviously true of the past and the future, as well as of the present, of what is farthest off, as of what is near; for it is true of time and space themselves, in which alone these distinctions arise. All that in any way belongs or can belong to the world is inevitably thus conditioned through the subject, and exists only for the subject. The world is idea.

This truth is by no means new. It was implicitly involved in the sceptical reflections from which Descartes started. Berkeley, however, was the first who distinctly enunciated it, and by this he has rendered a permanent service to philosophy, even though the rest of his teaching should not endure. Kant's primary mistake was the neglect of this principle, as is shown in the appendix. How early again this truth was recognised by the wise men of India, appearing indeed as the fundamental tenet of the Vedânta philosophy ascribed to Vyasa, is pointed out by Sir William Jones in the last of his essays: “On the philosophy of the Asiatics” (Asiatic Researches, vol. iv. p. 164), where he says, “The fundamental tenet of the Vedanta school consisted not in denying the existence of matter, that is, of solidity, impenetrability, and extended figure (to deny which would be lunacy), but in correcting the popular notion of it, and in contending that it has no essence independent of mental perception; that existence and perceptibility are convertible terms.” These words adequately express the compatibility of empirical reality and transcendental ideality.

In this first book, then, we consider the world only from this side, only so far as it is idea. The inward reluctance with which any one accepts the world as merely his idea, warns him that this view of it, however true it may be, is nevertheless one-sided, adopted in consequence of some arbitrary abstraction. And yet it is a conception from which he can never free himself. The defectiveness of this view will be corrected in the next book by means of a truth which is not so immediately certain as that from which we start here; a truth at which we can arrive only by deeper research and more severe abstraction, by the separation of what is different and the union of what is identical. This truth, which must be very serious and impressive if not awful to every one, is that a man can also say and must say, “the world is my will.”

In this book, however, we must consider separately that aspect of the world from which we start, its aspect as knowable, and therefore, in the meantime, we must, without reserve, regard all



presented objects, even our own bodies (as we shall presently show more fully), merely as ideas, and call them merely ideas. By so doing we always abstract from will (as we hope to make clear to every one further on), which by itself constitutes the other aspect of the world. For as the world is in one aspect entirely *idea*, so in another it is entirely *will*. A reality which is neither of these two, but an object in itself (into which the thing in itself has unfortunately dwindled in the hands of Kant), is the phantom of a dream, and its acceptance is an *ignis fatuus* in philosophy.

§ 2. That which knows all things and is known by none is the subject. Thus it is the supporter of the world, that condition of all phenomena, of all objects which is always pre-supposed throughout experience; for all that exists, exists only for the subject. Every one finds himself to be subject, yet only in so far as he knows, not in so far as he is an object of knowledge. But his body is object, and therefore from this point of view we call it idea. For the body is an object among objects, and is conditioned by the laws of objects, although it is an immediate object. Like all objects of perception, it lies within the universal forms of knowledge, time and space, which are the conditions of multiplicity. The subject, on the contrary, which is always the knower, never the known, does not come under these forms, but is presupposed by them; it has therefore neither multiplicity nor its opposite unity. We never know it, but it is always the knower wherever there is knowledge.

So then the world as idea, the only aspect in which we consider it at present, has two fundamental, necessary, and inseparable halves. The one half is the object, the forms of which are space and time, and through these multiplicity. The other half is the subject, which is not in space and time, for it is present, entire and undivided, in every percipient being. So that any one percipient being, with the object, constitutes the whole world as idea just as fully as the existing millions could do; but if this one were to disappear, then the whole world as idea would cease to be. These halves are therefore inseparable even for thought, for each of the two has meaning and existence only through and for the other, each appears with the other and vanishes with it. They limit each other immediately; where the object begins the subject ends. The universality of this limitation is shown by the fact that the essential and hence universal forms of all objects, space, time, and causality, may, without knowledge of the object, be discovered and fully known from a consideration of the subject, *i. e.*, in Kantian language, they lie *a priori* in our consciousness. That he discovered this is one of Kant's principal merits, and it is a great one. I however go beyond this, and maintain that the principle of sufficient reason is the general expression for all these forms of the object of which we are *a priori* conscious; and that therefore all that we know purely *a priori*, is merely the content of that principle and what follows from it; in it all our certain *a priori* knowledge is expressed. In my essay on the principle of sufficient reason I have shown in detail how every possible object comes under it; that is, stands in a necessary relation to other objects, on the one side as determined, on the other side as determining: this is of such wide application, that the whole existence of all objects, so far as they are objects, ideas and nothing more, may be entirely traced to this their necessary relation to each other, rests only in it, is in fact merely relative; but of this more presently. I have further shown, that the necessary relation which the principle of sufficient reason expresses generally, appears in other forms corresponding to the classes into which objects are divided, according to their possibility; and again that by these forms the proper division of the classes is tested. I take it for granted that what I said in this earlier essay is known and present to the reader, for if it had not been already said it would necessarily find its place here.

§ 3. The chief distinction among our ideas is that between ideas of perception and abstract ideas. The latter form just one class of ideas, namely concepts, and these are the possession of man alone of all creatures upon earth. The capacity for these, which distinguishes him from all the lower animals, has always been called reason.<sup>5</sup> We shall consider these abstract ideas by themselves later, but, in

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<sup>5</sup> Kant is the only writer who has confused this idea of reason, and in this connection I refer the reader to the Appendix, and also to my "Grundprobleme der Ethik": Grundle. dd. Moral. § 6, pp. 148-154, first and second editions.

the first place, we shall speak exclusively of the *ideas of perception*. These comprehend the whole visible world, or the sum total of experience, with the conditions of its possibility. We have already observed that it is a highly important discovery of Kant's, that these very conditions, these forms of the visible world, *i. e.*, the absolutely universal element in its perception, the common property of all its phenomena, space and time, even when taken by themselves and apart from their content, can, not only be thought in the abstract, but also be directly perceived; and that this perception or intuition is not some kind of phantasm arising from constant recurrence in experience, but is so entirely independent of experience that we must rather regard the latter as dependent on it, inasmuch as the qualities of space and time, as they are known in *a priori* perception or intuition, are valid for all possible experience, as rules to which it must invariably conform. Accordingly, in my essay on the principle of sufficient reason, I have treated space and time, because they are perceived as pure and empty of content, as a special and independent class of ideas. This quality of the universal forms of intuition, which was discovered by Kant, that they may be perceived in themselves and apart from experience, and that they may be known as exhibiting those laws on which is founded the infallible science of mathematics, is certainly very important. Not less worthy of remark, however, is this other quality of time and space, that the principle of sufficient reason, which conditions experience as the law of causation and of motive, and thought as the law of the basis of judgment, appears here in quite a special form, to which I have given the name of the ground of being. In time, this is the succession of its moments, and in space the position of its parts, which reciprocally determine each other *ad infinitum*.

Any one who has fully understood from the introductory essay the complete identity of the content of the principle of sufficient reason in all its different forms, must also be convinced of the importance of the knowledge of the simplest of these forms, as affording him insight into his own inmost nature. This simplest form of the principle we have found to be time. In it each instant is, only in so far as it has effaced the preceding one, its generator, to be itself in turn as quickly effaced. The past and the future (considered apart from the consequences of their content) are empty as a dream, and the present is only the indivisible and unenduring boundary between them. And in all the other forms of the principle of sufficient reason, we shall find the same emptiness, and shall see that not time only but also space, and the whole content of both of them, *i. e.*, all that proceeds from causes and motives, has a merely relative existence, is only through and for another like to itself, *i. e.*, not more enduring. The substance of this doctrine is old: it appears in Heraclitus when he laments the eternal flux of things; in Plato when he degrades the object to that which is ever becoming, but never being; in Spinoza as the doctrine of the mere accidents of the one substance which is and endures. Kant opposes what is thus known as the mere phenomenon to the thing in itself. Lastly, the ancient wisdom of the Indian philosophers declares, "It is Mâyâ, the veil of deception, which blinds the eyes of mortals, and makes them behold a world of which they cannot say either that it is or that it is not: for it is like a dream; it is like the sunshine on the sand which the traveller takes from afar for water, or the stray piece of rope he mistakes for a snake." (These similes are repeated in innumerable passages of the Vedas and the Puranas.) But what all these mean, and that of which they all speak, is nothing more than what we have just considered – the world as idea subject to the principle of sufficient reason.

§ 4. Whoever has recognised the form of the principle of sufficient reason, which appears in pure time as such, and on which all counting and arithmetical calculation rests, has completely mastered the nature of time. Time is nothing more than that form of the principle of sufficient reason, and has no further significance. Succession is the form of the principle of sufficient reason in time, and succession is the whole nature of time. Further, whoever has recognised the principle of sufficient reason as it appears in the presentation of pure space, has exhausted the whole nature of space, which is absolutely nothing more than that possibility of the reciprocal determination of its parts by each other, which is called position. The detailed treatment of this, and the formulation in

abstract conceptions of the results which flow from it, so that they may be more conveniently used, is the subject of the science of geometry. Thus also, whoever has recognised the law of causation, the aspect of the principle of sufficient reason which appears in what fills these forms (space and time) as objects of perception, that is to say matter, has completely mastered the nature of matter as such, for matter is nothing more than causation, as any one will see at once if he reflects. Its true being is its action, nor can we possibly conceive it as having any other meaning. Only as active does it fill space and time; its action upon the immediate object (which is itself matter) determines that perception in which alone it exists. The consequence of the action of any material object upon any other, is known only in so far as the latter acts upon the immediate object in a different way from that in which it acted before; it consists only of this. Cause and effect thus constitute the whole nature of matter; its true being is its action. (A fuller treatment of this will be found in the essay on the Principle of Sufficient Reason, § 21, p. 77.) The nature of all material things is therefore very appropriately called in German *Wirklichkeit*,<sup>6</sup> a word which is far more expressive than *Realität*. Again, that which is acted upon is always matter, and thus the whole being and essence of matter consists in the orderly change, which one part of it brings about in another part. The existence of matter is therefore entirely relative, according to a relation which is valid only within its limits, as in the case of time and space.

But time and space, each for itself, can be mentally presented apart from matter, whereas matter cannot be so presented apart from time and space. The form which is inseparable from it presupposes space, and the action in which its very existence consists, always imports some change, in other words a determination in time. But space and time are not only, each for itself, presupposed by matter, but a union of the two constitutes its essence, for this, as we have seen, consists in action, *i. e.*, in causation. All the innumerable conceivable phenomena and conditions of things, might be coexistent in boundless space, without limiting each other, or might be successive in endless time without interfering with each other: thus a necessary relation of these phenomena to each other, and a law which should regulate them according to such a relation, is by no means needful, would not, indeed, be applicable: it therefore follows that in the case of all co-existence in space and change in time, so long as each of these forms preserves for itself its condition and its course without any connection with the other, there can be no causation, and since causation constitutes the essential nature of matter, there can be no matter. But the law of causation receives its meaning and necessity only from this, that the essence of change does not consist simply in the mere variation of things, but rather in the fact that at the *same part of space* there is now *one thing* and then *another*, and at *one* and the same point of time there is *here* one thing and there *another*: only this reciprocal limitation of space and time by each other gives meaning, and at the same time necessity, to a law, according to which change must take place. What is determined by the law of causality is therefore not merely a succession of things in time, but this succession with reference to a definite space, and not merely existence of things in a particular place, but in this place at a different point of time. Change, *i. e.*, variation which takes place according to the law of causality, implies always a determined part of space and a determined part of time together and in union. Thus causality unites space with time. But we found that the whole essence of matter consisted in action, *i. e.*, in causation, consequently space and time must also be united in matter, that is to say, matter must take to itself at once the distinguishing qualities both of space and time, however much these may be opposed to each other, and must unite in itself what is impossible for each of these independently, that is, the fleeting course of time, with the rigid unchangeable perdurance of space: infinite divisibility it receives from both. It is for this reason that we find that co-existence, which could neither be in time alone, for time has no contiguity, nor in space alone, for space has no before, after, or now, is first established through matter. But the co-existence of many things constitutes, in fact, the essence of reality, for through

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<sup>6</sup> Mira in quibusdam rebus verborum proprietas est, et consuetudo sermonis antiqui quaedam efficacissimis notis signat. *Seneca*, epist. 81.

it permanence first becomes possible; for permanence is only knowable in the change of something which is present along with what is permanent, while on the other hand it is only because something permanent is present along with what changes, that the latter gains the special character of change, *i. e.*, the mutation of quality and form in the permanence of substance, that is to say, in matter.<sup>7</sup> If the world were in space alone, it would be rigid and immovable, without succession, without change, without action; but we know that with action, the idea of matter first appears. Again, if the world were in time alone, all would be fleeting, without persistence, without contiguity, hence without co-existence, and consequently without permanence; so that in this case also there would be no matter. Only through the union of space and time do we reach matter, and matter is the possibility of co-existence, and, through that, of permanence; through permanence again matter is the possibility of the persistence of substance in the change of its states.<sup>8</sup> As matter consists in the union of space and time, it bears throughout the stamp of both. It manifests its origin in space, partly through the form which is inseparable from it, but especially through its persistence (substance), the *a priori* certainty of which is therefore wholly deducible from that of space<sup>9</sup> (for variation belongs to time alone, but in it alone and for itself nothing is persistent). Matter shows that it springs from time by quality (accidents), without which it never exists, and which is plainly always causality, action upon other matter, and therefore change (a time concept). The law of this action, however, always depends upon space and time together, and only thus obtains meaning. The regulative function of causality is confined entirely to the determination of what must occupy *this time and this space*. The fact that we know *a priori* the unalterable characteristics of matter, depends upon this derivation of its essential nature from the forms of our knowledge of which we are conscious *a priori*. These unalterable characteristics are space-occupation, *i. e.*, impenetrability, *i. e.*, causal action, consequently, extension, infinite divisibility, persistence, *i. e.*, indestructibility, and lastly mobility: weight, on the other hand, notwithstanding its universality, must be attributed to *a posteriori* knowledge, although Kant, in his “Metaphysical Introduction to Natural Philosophy,” p. 71 (p. 372 of Rosenkranz's edition), treats it as knowable *a priori*.

But as the object in general is only for the subject, as its idea, so every special class of ideas is only for an equally special quality in the subject, which is called a faculty of perception. This subjective correlative of time and space in themselves as empty forms, has been named by Kant pure sensibility; and we may retain this expression, as Kant was the first to treat of the subject, though it is not exact, for sensibility presupposes matter. The subjective correlative of matter or of causation, for these two are the same, is understanding, which is nothing more than this. To know causality is its one function, its only power; and it is a great one, embracing much, of manifold application, yet of unmistakable identity in all its manifestations. Conversely all causation, that is to say, all matter, or the whole of reality, is only for the understanding, through the understanding, and in the understanding. The first, simplest, and ever-present example of understanding is the perception of the actual world. This is throughout knowledge of the cause from the effect, and therefore all perception is intellectual. The understanding could never arrive at this perception, however, if some effect did not become known immediately, and thus serve as a starting-point. But this is the affection of the animal body. So far, then, the animal body is the *immediate object* of the subject; the perception of all other objects becomes possible through it. The changes which every animal body experiences, are immediately known, that is, felt; and as these effects are at once referred to their causes, the perception of the latter as *objects* arises. This relation is no conclusion in abstract conceptions; it does not arise from reflection, nor is it arbitrary, but immediate, necessary, and certain. It is the method of knowing of the pure

<sup>7</sup> It is shown in the Appendix that matter and substance are one.

<sup>8</sup> This shows the ground of the Kantian explanation of matter, that it is “that which is movable in space,” for motion consists simply in the union of space and time.

<sup>9</sup> Not, as Kant holds, from the knowledge of time, as will be explained in the Appendix.

understanding, without which there could be no perception; there would only remain a dull plant-like consciousness of the changes of the immediate object, which would succeed each other in an utterly unmeaning way, except in so far as they might have a meaning for the will either as pain or pleasure. But as with the rising of the sun the visible world appears, so at one stroke, the understanding, by means of its one simple function, changes the dull, meaningless sensation into perception. What the eye, the ear, or the hand feels, is not perception; it is merely its data. By the understanding passing from the effect to the cause, the world first appears as perception extended in space, varying in respect of form, persistent through all time in respect of matter; for the understanding unites space and time in the idea of matter, that is, causal action. As the world as idea exists only through the understanding, so also it exists only for the understanding. In the first chapter of my essay on “Light and Colour,” I have already explained how the understanding constructs perceptions out of the data supplied by the senses; how by comparison of the impressions which the various senses receive from the object, a child arrives at perceptions; how this alone affords the solution of so many phenomena of the senses; the single vision of two eyes, the double vision in the case of a squint, or when we try to look at once at objects which lie at unequal distances behind each other; and all illusion which is produced by a sudden alteration in the organs of sense. But I have treated this important subject much more fully and thoroughly in the second edition of the essay on “The Principle of Sufficient Reason,” § 21. All that is said there would find its proper place here, and would therefore have to be said again; but as I have almost as much disinclination to quote myself as to quote others, and as I am unable to explain the subject better than it is explained there, I refer the reader to it, instead of quoting it, and take for granted that it is known.

The process by which children, and persons born blind who have been operated upon, learn to see, the single vision of the double sensation of two eyes, the double vision and double touch which occur when the organs of sense have been displaced from their usual position, the upright appearance of objects while the picture on the retina is upside down, the attributing of colour to the outward objects, whereas it is merely an inner function, a division through polarisation, of the activity of the eye, and lastly the stereoscope, – all these are sure and incontrovertible evidence that perception is not merely of the senses, but intellectual – that is, *pure knowledge through the understanding of the cause from the effect*, and that, consequently, it presupposes the law of causality, in a knowledge of which all perception – that is to say all experience, by virtue of its primary and only possibility, depends. The contrary doctrine that the law of causality results from experience, which was the scepticism of Hume, is first refuted by this. For the independence of the knowledge of causality of all experience, – that is, its *a priori* character – can only be deduced from the dependence of all experience upon it; and this deduction can only be accomplished by proving, in the manner here indicated, and explained in the passages referred to above, that the knowledge of causality is included in perception in general, to which all experience belongs, and therefore in respect of experience is completely *a priori*, does not presuppose it, but is presupposed by it as a condition. This, however, cannot be deduced in the manner attempted by Kant, which I have criticised in the essay on “The Principle of Sufficient Reason,” § 23.

§ 5. It is needful to guard against the grave error of supposing that because perception arises through the knowledge of causality, the relation of subject and object is that of cause and effect. For this relation subsists only between the immediate object and objects known indirectly, thus always between objects alone. It is this false supposition that has given rise to the foolish controversy about the reality of the outer world; a controversy in which dogmatism and scepticism oppose each other, and the former appears, now as realism, now as idealism. Realism treats the object as cause, and the subject as its effect. The idealism of Fichte reduces the object to the effect of the subject. Since however, and this cannot be too much emphasised, there is absolutely no relation according to the principle of sufficient reason between subject and object, neither of these views could be proved, and therefore scepticism attacked them both with success. Now, just as the law of causality precedes perception and experience as their condition, and therefore cannot (as Hume thought) be derived

from them, so object and subject precede all knowledge, and hence the principle of sufficient reason in general, as its first condition; for this principle is merely the form of all objects, the whole nature and possibility of their existence as phenomena: but the object always presupposes the subject; and therefore between these two there can be no relation of reason and consequent. My essay on the principle of sufficient reason accomplishes just this: it explains the content of that principle as the essential form of every object – that is to say, as the universal nature of all objective existence, as something which pertains to the object as such; but the object as such always presupposes the subject as its necessary correlative; and therefore the subject remains always outside the province in which the principle of sufficient reason is valid. The controversy as to the reality of the outer world rests upon this false extension of the validity of the principle of sufficient reason to the subject also, and starting with this mistake it can never understand itself. On the one side realistic dogmatism, looking upon the idea as the effect of the object, desires to separate these two, idea and object, which are really one, and to assume a cause quite different from the idea, an object in itself, independent of the subject, a thing which is quite inconceivable; for even as object it presupposes subject, and so remains its idea. Opposed to this doctrine is scepticism, which makes the same false presupposition that in the idea we have only the effect, never the cause, therefore never real being; that we always know merely the action of the object. But this object, it supposes, may perhaps have no resemblance whatever to its effect, may indeed have been quite erroneously received as the cause, for the law of causality is first to be gathered from experience, and the reality of experience is then made to rest upon it. Thus both of these views are open to the correction, firstly, that object and idea are the same; secondly, that the true being of the object of perception is its action, that the reality of the thing consists in this, and the demand for an existence of the object outside the idea of the subject, and also for an essence of the actual thing different from its action, has absolutely no meaning, and is a contradiction: and that the knowledge of the nature of the effect of any perceived object, exhausts such an object itself, so far as it is object, *i. e.*, idea, for beyond this there is nothing more to be known. So far then, the perceived world in space and time, which makes itself known as causation alone, is entirely real, and is throughout simply what it appears to be, and it appears wholly and without reserve as idea, bound together according to the law of causality. This is its empirical reality. On the other hand, all causality is in the understanding alone, and for the understanding. The whole actual, that is, active world is determined as such through the understanding, and apart from it is nothing. This, however, is not the only reason for altogether denying such a reality of the outer world as is taught by the dogmatist, who explains its reality as its independence of the subject. We also deny it, because no object apart from a subject can be conceived without contradiction. The whole world of objects is and remains idea, and therefore wholly and for ever determined by the subject; that is to say, it has transcendental ideality. But it is not therefore illusion or mere appearance; it presents itself as that which it is, idea, and indeed as a series of ideas of which the common bond is the principle of sufficient reason. It is according to its inmost meaning quite comprehensible to the healthy understanding, and speaks a language quite intelligible to it. To dispute about its reality can only occur to a mind perverted by over-subtilty, and such discussion always arises from a false application of the principle of sufficient reason, which binds all ideas together of whatever kind they may be, but by no means connects them with the subject, nor yet with a something which is neither subject nor object, but only the ground of the object; an absurdity, for only objects can be and always are the ground of objects. If we examine more closely the source of this question as to the reality of the outer world, we find that besides the false application of the principle of sufficient reason generally to what lies beyond its province, a special confusion of its forms is also involved; for that form which it has only in reference to concepts or abstract ideas, is applied to perceived ideas, real objects; and a ground of knowing is demanded of objects, whereas they can have nothing but a ground of being. Among the abstract ideas, the concepts united in the judgment, the principle of sufficient reason appears in such a way that each of these has its worth, its validity, and its whole existence, here called *truth*, simply and solely through the

relation of the judgment to something outside of it, its ground of knowledge, to which there must consequently always be a return. Among real objects, ideas of perception, on the other hand, the principle of sufficient reason appears not as the principle of the ground of *knowing*, but of *being*, as the law of causality: every real object has paid its debt to it, inasmuch as it has come to be, *i. e.*, has appeared as the effect of a cause. The demand for a ground of knowing has therefore here no application and no meaning, but belongs to quite another class of things. Thus the world of perception raises in the observer no question or doubt so long as he remains in contact with it: there is here neither error nor truth, for these are confined to the province of the abstract – the province of reflection. But here the world lies open for sense and understanding; presents itself with naive truth as that which it really is – ideas of perception which develop themselves according to the law of causality.

So far as we have considered the question of the reality of the outer world, it arises from a confusion which amounts even to a misunderstanding of reason itself, and therefore thus far, the question could be answered only by explaining its meaning. After examination of the whole nature of the principle of sufficient reason, of the relation of subject and object, and the special conditions of sense perception, the question itself disappeared because it had no longer any meaning. There is, however, one other possible origin of this question, quite different from the purely speculative one which we have considered, a specially empirical origin, though the question is always raised from a speculative point of view, and in this form it has a much more comprehensible meaning than it had in the first. We have dreams; may not our whole life be a dream? or more exactly: is there a sure criterion of the distinction between dreams and reality? between phantasms and real objects? The assertion that what is dreamt is less vivid and distinct than what we actually perceive is not to the point, because no one has ever been able to make a fair comparison of the two; for we can only compare the recollection of a dream with the present reality. Kant answers the question thus: “The connection of ideas among themselves, according to the law of causality, constitutes the difference between real life and dreams.” But in dreams, as well as in real life, everything is connected individually at any rate, in accordance with the principle of sufficient reason in all its forms, and this connection is broken only between life and dreams, or between one dream and another. Kant's answer therefore could only run thus: – the *long* dream (life) has throughout complete connection according to the principle of sufficient reason; it has not this connection, however, with *short* dreams, although each of these has in itself the same connection: the bridge is therefore broken between the former and the latter, and on this account we distinguish them.

But to institute an inquiry according to this criterion, as to whether something was dreamt or seen, would always be difficult and often impossible. For we are by no means in a position to trace link by link the causal connection between any experienced event and the present moment, but we do not on that account explain it as dreamt. Therefore in real life we do not commonly employ that method of distinguishing between dreams and reality. The only sure criterion by which to distinguish them is in fact the entirely empirical one of awaking, through which at any rate the causal connection between dreamed events and those of waking life, is distinctly and sensibly broken off. This is strongly supported by the remark of Hobbes in the second chapter of *Leviathan*, that we easily mistake dreams for reality if we have unintentionally fallen asleep without taking off our clothes, and much more so when it also happens that some undertaking or design fills all our thoughts, and occupies our dreams as well as our waking moments. We then observe the awaking just as little as the falling asleep, dream and reality run together and become confounded. In such a case there is nothing for it but the application of Kant's criterion; but if, as often happens, we fail to establish by means of this criterion, either the existence of causal connection with the present, or the absence of such connection, then it must for ever remain uncertain whether an event was dreamt or really happened. Here, in fact, the intimate relationship between life and dreams is brought out very clearly, and we need not be ashamed to confess it, as it has been recognised and spoken of by many great men. The Vedas and Puranas have no better simile than a dream for the whole knowledge of the actual world, which they call the

web of Mâyâ, and they use none more frequently. Plato often says that men live only in a dream; the philosopher alone strives to awake himself. Pindar says (ii. η. 135): σκιας οναρ ανθρωπος (umbræ somnium homo), and Sophocles: —

Ὦνω γυν ἡμας ουδεν οντας αλλο, πλην  
Σιδωλ' ὅσοι περ ζωμεν, ἡ κουφην σκιαν. — Ajax, 125.

(Nos enim, quicumque vivimus, nihil aliud esse comperio quam simulacra et levem umbram.)  
Beside which most worthily stands Shakespeare: —

“We are such stuff  
As dreams are made on, and our little life  
Is rounded with a sleep.” — *Tempest*, Act iv. Sc. 1.

Lastly, Calderon was so deeply impressed with this view of life that he sought to embody it in a kind of metaphysical drama — “Life a Dream.”

After these numerous quotations from the poets, perhaps I also may be allowed to express myself by a metaphor. Life and dreams are leaves of the same book. The systematic reading of this book is real life, but when the reading hours (that is, the day) are over, we often continue idly to turn over the leaves, and read a page here and there without method or connection: often one we have read before, sometimes one that is new to us, but always in the same book. Such an isolated page is indeed out of connection with the systematic study of the book, but it does not seem so very different when we remember that the whole continuous perusal begins and ends just as abruptly, and may therefore be regarded as merely a larger single page.

Thus although individual dreams are distinguished from real life by the fact that they do not fit into that continuity which runs through the whole of experience, and the act of awaking brings this into consciousness, yet that very continuity of experience belongs to real life as its form, and the dream on its part can point to a similar continuity in itself. If, therefore, we consider the question from a point of view external to both, there is no distinct difference in their nature, and we are forced to concede to the poets that life is a long dream.

Let us turn back now from this quite independent empirical origin of the question of the reality of the outer world, to its speculative origin. We found that this consisted, first, in the false application of the principle of sufficient reason to the relation of subject and object; and secondly, in the confusion of its forms, inasmuch as the principle of sufficient reason of knowing was extended to a province in which the principle of sufficient reason of being is valid. But the question could hardly have occupied philosophers so constantly if it were entirely devoid of all real content, and if some true thought and meaning did not lie at its heart as its real source. Accordingly, we must assume that when the element of truth that lies at the bottom of the question first came into reflection and sought its expression, it became involved in these confused and meaningless forms and problems. This at least is my opinion, and I think that the true expression of that inmost meaning of the question, which it failed to find, is this: — What is this world of perception besides being my idea? Is that of which I am conscious only as idea, exactly like my own body, of which I am doubly conscious, in one aspect as *idea*, in another aspect as *will*? The fuller explanation of this question and its answer in the affirmative, will form the content of the second book, and its consequences will occupy the remaining portion of this work.

§ 6. For the present, however, in this first book we consider everything merely as idea, as object for the subject. And our own body, which is the starting-point for each of us in our perception of the world, we consider, like all other real objects, from the side of its knowableness, and in this regard it is simply an idea. Now the consciousness of every one is in general opposed to the explanation of objects as mere ideas, and more especially to the explanation of our bodies as such; for the thing in



itself is known to each of us immediately in so far as it appears as our own body; but in so far as it objectifies itself in the other objects of perception, it is known only indirectly. But this abstraction, this one-sided treatment, this forcible separation of what is essentially and necessarily united, is only adopted to meet the demands of our argument; and therefore the disinclination to it must, in the meantime, be suppressed and silenced by the expectation that the subsequent treatment will correct the one-sidedness of the present one, and complete our knowledge of the nature of the world.

At present therefore the body is for us immediate object; that is to say, that idea which forms the starting-point of the subject's knowledge; because the body, with its immediately known changes, precedes the application of the law of causality, and thus supplies it with its first data. The whole nature of matter consists, as we have seen, in its causal action. But cause and effect exist only for the understanding, which is nothing but their subjective correlative. The understanding, however, could never come into operation if there were not something else from which it starts. This is simple sensation – the immediate consciousness of the changes of the body, by virtue of which it is immediate object. Thus the possibility of knowing the world of perception depends upon two conditions; the first, *objectively expressed*, is the power of material things to act upon each other, to produce changes in each other, without which common quality of all bodies no perception would be possible, even by means of the sensibility of the animal body. And if we wish to express this condition *subjectively* we say: The understanding first makes perception possible; for the law of causality, the possibility of effect and cause, springs only from the understanding, and is valid only for it, and therefore the world of perception exists only through and for it. The second condition is the sensibility of animal bodies, or the quality of being immediate objects of the subject which certain bodies possess. The mere modification which the organs of sense sustain from without through their specific affections, may here be called ideas, so far as these affections produce neither pain nor pleasure, that is, have no immediate significance for the will, and are yet perceived, exist therefore only for *knowledge*. Thus far, then, I say that the body is immediately *known*, is *immediate object*. But the conception of object is not to be taken here in its fullest sense, for through this immediate knowledge of the body, which precedes the operation of the understanding, and is mere sensation, our own body does not exist specifically as *object*, but first the material things which affect it: for all knowledge of an object proper, of an idea perceived in space, exists only through and for the understanding; therefore not before, but only subsequently to its operation. Therefore the body as object proper, that is, as an idea perceived in space, is first known indirectly, like all other objects, through the application of the law of causality to the action of one of its parts upon another, as, for example, when the eye sees the body or the hand touches it. Consequently the form of our body does not become known to us through mere feeling, but only through knowledge, only in idea; that is to say, only in the brain does our own body first come to appear as extended, articulate, organic. A man born blind receives this idea only little by little from the data afforded by touch. A blind man without hands could never come to know his own form; or at the most could infer and construct it little by little from the effects of other bodies upon him. If, then, we call the body an immediate object, we are to be understood with these reservations.

In other respects, then, according to what has been said, all animal bodies are immediate objects; that is, starting-points for the subject which always knows and therefore is never known in its perception of the world. Thus the distinctive characteristic of animal life is knowledge, with movement following on motives, which are determined by knowledge, just as movement following on stimuli is the distinctive characteristic of plant-life. Unorganised matter, however, has no movement except such as is produced by causes properly so called, using the term in its narrowest sense. All this I have thoroughly discussed in my essay on the principle of sufficient reason, § 20, in the “Ethics,” first essay, iii., and in my work on Sight and Colour, § 1, to which I therefore refer.

It follows from what has been said, that all animals, even the least developed, have understanding; for they all know objects, and this knowledge determines their movements as motive. Understanding is the same in all animals and in all men; it has everywhere the same simple form;

knowledge of causality, transition from effect to cause, and from cause to effect, nothing more; but the degree of its acuteness, and the extension of the sphere of its knowledge varies enormously, with innumerable gradations from the lowest form, which is only conscious of the causal connection between the immediate object and objects affecting it – that is to say, perceives a cause as an object in space by passing to it from the affection which the body feels, to the higher grades of knowledge of the causal connection among objects known indirectly, which extends to the understanding of the most complicated system of cause and effect in nature. For even this high degree of knowledge is still the work of the understanding, not of the reason. The abstract concepts of the reason can only serve to take up the objective connections which are immediately known by the understanding, to make them permanent for thought, and to relate them to each other; but reason never gives us immediate knowledge. Every force and law of nature, every example of such forces and laws, must first be immediately known by the understanding, must be apprehended through perception before it can pass into abstract consciousness for reason. Hooke's discovery of the law of gravitation, and the reference of so many important phenomena to this one law, was the work of immediate apprehension by the understanding; and such also was the proof of Newton's calculations, and Lavoisier's discovery of acids and their important function in nature, and also Goethe's discovery of the origin of physical colours. All these discoveries are nothing more than a correct immediate passage from the effect to the cause, which is at once followed by the recognition of the ideality of the force of nature which expresses itself in all causes of the same kind; and this complete insight is just an example of that single function of the understanding, by which an animal perceives as an object in space the cause which affects its body, and differs from such a perception only in degree. Every one of these great discoveries is therefore, just like perception, an operation of the understanding, an immediate intuition, and as such the work of an instant, an *apperçu*, a flash of insight. They are not the result of a process of abstract reasoning, which only serves to make the immediate knowledge of the understanding permanent for thought by bringing it under abstract concepts, *i. e.*, it makes knowledge distinct, it puts us in a position to impart it and explain it to others. The keenness of the understanding in apprehending the causal relations of objects which are known indirectly, does not find its only application in the sphere of natural science (though all the discoveries in that sphere are due to it), but it also appears in practical life. It is then called good sense or prudence, as in its other application it is better called acuteness, penetration, sagacity. More exactly, good sense or prudence signifies exclusively understanding at the command of the will. But the limits of these conceptions must not be too sharply defined, for it is always that one function of the understanding by means of which all animals perceive objects in space, which, in its keenest form, appears now in the phenomena of nature, correctly inferring the unknown causes from the given effects, and providing the material from which the reason frames general rules as laws of nature; now inventing complicated and ingenious machines by adapting known causes to desired effects; now in the sphere of motives, seeing through and frustrating intrigues and machinations, or fitly disposing the motives and the men who are susceptible to them, setting them in motion, as machines are moved by levers and wheels, and directing them at will to the accomplishment of its ends. Deficiency of understanding is called *stupidity*. It is just *dulness in applying the law of causality*, incapacity for the immediate apprehension of the concatenations of causes and effects, motives and actions. A stupid person has no insight into the connection of natural phenomena, either when they follow their own course, or when they are intentionally combined, *i. e.*, are applied to machinery. Such a man readily believes in magic and miracles. A stupid man does not observe that persons, who apparently act independently of each other, are really in collusion; he is therefore easily mystified, and outwitted; he does not discern the hidden motives of proffered advice or expressions of opinion, &c. But it is always just one thing that he lacks – keenness, rapidity, ease in applying the law of causality, *i. e.*, power of understanding. The greatest, and, in this reference, the most instructive example of stupidity I ever met with, was the case of a totally imbecile boy of about eleven years of age, in an asylum. He had reason, because

he spoke and comprehended, but in respect of understanding he was inferior to many of the lower animals. Whenever I visited him he noticed an eye-glass which I wore round my neck, and in which the window of the room and the tops of the trees beyond were reflected: on every occasion he was greatly surprised and delighted with this, and was never tired of looking at it with astonishment, because he did not understand the immediate causation of reflection.

While the difference in degree of the acuteness of the understanding, is very great between man and man, it is even greater between one species of animal and another. In all species of animals, even those which are nearest to plants, there is at least as much understanding as suffices for the inference from the effect on the immediate object, to the indirectly known object as its cause, *i. e.*, sufficient for perception, for the apprehension of an object. For it is this that constitutes them animals, as it gives them the power of movement following on motives, and thereby the power of seeking for food, or at least of seizing it; whereas plants have only movement following on stimuli, whose direct influence they must await, or else decay, for they cannot seek after them nor appropriate them. We marvel at the great sagacity of the most developed species of animals, such as the dog, the elephant, the monkey or the fox, whose cleverness has been so admirably sketched by Buffon. From these most sagacious animals, we can pretty accurately determine how far understanding can go without reason, *i. e.*, abstract knowledge embodied in concepts. We could not find this out from ourselves, for in us understanding and reason always reciprocally support each other. We find that the manifestation of understanding in animals is sometimes above our expectation, and sometimes below it. On the one hand, we are surprised at the sagacity of the elephant, who, after crossing many bridges during his journey in Europe, once refused to go upon one, because he thought it was not strong enough to bear his weight, though he saw the rest of the party, consisting of men and horses, go upon it as usual. On the other hand, we wonder that the intelligent Orang-outangs, who warm themselves at a fire they have found, do not keep it alight by throwing wood on it; a proof that this requires a deliberation which is not possible without abstract concepts. It is clear that the knowledge of cause and effect, as the universal form of understanding, belongs to all animals *a priori*, because to them as to us it is the prior condition of all perception of the outer world. If any one desires additional proof of this, let him observe, for example, how a young dog is afraid to jump down from a table, however much he may wish to do so, because he foresees the effect of the weight of his body, though he has not been taught this by experience. In judging of the understanding of animals, we must guard against ascribing to it the manifestations of instinct, a faculty which is quite distinct both from understanding and reason, but the action of which is often very analogous to the combined action of the two. We cannot, however, discuss this here; it will find its proper place in the second book, when we consider the harmony or so-called teleology of nature: and the 27th chapter of the supplementary volume is expressly devoted to it.

Deficiency of *understanding* we call *stupidity*: deficiency in the application of *reason* to practice we shall recognise later as *foolishness*: deficiency of judgment as *silliness*, and lastly, partial or entire deficiency of *memory* as *madness*. But each of these will be considered in its own place. That which is correctly known by *reason* is *truth*, that is, an abstract judgment on sufficient grounds (Essay on the Principle of Sufficient Reason, § 29 and following paragraphs); that which is correctly known by *understanding* is *reality*, that is correct inference from effect on the immediate object to its cause. *Error* is opposed to *truth*, as deception of the *reason*: *illusion* is opposed to *reality*, as deception of the *understanding*. The full discussion of all this will be found in the first chapter of my essay on Light and Colour. Illusion takes place when the same effect may be attributed to two causes, of which one occurs very frequently, the other very seldom; the understanding having no data to decide which of these two causes operates in any particular case, – for their effects are exactly alike, – always assumes the presence of the commoner cause, and as the activity of the understanding is not reflective and discursive, but direct and immediate, this false cause appears before us as a perceived object, whereas it is merely illusion. I have explained in the essay referred to, how in this way double sight

and double feeling take place if the organs of sense are brought into an unusual position; and have thus given an incontrovertible proof that perception exists only through and for the understanding. As additional examples of such illusions or deceptions of the understanding, we may mention the broken appearance of a stick dipped in water; the reflections in spherical mirrors, which, when the surface is convex appear somewhat behind it, and when the surface is concave appear a long way in front of it. To this class also belongs the apparently greater extension of the moon at the horizon than at the zenith. This appearance is not optical, for as the micrometre proves, the eye receives the image of the moon at the zenith, at an even greater angle of vision than at the horizon. The mistake is due to the understanding, which assumes that the cause of the feebler light of the moon and of all stars at the horizon is that they are further off, thus treating them as earthly objects, according to the laws of atmospheric perspective, and therefore it takes the moon to be much larger at the horizon than at the zenith, and also regards the vault of heaven as more extended or flattened out at the horizon. The same false application of the laws of atmospheric perspective leads us to suppose that very high mountains, whose summits alone are visible in pure transparent air, are much nearer than they really are, and therefore not so high as they are; for example, Mont Blanc seen from Salenche. All such illusions are immediately present to us as perceptions, and cannot be dispelled by any arguments of the reason. Reason can only prevent error, that is, a judgment on insufficient grounds, by opposing to it a truth; as for example, the abstract knowledge that the cause of the weaker light of the moon and the stars at the horizon is not greater distance, but the denser atmosphere; but in all the cases we have referred to, the illusion remains in spite of every abstract explanation. For the understanding is in itself, even in the case of man, irrational, and is completely and sharply distinguished from the reason, which is a faculty of knowledge that belongs to man alone. The reason can only *know*; perception remains free from its influence and belongs to the understanding alone.

§ 7. With reference to our exposition up to this point, it must be observed that we did not start either from the object or the subject, but from the idea, which contains and presupposes them both; for the antithesis of object and subject is its primary, universal and essential form. We have therefore first considered this form as such; then (though in this respect reference has for the most part been made to the introductory essay) the subordinate forms of time, space and causality. The latter belong exclusively to the *object*, and yet, as they are essential to the object *as such*, and as the object again is essential to the subject *as such*, they may be discovered from the subject, *i. e.*, they may be known *a priori*, and so far they are to be regarded as the common limits of both. But all these forms may be referred to one general expression, the principle of sufficient reason, as we have explained in the introductory essay.

This procedure distinguishes our philosophical method from that of all former systems. For they all start either from the object or from the subject, and therefore seek to explain the one from the other, and this according to the principle of sufficient reason. We, on the contrary, deny the validity of this principle with reference to the relation of subject and object, and confine it to the object. It may be thought that the philosophy of identity, which has appeared and become generally known in our own day, does not come under either of the alternatives we have named, for it does not start either from the subject or from the object, but from the absolute, known through “intellectual intuition,” which is neither object nor subject, but the identity of the two. I will not venture to speak of this revered identity, and this absolute, for I find myself entirely devoid of all “intellectual intuition.” But as I take my stand merely on those manifestoes of the “intellectual intuiter” which are open to all, even to profane persons like myself, I must yet observe that this philosophy is not to be excepted from the alternative errors mentioned above. For it does not escape these two opposite errors in spite of its identity of subject and object, which is not thinkable, but only “intellectually intuitable,” or to be experienced by a losing of oneself in it. On the contrary, it combines them both in itself; for it is divided into two parts, firstly, transcendental idealism, which is just Fichte's doctrine of the *ego*, and therefore teaches that the object is produced by the subject, or evolved out of it in accordance with

the principle of sufficient reason; secondly, the philosophy of nature, which teaches that the subject is produced little by little from the object, by means of a method called construction, about which I understand very little, yet enough to know that it is a process according to various forms of the principle of sufficient reason. The deep wisdom itself which that construction contains, I renounce; for as I entirely lack “intellectual intuition,” all those expositions which presuppose it must for me remain as a book sealed with seven seals. This is so truly the case that, strange to say, I have always been unable to find anything at all in this doctrine of profound wisdom but atrocious and wearisome bombast.

The systems starting from the object had always the whole world of perception and its constitution as their problem; yet the object which they take as their starting-point is not always this whole world of perception, nor its fundamental element, matter. On the contrary, a division of these systems may be made, based on the four classes of possible objects set forth in the introductory essay. Thus Thales and the Ionic school, Democritus, Epicurus, Giordano Bruno, and the French materialists, may be said to have started from the first class of objects, the real world: Spinoza (on account of his conception of substance, which is purely abstract, and exists only in his definition) and, earlier, the Eleatics, from the second class, the abstract conception: the Pythagoreans and Chinese philosophy in Y-King, from the third class, time, and consequently number: and, lastly, the schoolmen, who teach a creation out of nothing by the act of will of an extra-mundane personal being, started from the fourth class of objects, the act of will directed by knowledge.

Of all systems of philosophy which start from the object, the most consistent, and that which may be carried furthest, is simple materialism. It regards matter, and with it time and space, as existing absolutely, and ignores the relation to the subject in which alone all this really exists. It then lays hold of the law of causality as a guiding principle or clue, regarding it as a self-existent order (or arrangement) of things, *veritas aeterna*, and so fails to take account of the understanding, in which and for which alone causality is. It seeks the primary and most simple state of matter, and then tries to develop all the others from it; ascending from mere mechanism, to chemism, to polarity, to the vegetable and to the animal kingdom. And if we suppose this to have been done, the last link in the chain would be animal sensibility – that is knowledge – which would consequently now appear as a mere modification or state of matter produced by causality. Now if we had followed materialism thus far with clear ideas, when we reached its highest point we would suddenly be seized with a fit of the inextinguishable laughter of the Olympians. As if waking from a dream, we would all at once become aware that its final result – knowledge, which it reached so laboriously, was presupposed as the indispensable condition of its very starting-point, mere matter; and when we imagined that we thought matter, we really thought only the subject that perceives matter; the eye that sees it, the hand that feels it, the understanding that knows it. Thus the tremendous *petitio principii* reveals itself unexpectedly; for suddenly the last link is seen to be the starting-point, the chain a circle, and the materialist is like Baron Münchhausen who, when swimming in water on horseback, drew the horse into the air with his legs, and himself also by his cue. The fundamental absurdity of materialism is that it starts from the *objective*, and takes as the ultimate ground of explanation something *objective*, whether it be matter in the abstract, simply as it is *thought*, or after it has taken form, is empirically given – that is to say, is *substance*, the chemical element with its primary relations. Some such thing it takes, as existing absolutely and in itself, in order that it may evolve organic nature and finally the knowing subject from it, and explain them adequately by means of it; whereas in truth all that is objective is already determined as such in manifold ways by the knowing subject through its forms of knowing, and presupposes them; and consequently it entirely disappears if we think the subject away. Thus materialism is the attempt to explain what is immediately given us by what is given us indirectly. All that is objective, extended, active – that is to say, all that is material – is regarded by materialism as affording so solid a basis for its explanation, that a reduction of everything to this can leave nothing to be desired (especially if in ultimate analysis this reduction should resolve itself

into action and reaction). But we have shown that all this is given indirectly and in the highest degree determined, and is therefore merely a relatively present object, for it has passed through the machinery and manufactory of the brain, and has thus come under the forms of space, time and causality, by means of which it is first presented to us as extended in space and ever active in time. From such an indirectly given object, materialism seeks to explain what is immediately given, the idea (in which alone the object that materialism starts with exists), and finally even the will from which all those fundamental forces, that manifest themselves, under the guidance of causes, and therefore according to law, are in truth to be explained. To the assertion that thought is a modification of matter we may always, with equal right, oppose the contrary assertion that all matter is merely the modification of the knowing subject, as its idea. Yet the aim and ideal of all natural science is at bottom a consistent materialism. The recognition here of the obvious impossibility of such a system establishes another truth which will appear in the course of our exposition, the truth that all science properly so called, by which I understand systematic knowledge under the guidance of the principle of sufficient reason, can never reach its final goal, nor give a complete and adequate explanation: for it is not concerned with the inmost nature of the world, it cannot get beyond the idea; indeed, it really teaches nothing more than the relation of one idea to another.

Every science must start from two principal data. One of these is always the principle of sufficient reason in some form or another, as organon; the other is its special object as problem. Thus, for example, geometry has space as problem, and the ground of existence in space as organon. Arithmetic has time as problem, and the ground of existence in time as organon. Logic has the combination of concepts as such as problem, and the ground of knowledge as organon. History has the past acts of men treated as a whole as problem, and the law of human motives as organon. Natural science has matter as problem, and the law of causality as organon. Its end and aim is therefore, by the guidance of causality, to refer all possible states of matter to other states, and ultimately to one single state; and again to deduce these states from each other, and ultimately from one single state. Thus two states of matter stand over against each other in natural science as extremes: that state in which matter is furthest from being the immediate object of the subject, and that state in which it is most completely such an immediate object, *i. e.*, the most dead and crude matter, the primary element, as the one extreme, and the human organism as the other. Natural science as chemistry seeks for the first, as physiology for the second. But as yet neither extreme has been reached, and it is only in the intermediate ground that something has been won. The prospect is indeed somewhat hopeless. The chemists, under the presupposition that the qualitative division of matter is not, like quantitative division, an endless process, are always trying to decrease the number of the elements, of which there are still about sixty; and if they were to succeed in reducing them to two, they would still try to find the common root of these. For, on the one hand, the law of homogeneity leads to the assumption of a primary chemical state of matter, which alone belongs to matter as such, and precedes all others which are not essentially matter as such, but merely contingent forms and qualities. On the other hand, we cannot understand how this one state could ever experience a chemical change, if there did not exist a second state to affect it. Thus the same difficulty appears in chemistry which Epicurus met with in mechanics. For he had to show how the first atom departed from the original direction of its motion. Indeed this contradiction, which develops entirely of itself and can neither be escaped nor solved, might quite properly be set up as a chemical *antinomy*. Thus an antinomy appears in the one extreme of natural science, and a corresponding one will appear in the other. There is just as little hope of reaching this opposite extreme of natural science, for we see ever more clearly that what is chemical can never be referred to what is mechanical, nor what is organic to what is chemical or electrical. Those who in our own day are entering anew on this old, misleading path, will soon slink back silent and ashamed, as all their predecessors have done before them. We shall consider this more fully in the second book. Natural science encounters the difficulties which we have cursorily mentioned, in its own province. Regarded as philosophy, it would further be materialism; but this, as we have seen,

even at its birth, has death in its heart, because it ignores the subject and the forms of knowledge, which are presupposed, just as much in the case of the crudest matter, from which it desires to start, as in that of the organism, at which it desires to arrive. For, “no object without a subject,” is the principle which renders all materialism for ever impossible. Suns and planets without an eye that sees them, and an understanding that knows them, may indeed be spoken of in words, but for the idea, these words are absolutely meaningless. On the other hand, the law of causality and the treatment and investigation of nature which is based upon it, lead us necessarily to the conclusion that, in time, each more highly organised state of matter has succeeded a cruder state: so that the lower animals existed before men, fishes before land animals, plants before fishes, and the unorganised before all that is organised; that, consequently, the original mass had to pass through a long series of changes before the first eye could be opened. And yet, the existence of this whole world remains ever dependent upon the first eye that opened, even if it were that of an insect. For such an eye is a necessary condition of the possibility of knowledge, and the whole world exists only in and for knowledge, and without it is not even thinkable. The world is entirely idea, and as such demands the knowing subject as the supporter of its existence. This long course of time itself, filled with innumerable changes, through which matter rose from form to form till at last the first percipient creature appeared, – this whole time itself is only thinkable in the identity of a consciousness whose succession of ideas, whose form of knowing it is, and apart from which, it loses all meaning and is nothing at all. Thus we see, on the one hand, the existence of the whole world necessarily dependent upon the first conscious being, however undeveloped it may be; on the other hand, this conscious being just as necessarily entirely dependent upon a long chain of causes and effects which have preceded it, and in which it itself appears as a small link. These two contradictory points of view, to each of which we are led with the same necessity, we might again call an *antinomy* in our faculty of knowledge, and set it up as the counterpart of that which we found in the first extreme of natural science. The fourfold antinomy of Kant will be shown, in the criticism of his philosophy appended to this volume, to be a groundless delusion. But the necessary contradiction which at last presents itself to us here, finds its solution in the fact that, to use Kant's phraseology, time, space, and causality do not belong to the thing-in-itself, but only to its phenomena, of which they are the form; which in my language means this: The objective world, the world as idea, is not the only side of the world, but merely its outward side; and it has an entirely different side – the side of its inmost nature – its kernel – the thing-in-itself. This we shall consider in the second book, calling it after the most immediate of its objective manifestations – will. But the world as idea, with which alone we are here concerned, only appears with the opening of the first eye. Without this medium of knowledge it cannot be, and therefore it was not before it. But without that eye, that is to say, outside of knowledge, there was also no before, no time. Thus time has no beginning, but all beginning is in time. Since, however, it is the most universal form of the knowable, in which all phenomena are united together through causality, time, with its infinity of past and future, is present in the beginning of knowledge. The phenomenon which fills the first present must at once be known as causally bound up with and dependent upon a sequence of phenomena which stretches infinitely into the past, and this past itself is just as truly conditioned by this first present, as conversely the present is by the past. Accordingly the past out of which the first present arises, is, like it, dependent upon the knowing subject, without which it is nothing. It necessarily happens, however, that this first present does not manifest itself as the first, that is, as having no past for its parent, but as being the beginning of time. It manifests itself rather as the consequence of the past, according to the principle of existence in time. In the same way, the phenomena which fill this first present appear as the effects of earlier phenomena which filled the past, in accordance with the law of causality. Those who like mythological interpretations may take the birth of Kronos (χρόνος), the youngest of the Titans, as a symbol of the moment here referred to at which time appears, though, indeed it has no beginning; for with him, since he ate his father, the crude productions of heaven and earth cease, and the races of gods and men appear upon the scene.

This explanation at which we have arrived by following the most consistent of the philosophical systems which start from the object, materialism, has brought out clearly the inseparable and reciprocal dependence of subject and object, and at the same time the inevitable antithesis between them. And this knowledge leads us to seek for the inner nature of the world, the thing-in-itself, not in either of the two elements of the idea, but in something quite distinct from it, and which is not encumbered with such a fundamental and insoluble antithesis.

Opposed to the system we have explained, which starts from the object in order to derive the subject from it, is the system which starts from the subject and tries to derive the object from it. The first of these has been of frequent and common occurrence throughout the history of philosophy, but of the second we find only one example, and that a very recent one; the “philosophy of appearance” of J. G. Fichte. In this respect, therefore, it must be considered; little real worth or inner meaning as the doctrine itself had. It was indeed for the most part merely a delusion, but it was delivered with an air of the deepest earnestness, with sustained loftiness of tone and zealous ardour, and was defended with eloquent polemic against weak opponents, so that it was able to present a brilliant exterior and seemed to be something. But the genuine earnestness which keeps truth always steadfastly before it as its goal, and is unaffected by any external influences, was entirely wanting to Fichte, as it is to all philosophers who, like him, concern themselves with questions of the day. In his case, indeed, it could not have been otherwise. A man becomes a philosopher by reason of a certain perplexity, from which he seeks to free himself. This is Plato's θαυμαζειν, which he calls a *μαλα φιλοσοφικον παθος*. But what distinguishes the false philosopher from the true is this: the perplexity of the latter arises from the contemplation of the world itself, while that of the former results from some book, some system of philosophy which is before him. Now Fichte belongs to the class of the false philosophers. He was made a philosopher by Kant's doctrine of the thing-in-itself, and if it had not been for this he would probably have pursued entirely different ends, with far better results, for he certainly possessed remarkable rhetorical talent. If he had only penetrated somewhat deeply into the meaning of the book that made him a philosopher, “The Critique of Pure Reason,” he would have understood that its principal teaching about mind is this. The principle of sufficient reason is not, as all scholastic philosophy maintains, a *veritas aeterna*—that is to say, it does not possess an unconditioned validity before, outside of, and above the world. It is relative and conditioned, and valid only in the sphere of phenomena, and thus it may appear as the necessary nexus of space and time, or as the law of causality, or as the law of the ground of knowledge. The inner nature of the world, the thing-in-itself can never be found by the guidance of this principle, for all that it leads to will be found to be dependent and relative and merely phenomenal, not the thing-in-itself. Further, it does not concern the subject, but is only the form of objects, which are therefore not things-in-themselves. The subject must exist along with the object, and the object along with the subject, so that it is impossible that subject and object can stand to each other in a relation of reason and consequent. But Fichte did not take up the smallest fragment of all this. All that interested him about the matter was that the system started from the subject. Now Kant had chosen this procedure in order to show the fallacy of the prevalent systems, which started from the object, and through which the object had come, to be regarded as a thing-in-itself. Fichte, however, took this departure from the subject for the really important matter, and like all imitators, he imagined that in going further than Kant he was surpassing him. Thus he repeated the fallacy with regard to the subject, which all the previous dogmatism had perpetrated with regard to the object, and which had been the occasion of Kant's “Critique”. Fichte then made no material change, and the fundamental fallacy, the assumption of a relation of reason and consequent between object and subject, remained after him as it was before him. The principle of sufficient reason possessed as before an unconditioned validity, and the only difference was that the thing-in-itself was now placed in the subject instead of, as formerly, in the object. The entire relativity of both subject and object, which proves that the thing-in-itself, or the inner nature of the world, is not to be sought in them at all, but outside of them, and outside everything else that exists merely



relatively, still remained unknown. Just as if Kant had never existed, the principle of sufficient reason is to Fichte precisely what it was to all the schoolmen, a *veritas aeterna*. As an eternal fate reigned over the gods of old, so these *aeternæ veritates*, these metaphysical, mathematical and metalogical truths, and in the case of some, the validity of the moral law also, reigned over the God of the schoolmen. These *veritates* alone were independent of everything, and through their necessity both God and the world existed. According to the principle of sufficient reason, as such a *veritas aeterna*, the *ego* is for Fichte the ground of the world, or of the *non-ego*, the object, which is just its consequent, its creation. He has therefore taken good care to avoid examining further or limiting the principle of sufficient reason. If, however, it is thought I should specify the form of the principle of sufficient reason under the guidance of which Fichte derives the *non-ego* from the *ego*, as a spider spins its web out of itself, I find that it is the principle of sufficient reason of existence in space: for it is only as referred to this that some kind of meaning and sense can be attached to the laboured deductions of the way in which the *ego* produces and fabricates the *non-ego* from itself, which form the content of the most senseless, and consequently the most wearisome book that was ever written. This philosophy of Fichte, otherwise not worth mentioning, is interesting to us only as the tardy expression of the converse of the old materialism. For materialism was the most consistent system starting from the object, as this is the most consistent system starting from the subject. Materialism overlooked the fact that, with the simplest object, it assumed the subject also; and Fichte overlooked the fact that with the subject (whatever he may call it) he assumed the object also, for no subject is thinkable without an object. Besides this he forgot that all *a priori* deduction, indeed all demonstration in general, must rest upon some necessity, and that all necessity is based on the principle of sufficient reason, because to be necessary, and to follow from given grounds are convertible conceptions.<sup>10</sup> But the principle of sufficient reason is just the universal form of the object as such. Thus it is in the object, but is not valid before and outside of it; it first produces the object and makes it appear in conformity with its regulative principle. We see then that the system which starts from the subject contains the same fallacy as the system, explained above, which starts from the object; it begins by assuming what it proposes to deduce, the necessary correlative of its starting-point.

The method of our own system is *toto genere* distinct from these two opposite misconceptions, for we start neither from the object nor from the subject, but from the *idea*, as the first fact of consciousness. Its first essential, fundamental form is the antithesis of subject and object. The form of the object again is the principle of sufficient reason in its various forms. Each of these reigns so absolutely in its own class of ideas that, as we have seen, when the special form of the principle of sufficient reason which governs any class of ideas is known, the nature of the whole class is known also: for the whole class, as *idea*, is no more than this form of the principle of sufficient reason itself; so that time itself is nothing but the principle of existence in it, *i. e.*, succession; space is nothing but the principle of existence in it, *i. e.*, position; matter is nothing but causality; the concept (as will appear immediately) is nothing but relation to a ground of knowledge. This thorough and consistent relativity of the world as *idea*, both according to its universal form (subject and object), and according to the form which is subordinate to this (the principle of sufficient reason) warns us, as we said before, to seek the inner nature of the world in an aspect of it which is *quite different and quite distinct from the idea*; and in the next book we shall find this in a fact which is just as immediate to every living being as the *idea*.

But we must first consider that class of ideas which belongs to man alone. The matter of these is the concept, and the subjective correlative is reason, just as the subjective correlative of the ideas we have already considered was understanding and sensibility, which are also to be attributed to all the lower animals.<sup>11</sup>

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<sup>10</sup> On this see "The Fourfold Root of the Principle of Sufficient Reason," § 49.

<sup>11</sup> The first four chapters of the first of the supplementary books belong to these seven paragraphs.

§ 8. As from the direct light of the sun to the borrowed light of the moon, we pass from the immediate idea of perception, which stands by itself and is its own warrant, to reflection, to the abstract, discursive concepts of the reason, which obtain their whole content from knowledge of perception, and in relation to it. As long as we continue simply to perceive, all is clear, firm, and certain. There are neither questions nor doubts nor errors; we desire to go no further, can go no further; we find rest in perceiving, and satisfaction in the present. Perception suffices for itself, and therefore what springs purely from it, and remains true to it, for example, a genuine work of art, can never be false, nor can it be discredited through the lapse of time, for it does not present an opinion but the thing itself. But with abstract knowledge, with reason, doubt and error appear in the theoretical, care and sorrow in the practical. In the idea of perception, illusion may at moments take the place of the real; but in the sphere of abstract thought, error may reign for a thousand years, impose its yoke upon whole nations, extend to the noblest impulses of humanity, and, by the help of its slaves and its dupes, may chain and fetter those whom it cannot deceive. It is the enemy against which the wisest men of all times have waged unequal war, and only what they have won from it has become the possession of mankind. Therefore it is well to draw attention to it at once, as we already tread the ground to which its province belongs. It has often been said that we ought to follow truth even although no utility can be seen in it, because it may have indirect utility which may appear when it is least expected; and I would add to this, that we ought to be just as anxious to discover and to root out all error even when no harm is anticipated from it, because its mischief may be very indirect, and may suddenly appear when we do not expect it, for all error has poison at its heart. If it is mind, if it is knowledge, that makes man the lord of creation, there can be no such thing as harmless error, still less venerable and holy error. And for the consolation of those who in any way and at any time may have devoted strength and life to the noble and hard battle against error, I cannot refrain from adding that, so long as truth is absent, error will have free play, as owls and bats in the night; but sooner would we expect to see the owls and the bats drive back the sun in the eastern heavens, than that any truth which has once been known and distinctly and fully expressed, can ever again be so utterly vanquished and overcome that the old error shall once more reign undisturbed over its wide kingdom. This is the power of truth; its conquest is slow and laborious, but if once the victory be gained it can never be wrested back again.

Besides the ideas we have as yet considered, which, according to their construction, could be referred to time, space, and matter, if we consider them with reference to the object, or to pure sensibility and understanding (*i. e.*, knowledge of causality), if we consider them with reference to the subject, another faculty of knowledge has appeared in man alone of all earthly creatures, an entirely new consciousness, which, with very appropriate and significant exactness, is called *reflection*. For it is in fact derived from the knowledge of perception, and is a reflected appearance of it. But it has assumed a nature fundamentally different. The forms of perception do not affect it, and even the principle of sufficient reason which reigns over all objects has an entirely different aspect with regard to it. It is just this new, more highly endowed, consciousness, this abstract reflex of all that belongs to perception in that conception of the reason which has nothing to do with perception, that gives to man that thoughtfulness which distinguishes his consciousness so entirely from that of the lower animals, and through which his whole behaviour upon earth is so different from that of his irrational fellow-creatures. He far surpasses them in power and also in suffering. They live in the present alone, he lives also in the future and the past. They satisfy the needs of the moment, he provides by the most ingenious preparations for the future, yea for days that he shall never see. They are entirely dependent on the impression of the moment, on the effect of the perceptible motive; he is determined by abstract conceptions independent of the present. Therefore he follows predetermined plans, he acts from maxims, without reference to his surroundings or the accidental impression of the moment. Thus, for example, he can make with composure deliberate preparations for his own death, he can dissemble past finding out, and can carry his secret with him to the grave; lastly, he has

an actual choice between several motives; for only in the abstract can such motives, present together in consciousness, afford the knowledge with regard to themselves, that the one excludes the other, and can thus measure themselves against each other with reference to their power over the will. The motive that overcomes, in that it decides the question at issue, is the deliberate determinant of the will, and is a sure indication of its character. The brute, on the other hand, is determined by the present impression; only the fear of present compulsion can constrain its desires, until at last this fear has become custom, and as such continues to determine it; this is called training. The brute feels and perceives; man, in addition to this, *thinks* and *knows*: both *will*. The brute expresses its feelings and dispositions by gestures and sounds; man communicates his thought to others, or, if he wishes, he conceals it, by means of speech. Speech is the first production, and also the necessary organ of his reason. Therefore in Greek and Italian, speech and reason are expressed by the same word; ὁ λόγος, *il discorso*. *Vernunft* is derived from *vernehmen*, which is not a synonym for the verb to hear, but signifies the consciousness of the meaning of thoughts communicated in words. It is by the help of language alone that reason accomplishes its most important achievements, – the united action of several individuals, the planned co-operation of many thousands, civilisation, the state; also science, the storing up of experience, the uniting of common properties in one concept, the communication of truth, the spread of error, thoughts and poems, dogmas and superstitions. The brute first knows death when it dies, but man draws consciously nearer to it every hour that he lives; and this makes life at times a questionable good even to him who has not recognised this character of constant annihilation in the whole of life. Principally on this account man has philosophies and religions, though it is uncertain whether the qualities we admire most in his conduct, voluntary rectitude and nobility of feeling, were ever the fruit of either of them. As results which certainly belong only to them, and as productions of reason in this sphere, we may refer to the marvellous and monstrous opinions of philosophers of various schools, and the extraordinary and sometimes cruel customs of the priests of different religions.

It is the universal opinion of all times and of all nations that these manifold and far-reaching achievements spring from a common principle, from that peculiar intellectual power which belongs distinctively to man and which has been called reason, ὁ λόγος, το λογιστικον, το λογιον, *ratio*. Besides this, no one finds any difficulty in recognising the manifestations of this faculty, and in saying what is rational and what is irrational, where reason appears as distinguished from the other faculties and qualities of man, or lastly, in pointing out what, on account of the want of reason, we must never expect even from the most sensible brute. The philosophers of all ages may be said to be on the whole at one about this general knowledge of reason, and they have also given prominence to several very important manifestations of it; such as, the control of the emotions and passions, the capacity for drawing conclusions and formulating general principles, even such as are true prior to all experience, and so forth. Still all their explanations of the peculiar nature of reason are wavering, not clearly defined, discursive, without unity and concentration; now laying stress on one manifestation, now on another, and therefore often at variance with each other. Besides this, many start from the opposition between reason and revelation, a distinction which is unknown to philosophy, and which only increases confusion. It is very remarkable that up till now no philosopher has referred these manifold expressions of reason to one simple function which would be recognised in them all, from which they would all be explained, and which would therefore constitute the real inner nature of reason. It is true that the excellent Locke in the “Essay on the Human Understanding” (Book II., ch. xi., §§ 10 and 11), very rightly refers to general concepts as the characteristic which distinguishes man from the brutes, and Leibnitz quotes this with full approval in the “Nouveaux Essais sur l'Entendement Humaine” (Book II., ch. xi., §§ 10 and 11.) But when Locke (in Book IV., ch. xvii., §§ 2 and 3) comes to the special explanation of reason he entirely loses sight of this simple, primary characteristic, and he also falls into a wavering, undetermined, incomplete account of mangled and derivative manifestations of it. Leibnitz also, in the corresponding part of his work, behaves in a similar manner,

only with more confusion and indistinctness. In the Appendix, I have fully considered how Kant confused and falsified the conception of the nature of reason. But whoever will take the trouble to go through in this reference the mass of philosophical writing which has appeared since Kant, will find out, that just as the faults of princes must be expiated by whole nations, the errors of great minds extend their influence over whole generations, and even over centuries; they grow and propagate themselves, and finally degenerate into monstrosities. All this arises from the fact that, as Berkeley says, “Few men think; yet all will have opinions.”

The understanding has only one function – immediate knowledge of the relation of cause and effect. Yet the perception of the real world, and all common sense, sagacity, and inventiveness, however multifarious their applications may be, are quite clearly seen to be nothing more than manifestations of that one function. So also the reason has one function; and from it all the manifestations of reason we have mentioned, which distinguish the life of man from that of the brutes, may easily be explained. The application or the non-application of this function is all that is meant by what men have everywhere and always called rational and irrational.<sup>12</sup>

§ 9. Concepts form a distinct class of ideas, existing only in the mind of man, and entirely different from the ideas of perception which we have considered up till now. We can therefore never attain to a sensuous and, properly speaking, evident knowledge of their nature, but only to a knowledge which is abstract and discursive. It would, therefore, be absurd to demand that they should be verified in experience, if by experience is meant the real external world, which consists of ideas of perception, or that they should be brought before the eyes or the imagination like objects of perception. They can only be thought, not perceived, and only the effects which men accomplish through them are properly objects of experience. Such effects are language, preconceived and planned action and science, and all that results from these. Speech, as an object of outer experience, is obviously nothing more than a very complete telegraph, which communicates arbitrary signs with the greatest rapidity and the finest distinctions of difference. But what do these signs mean? How are they interpreted? When some one speaks, do we at once translate his words into pictures of the fancy, which instantaneously flash upon us, arrange and link themselves together, and assume form and colour according to the words that are poured forth, and their grammatical inflections? What a tumult there would be in our brains while we listened to a speech, or to the reading of a book? But what actually happens is not this at all. The meaning of a speech is, as a rule, immediately grasped, accurately and distinctly taken in, without the imagination being brought into play. It is reason which speaks to reason, keeping within its own province. It communicates and receives abstract conceptions, ideas that cannot be presented in perceptions, which are framed once for all, and are relatively few in number, but which yet encompass, contain, and represent all the innumerable objects of the actual world. This itself is sufficient to prove that the lower animals can never learn to speak or comprehend, although they have the organs of speech and ideas of perception in common with us. But because words represent this perfectly distinct class of ideas, whose subjective correlative is reason, they are without sense and meaning for the brutes. Thus language, like every other manifestation which we ascribe to reason, and like everything which distinguishes man from the brutes, is to be explained from this as its one simple source – conceptions, abstract ideas which cannot be presented in perception, but are general, and have no individual existence in space and time. Only in single cases do we pass from the conception to the perception, do we construct images as *representatives of concepts* in perception, to which, however, they are never adequate. These cases are fully discussed in the essay on the principle of sufficient reason, § 28, and therefore I shall not repeat my explanation here. It may be compared, however, with what is said by Hume in the twelfth of his “Philosophical Essays,” p. 244, and by Herder in the “Metacritik,” pt. i. p. 274 (an otherwise worthless book). The Platonic idea, the possibility of

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<sup>12</sup> Compare with this paragraph §§ 26 and 27 of the third edition of the essay on the principle of sufficient reason.

which depends upon the union of imagination and reason, is the principal subject of the third book of this work.

Although concepts are fundamentally different from ideas of perception, they stand in a necessary relation to them, without which they would be nothing. This relation therefore constitutes the whole nature and existence of concepts. Reflection is the necessary copy or repetition of the originally presented world of perception, but it is a special kind of copy in an entirely different material. Thus concepts may quite properly be called ideas of ideas. The principle of sufficient reason has here also a special form. Now we have seen that the form under which the principle of sufficient reason appears in a class of ideas always constitutes and exhausts the whole nature of the class, so far as it consists of ideas, so that time is throughout succession, and nothing more; space is throughout position, and nothing more; matter is throughout causation, and nothing more. In the same way the whole nature of concepts, or the class of abstract ideas, consists simply in the relation which the principle of sufficient reason expresses in them; and as this is the relation to the ground of knowledge, the whole nature of the abstract idea is simply and solely its relation to another idea, which is its ground of knowledge. This, indeed, may, in the first instance, be a concept, an abstract idea, and this again may have only a similar abstract ground of knowledge; but the chain of grounds of knowledge does not extend *ad infinitum*; it must end at last in a concept which has its ground in knowledge of perception; for the whole world of reflection rests on the world of perception as its ground of knowledge. Hence the class of abstract ideas is in this respect distinguished from other classes; in the latter the principle of sufficient reason always demands merely a relation to another idea of the *same* class, but in the case of abstract ideas, it at last demands a relation to an idea of *another* class.

Those concepts which, as has just been pointed out, are not immediately related to the world of perception, but only through the medium of one, or it may be several other concepts, have been called by preference *abstracta*, and those which have their ground immediately in the world of perception have been called *concreta*. But this last name is only loosely applicable to the concepts denoted by it, for they are always merely *abstracta*, and not ideas of perception. These names, which have originated in a very dim consciousness of the distinctions they imply, may yet, with this explanation, be retained. As examples of the first kind of concepts, *i. e.*, *abstracta* in the fullest sense, we may take “relation,” “virtue,” “investigation,” “beginning,” and so on. As examples of the second kind, loosely called *concreta*, we may take such concepts as “man,” “stone,” “horse,” &c. If it were not a somewhat too pictorial and therefore absurd simile, we might very appropriately call the latter the ground floor, and the former the upper stories of the building of reflection.<sup>13</sup>

It is not, as is commonly supposed, an essential characteristic of a concept that it should contain much under it, that is to say, that many ideas of perception, or it may be other abstract ideas, should stand to it in the relation of its ground of knowledge, *i. e.*, be thought through it. This is merely a derived and secondary characteristic, and, as a matter of fact, does not always exist, though it must always exist potentially. This characteristic arises from the fact that a concept is an idea of an idea, *i. e.*, its whole nature consists in its relation to another idea; but as it is not this idea itself, which is generally an idea of perception and therefore belongs to quite a different class, the latter may have temporal, spacial, and other determinations, and in general many relations which are not thought along with it in the concept. Thus we see that several ideas which are different in unessential particulars may be thought by means of one concept, *i. e.*, may be brought under it. Yet this power of embracing several things is not an essential but merely an accidental characteristic of the concept. There may be concepts through which only one real object is thought, but which are nevertheless abstract and general, by no means capable of presentation individually and as perceptions. Such, for example, is the conception which any one may have of a particular town which he only knows from geography; although only this one town is thought under it, it might yet be applied to several towns differing in

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<sup>13</sup> Cf. Ch. 5 and 6 of the Supplement.

certain respects. We see then that a concept is not general because of being abstracted from several objects; but conversely, because generality, that is to say, non-determination of the particular, belongs to the concept as an abstract idea of the reason, different things can be thought by means of the same one.

It follows from what has been said that every concept, just because it is abstract and incapable of presentation in perception, and is therefore not a completely determined idea, has what is called extension or sphere, even in the case in which only one real object exists that corresponds to it. Now we always find that the sphere of one concept has something in common with the sphere of other concepts. That is to say, part of what is thought under one concept is the same as what is thought under other concepts; and conversely, part of what is thought under these concepts is the same as what is thought under the first; although, if they are really different concepts, each of them, or at least one of them, contains something which the other does not contain; this is the relation in which every subject stands to its predicate. The recognition of this relation is called judgment. The representation of these spheres by means of figures in space, is an exceedingly happy idea. It first occurred to Gottfried Plouquet, who used squares for the purpose. Lambert, although later than him, used only lines, which he placed under each other. Euler carried out the idea completely with circles. Upon what this complete analogy between the relations of concepts, and those of figures in space, ultimately rests, I am unable to say. It is, however, a very fortunate circumstance for logic that all the relations of concepts, according to their possibility, *i. e.*, *a priori*, may be made plain in perception by the use of such figures, in the following way: —

(1.) The spheres of two concepts coincide: for example the concept of necessity and the concept of following from given grounds, in the same way the concepts of *Ruminantia* and *Bisulca* (ruminating and cloven-hoofed animals), also those of vertebrate and red-blooded animals (although there might be some doubt about this on account of the annelida): they are convertible concepts. Such concepts are represented by a single circle which stands for either of them.

(2.) The sphere of one concept includes that of the other.

(3.) A sphere includes two or more spheres which exclude each other and fill it.

(4.) Two spheres include each a part of the other.

(5.) Two spheres lie in a third, but do not fill it.

This last case applies to all concepts whose spheres have nothing immediately in common, for there is always a third sphere, often a much wider one, which includes both.

To these cases all combinations of concepts may be referred, and from them the entire doctrine of the judgment, its conversion, contraposition, equipollence, disjunction (this according to the third figure) may be deduced. From these also may be derived the properties of the judgment, upon which Kant based his pretended categories of the understanding, with the exception however of the hypothetical form, which is not a combination of concepts, but of judgments. A full account is given in the Appendix of “Modality,” and indeed of every property of judgments on which the categories are founded.

With regard to the possible combinations of concepts which we have given, it has only further to be remarked that they may also be combined with each other in many ways. For example, the fourth figure with the second. Only if one sphere, which partly or wholly contains another, is itself contained in a third sphere, do these together exemplify the syllogism in the first figure, *i. e.*, that combination of judgments, by means of which it is known that a concept which is partly or wholly contained in another concept, is also contained in a third concept, which again contains the first: and also, conversely, the negation; the pictorial representation of which can, of course, only be two connected spheres which do not lie within a third sphere. If many spheres are brought together in this way we get a long train of syllogisms. This schematism of concepts, which has already been fairly well explained in more than one textbook, may be used as the foundation of the doctrine of the judgment, and indeed of the whole syllogistic theory, and in this way the treatment of both becomes very easy

and simple. Because, through it, all syllogistic rules may be seen in their origin, and may be deduced and explained. It is not necessary, however, to load the memory with these rules, as logic is never of practical use, but has only a theoretical interest for philosophy. For although it may be said that logic is related to rational thinking as thorough-bass is to music, or less exactly, as ethics is to virtue, or æsthetics to art; we must yet remember that no one ever became an artist by the study of æsthetics; that a noble character was never formed by the study of ethics; that long before Rameau, men composed correctly and beautifully, and that we do not need to know thorough-bass in order to detect discords: and just as little do we need to know logic in order to avoid being misled by fallacies. Yet it must be conceded that thorough-bass is of the greatest use in the practice of musical composition, although it may not be necessary for the understanding of it; and indeed æsthetics and even ethics, though in a much less degree, and for the most part negatively, may be of some use in practice, so that we cannot deny them all practical worth, but of logic even this much cannot be conceded. It is nothing more than the knowledge in the abstract of what every one knows in the concrete. Therefore we call in the aid of logical rules, just as little to enable us to construct a correct argument as to prevent us from consenting to a false one, and the most learned logician lays aside the rules of logic altogether in his actual thought. This may be explained in the following way. Every science is a system of general and therefore abstract truths, laws, and rules with reference to a special class of objects. The individual case coming under these laws is determined in accordance with this general knowledge, which is valid once for all; because such application of the general principle is far easier than the exhaustive investigation of the particular case; for the general abstract knowledge which has once been obtained is always more within our reach than the empirical investigation of the particular case. With logic, however, it is just the other way. It is the general knowledge of the mode of procedure of the reason expressed in the form of rules. It is reached by the introspection of reason, and by abstraction from all content. But this mode of procedure is necessary and essential to reason, so that it will never depart from it if left to itself. It is, therefore, easier and surer to let it proceed itself according to its nature in each particular case, than to present to it the knowledge abstracted from this procedure in the form of a foreign and externally given law. It is easier, because, while in the case of all other sciences, the general rule is more within our reach than the investigation of the particular case taken by itself; with the use of reason, on the contrary, its necessary procedure in a given case is always more within our reach than the general rule abstracted from it; for that which thinks in us is reason itself. It is surer, because a mistake may more easily occur in such abstract knowledge, or in its application, than that a process of reason should take place which would run contrary to its essence and nature. Hence arises the remarkable fact, that while in other sciences the particular case is always proved by the rule, in logic, on the contrary, the rule must always be proved from the particular case; and even the most practised logician, if he remark that in some particular case he concludes otherwise than the rule prescribes, will always expect to find a mistake in the rule rather than in his own conclusion. To desire to make practical use of logic means, therefore, to desire to derive with unspeakable trouble, from general rules, that which is immediately known with the greatest certainty in the particular case. It is just as if a man were to consult mechanics as to the motion of his body, and physiology as to his digestion; and whoever has learnt logic for practical purposes is like him who would teach a beaver to make its own dam. Logic is, therefore, without practical utility; but it must nevertheless be retained, because it has philosophical interest as the special knowledge of the organisation and action of reason. It is rightly regarded as a definite, self-subsisting, self-contained, complete, and thoroughly safe discipline; to be treated scientifically for itself alone and independently of everything else, and therefore to be studied at the universities. But it has its real value, in relation to philosophy as a whole, in the inquiry into the nature of knowledge, and indeed of rational and abstract knowledge. Therefore the exposition of logic should not have so much the form of a practical science, should not contain merely naked arbitrary rules for the correct formation of the judgment, the syllogism, &c., but should rather be directed to the knowledge of the nature of reason and the concept, and to the

detailed investigation of the principle of sufficient reason of knowing. For logic is only a paraphrase of this principle, and, more exactly, only of that exemplification of it in which the ground that gives truth to the judgment is neither empirical nor metaphysical, but logical or metalogical. Besides the principle of sufficient reason of knowing, it is necessary to take account of the three remaining fundamental laws of thought, or judgments of metalogical truth, so nearly related to it; and out of these the whole science of reason grows. The nature of thought proper, that is to say, of the judgment and the syllogism, must be exhibited in the combination of the spheres of concepts, according to the analogy of the special schema, in the way shown above; and from all this the rules of the judgment and the syllogism are to be deduced by construction. The only practical use we can make of logic is in a debate, when we can convict our antagonist of his intentional fallacies, rather than of his actual mistakes, by giving them their technical names. By thus throwing into the background the practical aim of logic, and bringing out its connection with the whole scheme of philosophy as one of its chapters, we do not think that we shall make the study of it less prevalent than it is just now. For at the present day every one who does not wish to remain uncultured, and to be numbered with the ignorant and incompetent multitude, must study speculative philosophy. For the nineteenth century is a philosophical age, though by this we do not mean either that it has philosophy, or that philosophy governs it, but rather that it is ripe for philosophy, and, therefore, stands in need of it. This is a sign of a high degree of civilisation, and indeed, is a definite stage in the culture of the ages.<sup>14</sup>

Though logic is of so little practical use, it cannot be denied that it was invented for practical purposes. It appears to me to have originated in the following way: – As the love of debating developed among the Eleatics, the Megarics, and the Sophists, and by degrees became almost a passion, the confusion in which nearly every debate ended must have made them feel the necessity of a method of procedure as a guide; and for this a scientific dialectic had to be sought. The first thing which would have to be observed would be that both the disputing parties should always be agreed on some one proposition, to which the disputed points might be referred. The beginning of the methodical procedure consisted in this, that the propositions admitted on both sides were formally stated to be so, and placed at the head of the inquiry. But these propositions were at first concerned only with the material of the inquiry. It was soon observed that in the process of going back to the truth admitted on both sides, and of deducing their assertions from it, each party followed certain forms and laws about which, without any express agreement, there was no difference of opinion. And from this it became evident that these must constitute the peculiar and natural procedure of reason itself, the form of investigation. Although this was not exposed to any doubt or difference of opinion, some pedantically systematic philosopher hit upon the idea that it would look well, and be the completion of the method of dialectic, if this formal part of all discussion, this regular procedure of reason itself, were to be expressed in abstract propositions, just like the substantial propositions admitted on both sides, and placed at the beginning of every investigation, as the fixed canon of debate to which reference and appeal must always be made. In this way what had formerly been followed only by tacit agreement, and instinctively, would be consciously recognised and formally expressed. By degrees, more or less perfect expressions were found for the fundamental principles of logic, such as the principles of contradiction, sufficient reason, excluded middle, the *dictum de omni et nullo*, as well as the special rules of the syllogism, as for example, *ex meris particularibus aut negativis nihil sequitur, a rationato ad rationem non valet consequentia*, and so on. That all this was only brought about slowly, and with great pains, and up till the time of Aristotle remained very incomplete, is evident from the awkward and tedious way in which logical truths are brought out in many of the Platonic dialogues, and still more from what Sextus Empiricus tells us of the controversies of the Megarics, about the easiest and simplest logical rules, and the laborious way in which they were brought into a definite form (Sext. Emp. adv. Math. I. 8, p. 112). But Aristotle collected, arranged, and corrected all that

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<sup>14</sup> Cf. Ch. 9 and 10 of the Supplement.



had been discovered before his time, and brought it to an incomparably greater state of perfection. If we thus observe how the course of Greek culture had prepared the way for, and led up to the work of Aristotle, we shall be little inclined to believe the assertion of the Persian author, quoted by Sir William Jones with much approval, that Kallisthenes found a complete system of logic among the Indians, and sent it to his uncle Aristotle (Asiatic Researches, vol. iv. p. 163). It is easy to understand that in the dreary middle ages the Aristotelian logic would be very acceptable to the controversial spirit of the schoolmen, which, in the absence of all real knowledge, spent its energy upon mere formulas and words, and that it would be eagerly adopted even in its mutilated Arabian form, and presently established as the centre of all knowledge. Though its authority has since declined, yet up to our own time logic has retained the credit of a self-contained, practical, and highly important science. Indeed, in our own day, the Kantian philosophy, the foundation-stone of which is taken from logic, has excited a new interest in it; which, in this respect, at any rate, that is, as the means of the knowledge of the nature of reason, it deserves.

Correct and accurate conclusions may be arrived at if we carefully observe the relation of the spheres of concepts, and only conclude that one sphere is contained in a third sphere, when we have clearly seen that this first sphere is contained in a second, which in its turn is contained in the third. On the other hand, the art of sophistry lies in casting only a superficial glance at the relations of the spheres of the concepts, and then manipulating these relations to suit our purposes, generally in the following way: – When the sphere of an observed concept lies partly within that of another concept, and partly within a third altogether different sphere, we treat it as if it lay entirely within the one or the other, as may suit our purpose. For example, in speaking of passion, we may subsume it under the concept of the greatest force, the mightiest agency in the world, or under the concept of the irrational, and this again under the concept of impotency or weakness. We may then repeat the process, and start anew with each concept to which the argument leads us. A concept has almost always several others, which partially come under it, and each of these contains part of the sphere of the first, but also includes in its own sphere something more, which is not in the first. But we draw attention only to that one of these latter concepts, under which we wish to subsume the first, and let the others remain unobserved, or keep them concealed. On the possession of this skill depends the whole art of sophistry and all finer fallacies; for logical fallacies such as *mentiens*, *velatus*, *cornatus*, &c., are clearly too clumsy for actual use. I am not aware that hitherto any one has traced the nature of all sophistry and persuasion back to this last possible ground of its existence, and referred it to the peculiar character of concepts, *i. e.*, to the procedure of reason itself. Therefore, as my exposition has led me to it, though it is very easily understood, I will illustrate it in the following table by means of a schema. This table is intended to show how the spheres of concepts overlap each other at many points, and so leave room for a passage from each concept to whichever one we please of several other concepts. I hope, however, that no one will be led by this table to attach more importance to this little explanation, which I have merely given in passing, than ought to belong to it, from the nature of the subject. I have chosen as an illustration the concept of travelling. Its sphere partially includes four others, to any of which the sophist may pass at will; these again partly include other spheres, several of them two or more at once, and through these the sophist takes whichever way he chooses, always as if it were the only way, till at last he reaches, in good or evil, whatever end he may have in view. In passing from one sphere to another, it is only necessary always to follow the direction from the centre (the given chief concept) to the circumference, and never to reverse this process. Such a piece of sophistry may be either an unbroken speech, or it may assume the strict syllogistic form, according to what is the weak side of the hearer. Most scientific arguments, and especially philosophical demonstrations, are at bottom not much more than this, for how else would it be possible, that so much, in different ages, has not only been falsely apprehended (for error itself has a different source), but demonstrated and proved, and has yet afterwards been found to be

fundamentally wrong, for example, the Leibnitz-Wolfian Philosophy, Ptolemaic Astronomy, Stahl's Chemistry, Newton's Theory of Colours, &c. &c.<sup>15</sup>

§ 10. Through all this, the question presses ever more upon us, how *certainty* is to be attained, how *judgments are to be established*, what constitutes *rational knowledge*, (*wissen*), and *science*, which we rank with language and deliberate action as the third great benefit conferred by reason.

Reason is feminine in nature; it can only give after it has received. Of itself it has nothing but the empty forms of its operation. There is no absolutely pure rational knowledge except the four principles to which I have attributed metalogical truth; the principles of identity, contradiction, excluded middle, and sufficient reason of knowledge. For even the rest of logic is not absolutely pure rational knowledge. It presupposes the relations and the combinations of the spheres of concepts. But concepts in general only exist after experience of ideas of perception, and as their whole nature consists in their relation to these, it is clear that they presuppose them. No special content, however, is presupposed, but merely the existence of a content generally, and so logic as a whole may fairly pass for pure rational science. In all other sciences reason has received its content from ideas of perception; in mathematics from the relations of space and time, presented in intuition or perception prior to all experience; in pure natural science, that is, in what we know of the course of nature prior to any experience, the content of the science proceeds from the pure understanding, *i. e.*, from the *a priori* knowledge of the law of causality and its connection with those pure intuitions or perceptions of space and time. In all other sciences everything that is not derived from the sources we have just referred to belongs to experience. Speaking generally, *to know rationally* (*wissen*) means to have in the power of the mind, and capable of being reproduced at will, such judgments as have their sufficient ground of knowledge in something outside themselves, *i. e.*, are true. Thus only abstract cognition is *rational knowledge* (*wissen*), which is therefore the result of reason, so that we cannot accurately say of the lower animals that they *rationally know* (*wissen*) anything, although they have apprehension of what is presented in perception, and memory of this, and consequently imagination, which is further proved by the circumstance that they dream. We attribute consciousness to them, and therefore although the word (*bewusstsein*) is derived from the verb to know rationally (*wissen*), the conception of consciousness corresponds generally with that of idea of whatever kind it may be. Thus we attribute life to plants, but not consciousness. *Rational knowledge* (*wissen*) is therefore abstract consciousness, the permanent possession in concepts of the reason, of what has become known in another way.

§ 11. In this regard the direct opposite of *rational knowledge* is feeling, and therefore we must insert the explanation of feeling here. The concept which the word feeling denotes has merely a negative content, which is this, that something which is present in consciousness, *is not a concept, is not abstract rational knowledge*. Except this, whatever it may be, it comes under the concept of *feeling*. Thus the immeasurably wide sphere of the concept of feeling includes the most different kinds of objects, and no one can ever understand how they come together until he has recognised that they all agree in this negative respect, that they are not *abstract concepts*. For the most diverse and even antagonistic elements lie quietly side by side in this concept; for example, religious feeling, feeling of sensual pleasure, moral feeling, bodily feeling, as touch, pain, sense of colour, of sounds and their harmonies and discords, feeling of hate, of disgust, of self-satisfaction, of honour, of disgrace, of right, of wrong, sense of truth, æsthetic feeling, feeling of power, weakness, health, friendship, love, &c. &c. There is absolutely nothing in common among them except the negative quality that they are not abstract rational knowledge. But this diversity becomes more striking when the apprehension of space relations presented *a priori* in perception, and also the knowledge of the pure understanding is brought under this concept, and when we say of all knowledge and all truth, of which we are first conscious only intuitively, and have not yet formulated in abstract concepts, we *feel* it. I should like,

<sup>15</sup> Cf. Ch. 11 of Supplement.

for the sake of illustration, to give some examples of this taken from recent books, as they are striking proofs of my theory. I remember reading in the introduction to a German translation of Euclid, that we ought to make beginners in geometry draw the figures before proceeding to demonstrate, for in this way they would already feel geometrical truth before the demonstration brought them complete knowledge. In the same way Schleiermacher speaks in his “Critique of Ethics” of logical and mathematical feeling (p. 339), and also of the feeling of the sameness or difference of two formulas (p. 342). Again Tennemann in his “History of Philosophy” (vol. I., p. 361) says, “One *felt* that the fallacies were not right, but could not point out the mistakes.” Now, so long as we do not regard this concept “*feeling*” from the right point of view, and do not recognise that one negative characteristic which alone is essential to it, it must constantly give occasion for misunderstanding and controversy, on account of the excessive wideness of its sphere, and its entirely negative and very limited content which is determined in a purely one-sided manner. Since then we have in German the nearly synonymous word *empfindung* (sensation), it would be convenient to make use of it for bodily feeling, as a sub-species. This concept “feeling,” which is quite out of proportion to all others, doubtless originated in the following manner. All concepts, and concepts alone, are denoted by words; they exist only for the reason, and proceed from it. With concepts, therefore, we are already at a one-sided point of view; but from such a point of view what is near appears distinct and is set down as positive, what is farther off becomes mixed up and is soon regarded as merely negative. Thus each nation calls all others foreign: to the Greek all others are barbarians; to the Englishman all that is not England or English is continent or continental; to the believer all others are heretics, or heathens; to the noble all others are *roturiers*; to the student all others are Philistines, and so forth. Now, reason itself, strange as it may seem, is guilty of the same one-sidedness, indeed one might say of the same crude ignorance arising from vanity, for it classes under the one concept, “*feeling*,” every modification of consciousness which does not immediately belong to its own mode of apprehension, that is to say, which is *not an abstract concept*. It has had to pay the penalty of this hitherto in misunderstanding and confusion in its own province, because its own procedure had not become clear to it through thorough self-knowledge, for a special faculty of feeling has been set up, and new theories of it are constructed.

§ 12. *Rational knowledge (wissen)* is then all abstract knowledge, – that is, the knowledge which is peculiar to the reason as distinguished from the understanding. Its contradictory opposite has just been explained to be the concept “feeling.” Now, as reason only reproduces, for knowledge, what has been received in another way, it does not actually extend our knowledge, but only gives it another form. It enables us to know in the abstract and generally, what first became known in sense-perception, in the concrete. But this is much more important than it appears at first sight when so expressed. For it depends entirely upon the fact that knowledge has become rational or abstract knowledge (*wissen*), that it can be safely preserved, that it is communicable and susceptible of certain and wide-reaching application to practice. Knowledge in the form of sense-perception is valid only of the particular case, extends only to what is nearest, and ends with it, for sensibility and understanding can only comprehend one object at a time. Every enduring, arranged, and planned activity must therefore proceed from principles, – that is, from abstract knowledge, and it must be conducted in accordance with them. Thus, for example, the knowledge of the relation of cause and effect arrived at by the understanding, is in itself far completer, deeper and more exhaustive than anything that can be thought about it in the abstract; the understanding alone knows in perception directly and completely the nature of the effect of a lever, of a pulley, or a cog-wheel, the stability of an arch, and so forth. But on account of the peculiarity of the knowledge of perception just referred to, that it only extends to what is immediately present, the mere understanding can never enable us to construct machines and buildings. Here reason must come in; it must substitute abstract concepts for ideas of perception, and take them as the guide of action; and if they are right, the anticipated result will happen. In the same way we have perfect knowledge in pure perception of the nature and constitution of the parabola, hyperbola, and spiral; but if we are to make trustworthy application of this knowledge to the

real, it must first become abstract knowledge, and by this it certainly loses its character of intuition or perception, but on the other hand it gains the certainty and preciseness of abstract knowledge. The differential calculus does not really extend our knowledge of the curve, it contains nothing that was not already in the mere pure perception of the curve; but it alters the kind of knowledge, it changes the intuitive into an abstract knowledge, which is so valuable for application. But here we must refer to another peculiarity of our faculty of knowledge, which could not be observed until the distinction between the knowledge of the senses and understanding and abstract knowledge had been made quite clear. It is this, that relations of space cannot as such be directly translated into abstract knowledge, but only temporal quantities, – that is, numbers, are suitable for this. Numbers alone can be expressed in abstract concepts which accurately correspond to them, not spacial quantities. The concept “thousand” is just as different from the concept “ten,” as both these temporal quantities are in perception. We think of a thousand as a distinct multiple of ten, into which we can resolve it at pleasure for perception in time, – that is to say, we can count it. But between the abstract concept of a mile and that of a foot, apart from any concrete perception of either, and without the help of number, there is no accurate distinction corresponding to the quantities themselves. In both we only think of a spacial quantity in general, and if they must be completely distinguished we are compelled either to call in the assistance of intuition or perception in space, which would be a departure from abstract knowledge, or we must think the difference in *numbers*. If then we wish to have abstract knowledge of space-relations we must first translate them into time-relations, – that is, into numbers; therefore only arithmetic, and not geometry, is the universal science of quantity, and geometry must be translated into arithmetic if it is to be communicable, accurately precise and applicable in practice. It is true that a space-relation as such may also be thought in the abstract; for example, “the sine increases as the angle,” but if the quantity of this relation is to be given, it requires number for its expression. This necessity, that if we wish to have abstract knowledge of space-relations (*i. e.*, rational knowledge, not mere intuition or perception), space with its three dimensions must be translated into time which has only one dimension, this necessity it is, which makes mathematics so difficult. This becomes very clear if we compare the perception of curves with their analytical calculation, or the table of logarithms of the trigonometrical functions with the perception of the changing relations of the parts of a triangle, which are expressed by them. What vast mazes of figures, what laborious calculations it would require to express in the abstract what perception here apprehends at a glance completely and with perfect accuracy, namely, how the co-sine diminishes as the sine increases, how the co-sine of one angle is the sine of another, the inverse relation of the increase and decrease of the two angles, and so forth. How time, we might say, must complain, that with its one dimension it should be compelled to express the three dimensions of space! Yet this is necessary if we wish to possess, for application, an expression, in abstract concepts, of space-relations. They could not be translated directly into abstract concepts, but only through the medium of the pure temporal quantity, number, which alone is directly related to abstract knowledge. Yet it is worthy of remark, that as space adapts itself so well to perception, and by means of its three dimensions, even its complicated relations are easily apprehended, while it eludes the grasp of abstract knowledge; time, on the contrary, passes easily into abstract knowledge, but gives very little to perception. Our perceptions of numbers in their proper element, mere time, without the help of space, scarcely extends as far as ten, and beyond that we have only abstract concepts of numbers, no knowledge of them which can be presented in perception. On the other hand, we connect with every numeral, and with all algebraical symbols, accurately defined abstract concepts.

We may further remark here that some minds only find full satisfaction in what is known through perception. What they seek is the reason and consequent of being in space, sensuously expressed; a demonstration after the manner of Euclid, or an arithmetical solution of spacial problems, does not please them. Other minds, on the contrary, seek merely the abstract concepts which are needful for applying and communicating knowledge. They have patience and memory for abstract

principles, formulas, demonstrations in long trains of reasoning, and calculations, in which the symbols represent the most complicated abstractions. The latter seek preciseness, the former sensible perception. The difference is characteristic.

The greatest value of rational or abstract knowledge is that it can be communicated and permanently retained. It is principally on this account that it is so inestimably important for practice. Any one may have a direct perceptive knowledge through the understanding alone, of the causal connection, of the changes and motions of natural bodies, and he may find entire satisfaction in it; but he cannot communicate this knowledge to others until it has been made permanent for thought in concepts. Knowledge of the first kind is even sufficient for practice, if a man puts his knowledge into practice himself, in an action which can be accomplished while the perception is still vivid; but it is not sufficient if the help of others is required, or even if the action is his own but must be carried out at different times, and therefore requires a pre-conceived plan. Thus, for example, a practised billiard-player may have a perfect knowledge of the laws of the impact of elastic bodies upon each other, merely in the understanding, merely for direct perception; and for him it is quite sufficient; but on the other hand it is only the man who has studied the science of mechanics, who has, properly speaking, a rational knowledge of these laws, that is, a knowledge of them in the abstract. Such knowledge of the understanding in perception is sufficient even for the construction of machines, when the inventor of the machine executes the work himself; as we often see in the case of talented workmen, who have no scientific knowledge. But whenever a number of men, and their united action taking place at different times, is required for the completion of a mechanical work, of a machine, or a building, then he who conducts it must have thought out the plan in the abstract, and such co-operative activity is only possible through the assistance of reason. It is, however, remarkable that in the first kind of activity, in which we have supposed that one man alone, in an uninterrupted course of action, accomplishes something, abstract knowledge, the application of reason or reflection, may often be a hindrance to him; for example, in the case of billiard-playing, of fighting, of tuning an instrument, or in the case of singing. Here perceptive knowledge must directly guide action; its passage through reflection makes it uncertain, for it divides the attention and confuses the man. Thus savages and untaught men, who are little accustomed to think, perform certain physical exercises, fight with beasts, shoot with bows and arrows and the like, with a certainty and rapidity which the reflecting European never attains to, just because his deliberation makes him hesitate and delay. For he tries, for example, to hit the right position or the right point of time, by finding out the mean between two false extremes; while the savage hits it directly without thinking of the false courses open to him. In the same way it is of no use to me to know in the abstract the exact angle, in degrees and minutes, at which I must apply a razor, if I do not know it intuitively, that is, if I have not got it in my touch. The knowledge of physiognomy also, is interfered with by the application of reason. This knowledge must be gained directly through the understanding. We say that the expression, the meaning of the features, can only be *felt*, that is, it cannot be put into abstract concepts. Every man has his direct intuitive method of physiognomy and pathognomy, yet one man understands more clearly than another these *signatura rerum*. But an abstract science of physiognomy to be taught and learned is not possible; for the distinctions of difference are here so fine that concepts cannot reach them; therefore abstract knowledge is related to them as a mosaic is to a painting by a Van der Werft or a Denner. In mosaics, however fine they may be, the limits of the stones are always there, and therefore no continuous passage from one colour to another is possible, and this is also the case with regard to concepts, with their rigidity and sharp delineation; however finely we may divide them by exact definition, they are still incapable of reaching the finer modifications of the perceptible, and this is just what happens in the example we have taken, knowledge of physiognomy.<sup>16</sup>

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<sup>16</sup> I am therefore of opinion that a science of physiognomy cannot, with certainty, go further than to lay down a few quite general rules. For example, the intellectual qualities are to be read in the forehead and the eyes; the moral qualities, the expression of will,

This quality of concepts by which they resemble the stones of a mosaic, and on account of which perception always remains their asymptote, is also the reason why nothing good is produced in art by their means. If the singer or the virtuoso attempts to guide his execution by reflection he remains silent. And this is equally true of the composer, the painter, and the poet. The concept always remains unfruitful in art; it can only direct the technical part of it, its sphere is science. We shall consider more fully in the third book, why all true art proceeds from sensuous knowledge, never from the concept. Indeed, with regard to behaviour also, and personal agreeableness in society, the concept has only a negative value in restraining the grosser manifestations of egotism and brutality; so that a polished manner is its commendable production. But all that is attractive, gracious, charming in behaviour, all affectionateness and friendliness, must not proceed from the concepts, for if it does, “we feel intention, and are put out of tune.” All dissimulation is the work of reflection; but it cannot be maintained constantly and without interruption: “*nemo potest personam diu ferre fictum*,” says Seneca in his book *de clementia*; and so it is generally found out and loses its effect. Reason is needed in the full stress of life, where quick conclusions, bold action, rapid and sure comprehension are required, but it may easily spoil all if it gains the upper hand, and by perplexing hinders the intuitive, direct discovery, and grasp of the right by simple understanding, and thus induces irresolution.

Lastly, virtue and holiness do not proceed from reflection, but from the inner depths of the will, and its relation to knowledge. The exposition of this belongs to another part of our work; this, however, I may remark here, that the dogmas relating to ethics may be the same in the reason of whole nations, but the action of every individual different; and the converse also holds good; action, we say, is guided by *feelings*, – that is, simply not by concepts, but as a matter of fact by the ethical character. Dogmas occupy the idle reason; but action in the end pursues its own course independently of them, generally not according to abstract rules, but according to unspoken maxims, the expression of which is the whole man himself. Therefore, however different the religious dogmas of nations may be, yet in the case of all of them, a good action is accompanied by unspeakable satisfaction, and a bad action by endless remorse. No mockery can shake the former; no priest’s absolution can deliver from the latter. Notwithstanding this, we must allow, that for the pursuit of a virtuous life, the application of reason is needful; only it is not its source, but has the subordinate function of preserving resolutions which have been made, of providing maxims to withstand the weakness of the moment, and give consistency to action. It plays the same part ultimately in art also, where it has just as little to do with the essential matter, but assists in carrying it out, for genius is not always at call, and yet the work must be completed in all its parts and rounded off to a whole.<sup>17</sup>

§ 13. All these discussions of the advantages and disadvantages of the application of reason are intended to show, that although abstract rational knowledge is the reflex of ideas of perception, and is founded on them, it is by no means in such entire congruity with them that it could everywhere take their place: indeed it never corresponds to them quite accurately. And thus, as we have seen, many human actions can only be performed by the help of reason and deliberation, and yet there are some which are better performed without its assistance. This very incongruity of sensuous and abstract knowledge, on account of which the latter always merely approximates to the former, as mosaic approximates to painting, is the cause of a very remarkable phenomenon which, like reason itself, is peculiar to human nature, and of which the explanations that have ever anew been attempted, are insufficient: I mean *laughter*. On account of the source of this phenomenon, we cannot avoid giving the explanation of it here, though it again interrupts the course of our work to do so. The

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in the mouth and lower part of the face. The forehead and the eyes interpret each other; either of them seen alone can only be half understood. Genius is never without a high, broad, finely-arched brow; but such a brow often occurs where there is no genius. A clever-looking person may the more certainly be judged to be so the uglier the face is; and a stupid-looking person may the more certainly be judged to be stupid the more beautiful the face is; for beauty, as the approximation to the type of humanity, carries in and for itself the expression of mental clearness; the opposite is the case with ugliness, and so forth.

<sup>17</sup> Cf. Ch. 7 of the Supplement.

cause of laughter in every case is simply the sudden perception of the incongruity between a concept and the real objects which have been thought through it in some relation, and laughter itself is just the expression of this incongruity. It often occurs in this way: two or more real objects are thought through *one* concept, and the identity of the concept is transferred to the objects; it then becomes strikingly apparent from the entire difference of the objects in other respects, that the concept was only applicable to them from a one-sided point of view. It occurs just as often, however, that the incongruity between a single real object and the concept under which, from one point of view, it has rightly been subsumed, is suddenly felt. Now the more correct the subsumption of such objects under a concept may be from one point of view, and the greater and more glaring their incongruity with it, from another point of view, the greater is the ludicrous effect which is produced by this contrast. All laughter then is occasioned by a paradox, and therefore by unexpected subsumption, whether this is expressed in words or in actions. This, briefly stated, is the true explanation of the ludicrous.

I shall not pause here to relate anecdotes as examples to illustrate my theory; for it is so simple and comprehensible that it does not require them, and everything ludicrous which the reader may remember is equally valuable as a proof of it. But the theory is confirmed and illustrated by distinguishing two species into which the ludicrous is divided, and which result from the theory. Either, we have previously known two or more very different real objects, ideas of sense-perception, and have intentionally identified them through the unity of a concept which comprehends them both; this species of the ludicrous is called *wit*. Or, conversely, the concept is first present in knowledge, and we pass from it to reality, and to operation upon it, to action: objects which in other respects are fundamentally different, but which are all thought in that one concept, are now regarded and treated in the same way, till, to the surprise and astonishment of the person acting, the great difference of their other aspects appears: this species of the ludicrous is called *folly*. Therefore everything ludicrous is either a flash of wit or a foolish action, according as the procedure has been from the discrepancy of the objects to the identity of the concept, or the converse; the former always intentional, the latter always unintentional, and from without. To seem to reverse the starting-point, and to conceal wit with the mask of folly, is the art of the jester and the clown. Being quite aware of the diversity of the objects, the jester unites them, with secret wit, under one concept, and then starting from this concept he receives from the subsequently discovered diversity of the objects the surprise which he himself prepared. It follows from this short but sufficient theory of the ludicrous, that, if we set aside the last case, that of the jester, wit must always show itself in words, folly generally in actions, though also in words, when it only expresses an intention and does not actually carry it out, or when it shows itself merely in judgments and opinions.

*Pedantry* is a form of folly. It arises in this way: a man lacks confidence in his own understanding, and, therefore, does not wish to trust to it, to recognise what is right directly in the particular case. He, therefore, puts it entirely under the control of the reason, and seeks to be guided by reason in everything; that is to say, he tries always to proceed from general concepts, rules, and maxims, and to confine himself strictly to them in life, in art, and even in moral conduct. Hence that clinging to the form, to the manner, to the expression and word which is characteristic of pedantry, and which with it takes the place of the real nature of the matter. The incongruity then between the concept and reality soon shows itself here, and it becomes evident that the former never condescends to the particular case, and that with its generality and rigid definiteness it can never accurately apply to the fine distinctions of difference and innumerable modifications of the actual. Therefore, the pedant, with his general maxims, almost always misses the mark in life, shows himself to be foolish, awkward, useless. In art, in which the concept is unfruitful, he produces lifeless, stiff, abortive mannerisms. Even with regard to ethics, the purpose to act rightly or nobly cannot always be carried out in accordance with abstract maxims; for in many cases the excessively nice distinctions in the nature of the circumstances necessitate a choice of the right proceeding directly from the character; for the application of mere abstract maxims sometimes gives false results, because the maxims only

half apply; and sometimes cannot be carried out, because they are foreign to the individual character of the actor, and this never allows itself to be entirely discovered; therefore, inconsistencies arise. Since then Kant makes it a condition of the moral worth of an action, that it shall proceed from pure rational abstract maxims, without any inclination or momentary emotion, we cannot entirely absolve him from the reproach of encouraging moral pedantry. This reproach is the significance of Schiller's epigram, entitled "Scruples of Conscience." When we speak, especially in connection with politics, of doctrinaires, theorists, savants, and so forth, we mean pedants, that is, persons who know the things well in the abstract, but not in the concrete. Abstraction consists in thinking away the less general predicates; but it is precisely upon these that so much depends in practice.

To complete our theory it remains for us to mention a spurious kind of wit, the play upon words, the *calembourg*, the pun, to which may be added the equivocation, the *double entendre*, the chief use of which is the expression of what is obscene. Just as the witticism brings two very different real objects under one concept, the pun brings two different concepts, by the assistance of accident, under one word. The same contrast appears, only familiar and more superficial, because it does not spring from the nature of things, but merely from the accident of nomenclature. In the case of the witticism the identity is in the concept, the difference in the reality, but in the case of the pun the difference is in the concepts and the identity in the reality, for the terminology is here the reality. It would only be a somewhat far-fetched comparison if we were to say that the pun is related to the witticism as the parabola (*sic*) of the upper inverted cone to that of the lower. The misunderstanding of the word or the *quid pro quo* is the unintentional pun, and is related to it exactly as folly is to wit. Thus the deaf man often affords occasion for laughter, just as much as the fool, and inferior writers of comedy often use the former for the latter to raise a laugh.

I have treated laughter here only from the psychical side; with regard to the physical side, I refer to what is said on the subject in the "Parerga," vol. II. ch. vi., § 98.<sup>18</sup>

§ 14. By means of these various discussions it is hoped that both the difference and the relation between the process of knowledge that belongs to the reason, rational knowledge, the concept on the one hand, and the direct knowledge in purely sensuous, mathematical intuition or perception, and apprehension by the understanding on the other hand, has been clearly brought out. This remarkable relation of our kinds of knowledge led us almost inevitably to give, in passing, explanations of feeling and of laughter, but from all this we now turn back to the further consideration of science as the third great benefit which reason confers on man, the other two being speech and deliberate action. The general discussion of science which now devolves upon us, will be concerned partly with its form, partly with the foundation of its judgments, and lastly with its content.

We have seen that, with the exception of the basis of pure logic, rational knowledge in general has not its source in the reason itself; but having been otherwise obtained as knowledge of perception, it is stored up in the reason, for through reason it has entirely changed its character, and has become abstract knowledge. All rational knowledge, that is, knowledge that has been raised to consciousness in the abstract, is related to science strictly so called, as a fragment to the whole. Every one has gained a rational knowledge of many different things through experience, through consideration of the individual objects presented to him, but only he who sets himself the task of acquiring a complete knowledge in the abstract of a particular class of objects, strives after science. This class can only be marked off by means of a concept; therefore, at the beginning of every science there stands a concept, and by means of it the class of objects concerning which this science promises a complete knowledge in the abstract, is separated in thought from the whole world of things. For example, the concept of space-relations, or of the action of unorganised bodies upon each other, or of the nature of plants, or of animals, or of the successive changes of the surface of the globe, or of the changes of the human race as a whole, or of the construction of a language, and so forth. If science sought

<sup>18</sup> Cf. Ch. 8 of Supplement.



to obtain the knowledge of its object, by investigating each individual thing that is thought through the concept, till by degrees it had learned the whole, no human memory would be equal to the task, and no certainty of completeness would be obtainable. Therefore, it makes use of that property of concept-spheres explained above, that they include each other, and it concerns itself mainly with the wider spheres which lie within the concept of its object in general. When the relations of these spheres to each other have been determined, all that is thought in them is also generally determined, and can now be more and more accurately determined by the separation of smaller and smaller concept-spheres. In this way it is possible for a science to comprehend its object completely. This path which it follows to knowledge, the path from the general to the particular, distinguishes it from ordinary rational knowledge; therefore, systematic form is an essential and characteristic feature of science. The combination of the most general concept-spheres of every science, that is, the knowledge of its first principles, is the indispensable condition of mastering it; how far we advance from these to the more special propositions is a matter of choice, and does not increase the thoroughness but only the extent of our knowledge of the science. The number of the first principles to which all the rest are subordinated, varies greatly in the different sciences, so that in some there is more subordination, in others more co-ordination; and in this respect, the former make greater claims upon the judgment, the latter upon the memory. It was known to the schoolmen,<sup>19</sup> that, as the syllogism requires two premises, no science can proceed from a single first principle which cannot be the subject of further deduction, but must have several, at least two. The specially classifying sciences: Zoology, Botany, and also Physics and Chemistry, inasmuch as they refer all inorganic action to a few fundamental forces, have most subordination; history, on the other hand, has really none at all; for the general in it consists merely in the survey of the principal periods, from which, however, the particular events cannot be deduced, and are only subordinated to them according to time, but according to the concept are co-ordinate with them. Therefore, history, strictly speaking, is certainly rational knowledge, but is not science. In mathematics, according to Euclid's treatment, the axioms alone are indemonstrable first principles, and all demonstrations are in gradation strictly subordinated to them. But this method of treatment is not essential to mathematics, and in fact each proposition introduces quite a new space construction, which in itself is independent of those which precede it, and indeed can be completely comprehended from itself, quite independently of them, in the pure intuition or perception of space, in which the most complicated construction is just as directly evident as the axiom; but of this more fully hereafter. Meanwhile every mathematical proposition remains always a universal truth, which is valid for innumerable particular cases; and a graduated process from the simple to the complicated propositions which are to be deduced from them, is also essential to mathematics; therefore, in every respect mathematics is a science. The completeness of a science as such, that is, in respect of form, consists in there being as much subordination and as little co-ordination of the principles as possible. Scientific talent in general is, therefore, the faculty of subordinating the concept-spheres according to their different determinations, so that, as Plato repeatedly counsels, a science shall not be constituted by a general concept and an indefinite multiplicity immediately under it, but that knowledge shall descend by degrees from the general to the particular, through intermediate concepts and divisions, according to closer and closer definitions. In Kantian language this is called satisfying equally the law of homogeneity and that of specification. It arises from this peculiar nature of scientific completeness, that the aim of science is not greater certainty – for certainty may be possessed in just as high a degree by the most disconnected particular knowledge – but its aim is rather the facilitating of rational knowledge by means of its form, and the possibility of the completeness of rational knowledge which this form affords. It is therefore a very prevalent but perverted opinion that the scientific character of knowledge consists in its greater certainty, and just as false is the conclusion following from this, that, strictly speaking, the only sciences are mathematics and logic, because only in them, on

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<sup>19</sup> Suarez, *Disput. Metaphysicæ*, disp. iii. sect. 3, tit. 3.

account of their purely *a priori* character, is there unassailable certainty of knowledge. This advantage cannot be denied them, but it gives them no special claim to be regarded as sciences; for the special characteristic of science does not lie in certainty but in the systematic form of knowledge, based on the gradual descent from the general to the particular. The process of knowledge from the general to the particular, which is peculiar to the sciences, involves the necessity that in the sciences much should be established by deduction from preceding propositions, that is to say, by demonstration; and this has given rise to the old mistake that only what has been demonstrated is absolutely true, and that every truth requires a demonstration; whereas, on the contrary, every demonstration requires an undemonstrated truth, which ultimately supports it, or it may be, its own demonstration. Therefore a directly established truth is as much to be preferred to a truth established by demonstration as water from the spring is to water from the aqueduct. Perception, partly pure *a priori*, as it forms the basis of mathematics, partly empirical *a posteriori*, as it forms the basis of all the other sciences, is the source of all truth and the foundation of all science. (Logic alone is to be excepted, which is not founded upon perception but yet upon *direct* knowledge by the reason of its own laws.) Not the demonstrated judgments nor their demonstrations, but judgments which are created directly out of perception, and founded upon it rather than on any demonstrations, are to science what the sun is to the world; for all light proceeds from them, and lighted by their light the others give light also. To establish the truth of such primary judgments directly from perception, to raise such strongholds of science from the innumerable multitude of real objects, that is the work of the *faculty of judgment*, which consists in the power of rightly and accurately carrying over into abstract consciousness what is known in perception, and judgment is consequently the mediator between understanding and reason. Only extraordinary and exceptional strength of judgment in the individual can actually advance science; but every one who is possessed of a healthy reason is able to deduce propositions from propositions, to demonstrate, to draw conclusions. To lay down and make permanent for reflection, in suitable concepts, what is known through perception, so that, on the one hand, what is common to many real objects is thought through *one* concept, and, on the other hand, their points of difference are each thought through one concept, so that the different shall be known and thought as different in spite of a partial agreement, and the identical shall be known and thought as identical in spite of a partial difference, all in accordance with the end and intention which in each case is in view; all this is done by the *faculty of judgment*. Deficiency in judgment is *silliness*. The silly man fails to grasp, now the partial or relative difference of concepts which in one aspect are identical, now the identity of concepts which are relatively or partially different. To this explanation of the faculty of judgment, moreover, Kant's division of it into reflecting and subsuming judgment may be applied, according as it passes from the perceived objects to the concepts, or from the latter to the former; in both cases always mediating between empirical knowledge of the understanding and the reflective knowledge of the reason. There can be no truth which could be brought out by means of syllogisms alone; and the necessity of establishing truth by means of syllogisms is merely relative, indeed subjective. Since all demonstration is syllogistic, in the case of a new truth we must first seek, not for a demonstration, but for direct evidence, and only in the absence of such evidence is a demonstration to be temporarily made use of. No science is susceptible of demonstration throughout any more than a building can stand in the air; all its demonstrations must ultimately rest upon what is perceived, and consequently cannot be demonstrated, for the whole world of reflection rests upon and is rooted in the world of perception. All primal, that is, original, *evidence* is a *perception*, as the word itself indicates. Therefore it is either empirical or founded upon the perception *a priori* of the conditions of possible experience. In both cases it affords only immanent, not transcendent knowledge. Every concept has its worth and its existence only in its relation, sometimes very indirect, to an idea of perception; what is true of the concepts is also true of the judgments constructed out of them, and of all science. Therefore it must in some way be possible to know directly without demonstrations or syllogisms every truth that is arrived at through syllogisms and communicated by demonstrations. This is most difficult in the case

of certain complicated mathematical propositions at which we only arrive by chains of syllogisms; for example, the calculation of the chords and tangents to all arcs by deduction from the proposition of Pythagoras. But even such a truth as this cannot essentially and solely rest upon abstract principles, and the space-relations which lie at its foundation also must be capable of being so presented *a priori* in pure intuition or perception that the truth of their abstract expression is directly established. But of mathematical demonstration we shall speak more fully shortly.

It is true we often hear men speak in a lofty strain of sciences which rest entirely upon correct conclusions drawn from sure premises, and which are consequently unassailable. But through pure logical reasoning, however true the premises may be, we shall never receive more than an articulate expression and exposition of what lies already complete in the premises; thus we shall only *explicitly* expound what was already *implicitly* understood. The esteemed sciences referred to are, however, specially the mathematical sciences, particularly astronomy. But the certainty of astronomy arises from the fact that it has for its basis the intuition or perception of space, which is given *a priori*, and is therefore infallible. All space-relations, however, follow from each other with a necessity (ground of being) which affords *a priori* certainty, and they can therefore be safely deduced from each other. To these mathematical properties we have only to add one force of nature, gravity, which acts precisely in relation to the masses and the square of the distance; and, lastly, the law of inertia, which follows from the law of causality and is therefore true *a priori*, and with it the empirical datum of the motion impressed, once for all, upon each of these masses. This is the whole material of astronomy, which both by its simplicity and its certainty leads to definite results, which are highly interesting on account of the vastness and importance of the objects. For example, if I know the mass of a planet and the distance of its satellite from it, I can tell with certainty the period of the revolution of the latter according to Kepler's second law. But the ground of this law is, that with this distance only this velocity will both chain the satellite to the planet and prevent it from falling into it. Thus it is only upon such a geometrical basis, that is, by means of an intuition or perception *a priori*, and also under the application of a law of nature, that much can be arrived at by means of syllogisms, for here they are merely like bridges from *one* sensuous apprehension to others; but it is not so with mere pure syllogistic reasoning in the exclusively logical method. The source of the first fundamental truths of astronomy is, however, properly induction, that is, the comprehension of what is given in many perceptions in one true and directly founded judgment. From this, hypotheses are afterwards constructed, and their confirmation by experience, as induction approaching to completeness, affords the proof of the first judgment. For example, the apparent motion of the planets is known empirically; after many false hypotheses with regard to the spacial connection of this motion (planetary course) the right one was at last found, then the laws which it obeyed (the laws of Kepler), and, lastly, the cause of these laws (universal gravitation), and the empirically known agreement of all observed cases with the whole of the hypotheses, and with their consequences, that is to say, induction, established them with complete certainty. The invention of the hypotheses was the work of the judgment, which rightly comprehended the given facts and expressed them accordingly; but induction, that is, a multitude of perceptions, confirmed their truth. But their truth could also be known directly, and by a single empirical perception, if we could pass freely through space and had telescopic eyes. Therefore, here also syllogisms are not the essential and only source of knowledge, but really only a makeshift.

As a third example taken from a different sphere we may mention that the so-called metaphysical truths, that is, such truths as those to which Kant assigns the position of the metaphysical first principles of natural science, do not owe their evidence to demonstration. What is *a priori* certain we know directly; as the form of all knowledge, it is known to us with the most complete necessity. For example, that matter is permanent, that is, can neither come into being nor pass away, we know directly as negative truth; for our pure intuition or perception of space and time gives the possibility of motion; in the law of causality the understanding affords us the possibility of change of form and quality, but we lack powers of the imagination for conceiving the coming into being or passing away

of matter. Therefore that truth has at all times been evident to all men everywhere, nor has it ever been seriously doubted; and this could not be the case if it had no other ground of knowledge than the abstruse and exceedingly subtle proof of Kant. But besides this, I have found Kant's proof to be false (as is explained in the Appendix), and have shown above that the permanence of matter is to be deduced, not from the share which time has in the possibility of experience, but from the share which belongs to space. The true foundation of all truths which in this sense are called metaphysical, that is, abstract expressions of the necessary and universal forms of knowledge, cannot itself lie in abstract principles; but only in the immediate consciousness of the forms of the idea communicating itself in apodictic assertions *a priori*, and fearing no refutation. But if we yet desire to give a proof of them, it can only consist in showing that what is to be proved is contained in some truth about which there is no doubt, either as a part of it or as a presupposition. Thus, for example, I have shown that all empirical perception implies the application of the law of causality, the knowledge of which is hence a condition of all experience, and therefore cannot be first given and conditioned through experience as Hume thought. Demonstrations in general are not so much for those who wish to learn as for those who wish to dispute. Such persons stubbornly deny directly established insight; now only the truth can be consistent in all directions, and therefore we must show such persons that they admit under *one* form and indirectly, what they deny under another form and directly; that is, the logically necessary connection between what is denied and what is admitted.

It is also a consequence of the scientific form, the subordination of everything particular under a general, and so on always to what is more general, that the truth of many propositions is only logically proved, – that is, through their dependence upon other propositions, through syllogisms, which at the same time appear as proofs. But we must never forget that this whole form of science is merely a means of rendering knowledge more easy, not a means to greater certainty. It is easier to discover the nature of an animal, by means of the species to which it belongs, and so on through the genus, family, order, and class, than to examine on every occasion the animal presented to us: but the truth of all propositions arrived at syllogistically is always conditioned by and ultimately dependent upon some truth which rests not upon reasoning but upon perception. If this perception were always as much within our reach as a deduction through syllogisms, then it would be in every respect preferable. For every deduction from concepts is exposed to great danger of error, on account of the fact we have considered above, that so many spheres lie partly within each other, and that their content is often vague or uncertain. This is illustrated by a multitude of demonstrations of false doctrines and sophisms of every kind. Syllogisms are indeed perfectly certain as regards form, but they are very uncertain on account of their matter, the concepts. For, on the one hand, the spheres of these are not sufficiently sharply defined, and, on the other hand, they intersect each other in so many ways that one sphere is in part contained in many others, and we may pass at will from it to one or another of these, and from this sphere again to others, as we have already shown. Or, in other words, the minor term and also the middle can always be subordinated to different concepts, from which we may choose at will the major and the middle, and the nature of the conclusion depends on this choice. Consequently immediate evidence is always much to be preferred to reasoned truth, and the latter is only to be accepted when the former is too remote, and not when it is as near or indeed nearer than the latter. Accordingly we saw above that, as a matter of fact, in the case of logic, in which the immediate knowledge in each individual case lies nearer to hand than deduced scientific knowledge, we always conduct our thought according to our immediate knowledge of the laws of thought, and leave logic unused.<sup>20</sup>

§ 15. If now with our conviction that perception is the primary source of all evidence, and that only direct or indirect connection with it is absolute truth; and further, that the shortest way to this is always the surest, as every interposition of concepts means exposure to many deceptions; if, I say,

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<sup>20</sup> Cf. Ch. 12 of Supplement.

we now turn with this conviction to mathematics, as it was established as a science by Euclid, and has remained as a whole to our own day, we cannot help regarding the method it adopts, as strange and indeed perverted. We ask that every logical proof shall be traced back to an origin in perception; but mathematics, on the contrary, is at great pains deliberately to throw away the evidence of perception which is peculiar to it, and always at hand, that it may substitute for it a logical demonstration. This must seem to us like the action of a man who cuts off his legs in order to go on crutches, or like that of the prince in the "*Triumph der Empfindsamkeit*" who flees from the beautiful reality of nature, to delight in a stage scene that imitates it. I must here refer to what I have said in the sixth chapter of the essay on the principle of sufficient reason, and take for granted that it is fresh and present in the memory of the reader; so that I may link my observations on to it without explaining again the difference between the mere ground of knowledge of a mathematical truth, which can be given logically, and the ground of being, which is the immediate connection of the parts of space and time, known only in perception. It is only insight into the ground of being that secures satisfaction and thorough knowledge. The mere ground of knowledge must always remain superficial; it can afford us indeed rational knowledge *that* a thing is as it is, but it cannot tell *why* it is so. Euclid chose the latter way to the obvious detriment of the science. For just at the beginning, for example, when he ought to show once for all how in a triangle the angles and sides reciprocally determine each other, and stand to each other in the relation of reason and consequent, in accordance with the form which the principle of sufficient reason has in pure space, and which there, as in every other sphere, always affords the necessity that a thing is as it is, because something quite different from it, is as it is; instead of in this way giving a thorough insight into the nature of the triangle, he sets up certain disconnected arbitrarily chosen propositions concerning the triangle, and gives a logical ground of knowledge of them, through a laborious logical demonstration, based upon the principle of contradiction. Instead of an exhaustive knowledge of these space-relations we therefore receive merely certain results of them, imparted to us at pleasure, and in fact we are very much in the position of a man to whom the different effects of an ingenious machine are shown, but from whom its inner connection and construction are withheld. We are compelled by the principle of contradiction to admit that what Euclid demonstrates is true, but we do not comprehend *why* it is so. We have therefore almost the same uncomfortable feeling that we experience after a juggling trick, and, in fact, most of Euclid's demonstrations are remarkably like such feats. The truth almost always enters by the back door, for it manifests itself *per accidens* through some contingent circumstance. Often a *reductio ad absurdum* shuts all the doors one after another, until only one is left through which we are therefore compelled to enter. Often, as in the proposition of Pythagoras, lines are drawn, we don't know why, and it afterwards appears that they were traps which close unexpectedly and take prisoner the assent of the astonished learner, who must now admit what remains wholly inconceivable in its inner connection, so much so, that he may study the whole of Euclid through and through without gaining a real insight into the laws of space-relations, but instead of them he only learns by heart certain results which follow from them. This specially empirical and unscientific knowledge is like that of the doctor who knows both the disease and the cure for it, but does not know the connection between them. But all this is the necessary consequence if we capriciously reject the special kind of proof and evidence of one species of knowledge, and forcibly introduce in its stead a kind which is quite foreign to its nature. However, in other respects the manner in which this has been accomplished by Euclid deserves all the praise which has been bestowed on him through so many centuries, and which has been carried so far that his method of treating mathematics has been set up as the pattern of all scientific exposition. Men tried indeed to model all the sciences after it, but later they gave up the attempt without quite knowing why. Yet in our eyes this method of Euclid in mathematics can appear only as a very brilliant piece of perversity. But when a great error in life or in science has been intentionally and methodically carried out with universal applause, it is always possible to discover its source in the philosophy which prevailed at the time. The Eleatics first brought out the difference, and

indeed often the conflict, that exists between what is perceived, *φαινομενον*,<sup>21</sup> and what is thought, *νοουμενον*, and used it in many ways in their philosophical epigrams, and also in sophisms. They were followed later by the Megarics, the Dialecticians, the Sophists, the New-Academy, and the Sceptics; these drew attention to the illusion, that is to say, to the deception of the senses, or rather of the understanding which transforms the data of the senses into perception, and which often causes us to see things to which the reason unhesitatingly denies reality; for example, a stick broken in water, and such like. It came to be known that sense-perception was not to be trusted unconditionally, and it was therefore hastily concluded that only rational, logical thought could establish truth; although Plato (in the *Parmenides*), the Megarics, Pyrrho, and the New-Academy, showed by examples (in the manner which was afterwards adopted by Sextus Empiricus) how syllogisms and concepts were also sometimes misleading, and indeed produced paralogisms and sophisms which arise much more easily and are far harder to explain than the illusion of sense-perception. However, this rationalism, which arose in opposition to empiricism, kept the upper hand, and Euclid constructed the science of mathematics in accordance with it. He was compelled by necessity to found the axioms upon evidence of perception (*φαινομενον*), but all the rest he based upon reasoning (*νοουμενον*). His method reigned supreme through all the succeeding centuries, and it could not but do so as long as pure intuition or perception, *a priori*, was not distinguished from empirical perception. Certain passages from the works of Proclus, the commentator of Euclid, which Kepler translated into Latin in his book, “*De Harmonia Mundi*,” seem to show that he fully recognised this distinction. But Proclus did not attach enough importance to the matter; he merely mentioned it by the way, so that he remained unnoticed and accomplished nothing. Therefore, not till two thousand years later will the doctrine of Kant, which is destined to make such great changes in all the knowledge, thought, and action of European nations, produce this change in mathematics also. For it is only after we have learned from this great man that the intuitions or perceptions of space and time are quite different from empirical perceptions, entirely independent of any impression of the senses, conditioning it, not conditioned by it, *i. e.*, are *a priori*, and therefore are not exposed to the illusions of sense; only after we have learned this, I say, can we comprehend that Euclid’s logical method of treating mathematics is a useless precaution, a crutch for sound legs, that it is like a wanderer who during the night mistakes a bright, firm road for water, and carefully avoiding it, toils over the broken ground beside it, content to keep from point to point along the edge of the supposed water. Only now can we affirm with certainty that what presents itself to us as necessary in the perception of a figure, does not come from the figure on the paper, which is perhaps very defectively drawn, nor from the abstract concept under which we think it, but immediately from the form of all knowledge of which we are conscious *a priori*. This is always the principle of sufficient reason; here as the form of perception, *i. e.*, space, it is the principle of the ground of being, the evidence and validity of which is, however, just as great and as immediate as that of the principle of the ground of knowing, *i. e.*, logical certainty. Thus we need not and ought not to leave the peculiar province of mathematics in order to put our trust only in logical proof, and seek to authenticate mathematics in a sphere which is quite foreign to it, that of concepts. If we confine ourselves to the ground peculiar to mathematics, we gain the great advantage that in it the rational knowledge *that* something is, is one with the knowledge *why* it is so, whereas the method of Euclid entirely separates these two, and lets us know only the first, not the second. Aristotle says admirably in the *Analyt.*, post. i. 27: “*Ακριβεστερα δ’ επιστημη επιστημης και προτερα, ητε του οτι και του διοτι η αυτη, αλλα μη χωρις του οτι, της του διοτι*” (*Subtilior autem et praestantior ea est scientia, quâ quod aliquid sit, et cur sit una simulque intelligimus non separatim quod, et cur sit*). In physics we are only satisfied when the knowledge that a thing is as it is is combined with the knowledge why it is so. To know that the mercury in the Torricellian tube stands thirty inches high is not really rational knowledge if we do not know that it is sustained at this height by the counterbalancing weight of the

<sup>21</sup> The reader must not think here of Kant’s misuse of these Greek terms, which is condemned in the Appendix.

atmosphere. Shall we then be satisfied in mathematics with the *qualitas occulta* of the circle that the segments of any two intersecting chords always contain equal rectangles? That it is so Euclid certainly demonstrates in the 35th Prop. of the Third Book; *why* it is so remains doubtful. In the same way the proposition of Pythagoras teaches us a *qualitas occulta* of the right-angled triangle; the stilted and indeed fallacious demonstration of Euclid forsakes us at the *why*, and a simple figure, which we already know, and which is present to us, gives at a glance far more insight into the matter, and firm inner conviction of that necessity, and of the dependence of that quality upon the right angle: —

In the case of unequal catheti also, and indeed generally in the case of every possible geometrical truth, it is quite possible to obtain such a conviction based on perception, because these truths were always discovered by such an empirically known necessity, and their demonstration was only thought out afterwards in addition. Thus we only require an analysis of the process of thought in the first discovery of a geometrical truth in order to know its necessity empirically. It is the analytical method in general that I wish for the exposition of mathematics, instead of the synthetical method which Euclid made use of. Yet this would have very great, though not insuperable, difficulties in the case of complicated mathematical truths. Here and there in Germany men are beginning to alter the exposition of mathematics, and to proceed more in this analytical way. The greatest effort in this direction has been made by Herr Kosack, teacher of mathematics and physics in the Gymnasium at Nordhausen, who added a thorough attempt to teach geometry according to my principles to the programme of the school examination on the 6th of April 1852.

In order to improve the method of mathematics, it is especially necessary to overcome the prejudice that demonstrated truth has any superiority over what is known through perception, or that logical truth founded upon the principle of contradiction has any superiority over metaphysical truth, which is immediately evident, and to which belongs the pure intuition or perception of space.

That which is most certain, and yet always inexplicable, is what is involved in the principle of sufficient reason, for this principle, in its different aspects, expresses the universal form of all our ideas and knowledge. All explanation consists of reduction to it, exemplification in the particular case of the connection of ideas expressed generally through it. It is thus the principle of all explanation, and therefore it is neither susceptible of an explanation itself, nor does it stand in need of it; for every explanation presupposes it, and only obtains meaning through it. Now, none of its forms are superior to the rest; it is equally certain and incapable of demonstration as the principle of the ground of being, or of change, or of action, or of knowing. The relation of reason and consequent is a necessity in all its forms, and indeed it is, in general, the source of the concept of necessity, for necessity has no other meaning. If the reason is given there is no other necessity than that of the consequent, and there is no reason that does not involve the necessity of the consequent. Just as surely then as the consequent expressed in the conclusion follows from the ground of knowledge given in the premises, does the ground of being in space determine its consequent in space: if I know through perception the relation of these two, this certainty is just as great as any logical certainty. But every geometrical proposition is just as good an expression of such a relation as one of the twelve axioms; it is a metaphysical truth, and as such, just as certain as the principle of contradiction itself, which is a metalogical truth, and the common foundation of all logical demonstration. Whoever denies the necessity, exhibited for intuition or perception, of the space-relations expressed in any proposition, may just as well deny the axioms, or that the conclusion follows from the premises, or, indeed, he may as well deny the principle of contradiction itself, for all these relations are equally undemonstrable, immediately evident and known *a priori*. For any one to wish to derive the necessity of space-relations, known in intuition or perception, from the principle of contradiction by means of a logical demonstration is just the same as for the feudal superior of an estate to wish to hold it as the vassal of another. Yet this is what Euclid has done. His axioms only, he is compelled to leave resting upon immediate evidence; all the geometrical truths which follow are demonstrated logically, that is to say, from the agreement of the assumptions made in the proposition with the axioms which are presupposed, or with some earlier

proposition; or from the contradiction between the opposite of the proposition and the assumptions made in it, or the axioms, or earlier propositions, or even itself. But the axioms themselves have no more immediate evidence than any other geometrical problem, but only more simplicity on account of their smaller content.

When a criminal is examined, a *procès-verbal* is made of his statement in order that we may judge of its truth from its consistency. But this is only a makeshift, and we are not satisfied with it if it is possible to investigate the truth of each of his answers for itself; especially as he might lie consistently from the beginning. But Euclid investigated space according to this first method. He set about it, indeed, under the correct assumption that nature must everywhere be consistent, and that therefore it must also be so in space, its fundamental form. Since then the parts of space stand to each other in a relation of reason and consequent, no single property of space can be different from what it is without being in contradiction with all the others. But this is a very troublesome, unsatisfactory, and roundabout way to follow. It prefers indirect knowledge to direct, which is just as certain, and it separates the knowledge that a thing is from the knowledge why it is, to the great disadvantage of the science; and lastly, it entirely withholds from the beginner insight into the laws of space, and indeed renders him unaccustomed to the special investigation of the ground and inner connection of things, inclining him to be satisfied with a mere historical knowledge that a thing is as it is. The exercise of acuteness which this method is unceasingly extolled as affording consists merely in this, that the pupil practises drawing conclusions, *i. e.*, he practises applying the principle of contradiction, but specially he exerts his memory to retain all those data whose agreement is to be tested. Moreover, it is worth noticing that this method of proof was applied only to geometry and not to arithmetic. In arithmetic the truth is really allowed to come home to us through perception alone, which in it consists simply in counting. As the perception of numbers is in *time alone*, and therefore cannot be represented by a sensuous schema like the geometrical figure, the suspicion that perception is merely empirical, and possibly illusive, disappeared in arithmetic, and the introduction of the logical method of proof into geometry was entirely due to this suspicion. As time has only one dimension, counting is the only arithmetical operation, to which all others may be reduced; and yet counting is just intuition or perception *a priori*, to which there is no hesitation in appealing here, and through which alone everything else, every sum and every equation, is ultimately proved. We prove, for example, not that  $(7 + 9 \times 8 - 2)/3 = 42$ ; but we refer to the pure perception in time, counting thus makes each individual problem an axiom. Instead of the demonstrations that fill geometry, the whole content of arithmetic and algebra is thus simply a method of abbreviating counting. We mentioned above that our immediate perception of numbers in time extends only to about ten. Beyond this an abstract concept of the numbers, fixed by a word, must take the place of the perception; which does not therefore actually occur any longer, but is only indicated in a thoroughly definite manner. Yet even so, by the important assistance of the system of figures which enables us to represent all larger numbers by the same small ones, intuitive or perceptive evidence of every sum is made possible, even where we make such use of abstraction that not only the numbers, but indefinite quantities and whole operations are thought only in the abstract and indicated as so thought, as  $[\sqrt{r}^b]$  so that we do not perform them, but merely symbolise them.

We might establish truth in geometry also, through pure *a priori* perception, with the same right and certainty as in arithmetic. It is in fact always this necessity, known through perception in accordance with the principle of sufficient reason of being, which gives to geometry its principal evidence, and upon which in the consciousness of every one, the certainty of its propositions rests. The stilted logical demonstration is always foreign to the matter, and is generally soon forgotten, without weakening our conviction. It might indeed be dispensed with altogether without diminishing the evidence of geometry, for this is always quite independent of such demonstration, which never proves anything we are not convinced of already, through another kind of knowledge. So far then



it is like a cowardly soldier, who adds a wound to an enemy slain by another, and then boasts that he slew him himself.<sup>22</sup>

After all this we hope there will be no doubt that the evidence of mathematics, which has become the pattern and symbol of all evidence, rests essentially not upon demonstration, but upon immediate perception, which is thus here, as everywhere else, the ultimate ground and source of truth. Yet the perception which lies at the basis of mathematics has a great advantage over all other perception, and therefore over empirical perception. It is *a priori*, and therefore independent of experience, which is always given only in successive parts; therefore everything is equally near to it, and we can start either from the reason or from the consequent, as we please. Now this makes it absolutely reliable, for in it the consequent is known from the reason, and this is the only kind of knowledge that has necessity; for example, the equality of the sides is known as established by the equality of the angles. All empirical perception, on the other hand, and the greater part of experience, proceeds conversely from the consequent to the reason, and this kind of knowledge is not infallible, for necessity only attaches to the consequent on account of the reason being given, and no necessity attaches to the knowledge of the reason from the consequent, for the same consequent may follow from different reasons. The latter kind of knowledge is simply induction, *i. e.*, from many consequents which point to one reason, the reason is accepted as certain; but as the cases can never be all before us, the truth here is not unconditionally certain. But all knowledge through sense-perception, and the great bulk of experience, has only this kind of truth. The affection of one of the senses induces the understanding to infer a cause of the effect, but, as a conclusion from the consequent to the reason is never certain, illusion, which is deception of the senses, is possible, and indeed often occurs, as was pointed out above. Only when several of the senses, or it may be all the five, receive impressions which point to the same cause, the possibility of illusion is reduced to a minimum; but yet it still exists, for there are cases, for example, the case of counterfeit money, in which all the senses are deceived. All empirical knowledge, and consequently the whole of natural science, is in the same position, except only the pure, or as Kant calls it, metaphysical part of it. Here also the causes are known from the effects, consequently all natural philosophy rests upon hypotheses, which are often false, and must then gradually give place to more correct ones. Only in the case of purposely arranged experiments, knowledge proceeds from the cause to the effect, that is, it follows the method that affords certainty; but these experiments themselves are undertaken in consequence of hypotheses. Therefore, no branch of natural science, such as physics, or astronomy, or physiology could be discovered all at once, as was the case with mathematics and logic, but required and requires the collected and compared experiences of many centuries. In the first place, repeated confirmation in experience brings the induction, upon which the hypothesis rests, so near completeness that in practice it takes the place of certainty, and is regarded as diminishing the value of the hypothesis, its source, just as little as the incommensurability of straight and curved lines diminishes the value of the application of geometry, or that perfect exactness of the logarithm, which is not attainable, diminishes the value of arithmetic. For as the logarithm, or the squaring of the circle, approaches infinitely near to correctness through infinite fractions, so, through manifold experience, the induction, *i. e.*, the knowledge of the cause from the effects, approaches, not infinitely indeed, but yet so near mathematical evidence, *i. e.*, knowledge of the effects from the cause, that the possibility of mistake is small enough to be neglected, but yet the possibility exists; for example, a conclusion from an indefinite number of cases to all cases, *i. e.*, to the unknown ground on which all depend, is an induction. What conclusion of

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<sup>22</sup> Spinoza, who always boasts that he proceeds *more geometrico*, has actually done so more than he himself was aware. For what he knew with certainty and decision from the immediate, perceptive apprehension of the nature of the world, he seeks to demonstrate logically without reference to this knowledge. He only arrives at the intended and predetermined result by starting from arbitrary concepts framed by himself (*substantia causa sui*, &c.), and in the demonstrations he allows himself all the freedom of choice for which the nature of the wide concept-spheres afford such convenient opportunity. That his doctrine is true and excellent is therefore in his case, as in that of geometry, quite independent of the demonstrations of it. Cf. ch. 13 of supplementary volume.

this kind seems more certain than that all men have the heart on the left side? Yet there are extremely rare and quite isolated exceptions of men who have the heart upon the right side. Sense-perception and empirical science have, therefore, the same kind of evidence. The advantage which mathematics, pure natural science, and logic have over them, as *a priori* knowledge, rests merely upon this, that the formal element in knowledge upon which all that is *a priori* is based, is given as a whole and at once, and therefore in it we can always proceed from the cause to the effect, while in the former kind of knowledge we are generally obliged to proceed from the effect to the cause. In other respects, the law of causality, or the principle of sufficient reason of change, which guides empirical knowledge, is in itself just as certain as the other forms of the principle of sufficient reason which are followed by the *a priori* sciences referred to above. Logical demonstrations from concepts or syllogisms have the advantage of proceeding from the reason to the consequent, just as much as knowledge through perception *a priori*, and therefore in themselves, *i. e.*, according to their form, they are infallible. This has greatly assisted to bring demonstration in general into such esteem. But this infallibility is merely relative; the demonstration merely subsumes under the first principles of the science, and it is these which contain the whole material truth of science, and they must not themselves be demonstrated, but must be founded on perception. In the few *a priori* sciences we have named above, this perception is pure, but everywhere else it is empirical, and is only raised to universality through induction. If, then, in the empirical sciences also, the particular is proved from the general, yet the general, on the other hand, has received its truth from the particular; it is only a store of collected material, not a self-constituted foundation.

So much for the foundation of truth. Of the source and possibility of error many explanations have been tried since Plato's metaphorical solution of the dove-cot where the wrong pigeons are caught, &c. (Theætetus, p. 167, *et seq.*) Kant's vague, indefinite explanation of the source of error by means of the diagram of diagonal motion, will be found in the "Critique of Pure Reason," p. 294 of the first edition, and p. 350 of the fifth. As truth is the relation of a judgment to its ground of knowledge, it is always a problem how the person judging can believe that he has such a ground of knowledge and yet not have it; that is to say, how error, the deception of reason, is possible. I find this possibility quite analogous to that of illusion, or the deception of the understanding, which has been explained above. My opinion is (and this is what gives this explanation its proper place here) that *every error is an inference from the consequent to the reason*, which indeed is valid when we know that the consequent has that reason and can have no other; but otherwise is not valid. The person who falls into error, either attributes to a consequent a reason which it cannot have, in which case he shows actual deficiency of understanding, *i. e.*, deficiency in the capacity for immediate knowledge of the connection between the cause and the effect, or, as more frequently happens, he attributes to the effect a cause which is possible, but he adds to the major proposition of the syllogism, in which he infers the cause from the effect, that this effect *always* results only from this cause. Now he could only be assured of this by a complete induction, which, however, he assumes without having made it. This "always" is therefore too wide a concept, and instead of it he ought to have used "sometimes" or "generally." The conclusion would then be problematical, and therefore not erroneous. That the man who errs should proceed in this way is due either to haste, or to insufficient knowledge of what is possible, on account of which he does not know the necessity of the induction that ought to be made. Error then is quite analogous to illusion. Both are inferences from the effect to the cause; the illusion brought about always in accordance with the law of causality, and by the understanding alone, thus directly, in perception itself; the error in accordance with all the forms of the principle of sufficient reason, and by the reason, thus in thought itself; yet most commonly in accordance with the law of causality, as will appear from the three following examples, which may be taken as types or representatives of the three kinds of error. (1.) The illusion of the senses (deception of the understanding) induces error (deception of the reason); for example, if one mistakes a painting for an alto-relief, and actually takes it for such; the error results from a conclusion from the following

major premise: “If dark grey passes regularly through all shades to white; the cause is *always* the light, which strikes differently upon projections and depressions, *ergo*– .” (2.) “If there is no money in my safe, the cause is *always* that my servant has got a key for it: *ergo*– .” (3.) “If a ray of sunlight, broken through a prism, *i. e.*, bent up or down, appears as a coloured band instead of round and white as before, the cause must always be that light consists of homogeneous rays, differently coloured and refrangible to different degrees, which, when forced asunder on account of the difference of their refrangibility, give an elongated and variously-coloured spectrum: *ergo* – *bibamus!*” – It must be possible to trace every error to such a conclusion, drawn from a major premise which is often only falsely generalised, hypothetical, and founded on the assumption that some particular cause is that of a certain effect. Only certain mistakes in counting are to be excepted, and they are not really errors, but merely mistakes. The operation prescribed by the concepts of the numbers has not been carried out in pure intuition or perception, in counting, but some other operation instead of it.

As regards the *content* of the sciences generally, it is, in fact, always the relation of the phenomena of the world to each other, according to the principle of sufficient reason, under the guidance of the *why*, which has validity and meaning only through this principle. *Explanation* is the establishment of this relation. Therefore explanation can never go further than to show two ideas standing to each other in the relation peculiar to that form of the principle of sufficient reason which reigns in the class to which they belong. If this is done we cannot further be asked the question, *why*: for the relation proved is that one which absolutely cannot be imagined as other than it is, *i. e.*, it is the form of all knowledge. Therefore we do not ask why  $2 + 2 = 4$ ; or why the equality of the angles of a triangle determines the equality of the sides; or why its effect follows any given cause; or why the truth of the conclusion is evident from the truth of the premises. Every explanation which does not ultimately lead to a relation of which no “why” can further be demanded, stops at an accepted *qualitas occulta*; but this is the character of every original force of nature. Every explanation in natural science must ultimately end with such a *qualitas occulta*, and thus with complete obscurity. It must leave the inner nature of a stone just as much unexplained as that of a human being; it can give as little account of the weight, the cohesion, the chemical qualities, &c., of the former, as of the knowing and acting of the latter. Thus, for example, weight is a *qualitas occulta*, for it can be thought away, and does not proceed as a necessity from the form of knowledge; which, on the contrary, is not the case with the law of inertia, for it follows from the law of causality, and is therefore sufficiently explained if it is referred to that law. There are two things which are altogether inexplicable, – that is to say, do not ultimately lead to the relation which the principle of sufficient reason expresses. These are, first, the principle of sufficient reason itself in all its four forms, because it is the principle of all explanation, which has meaning only in relation to it; secondly, that to which this principle does not extend, but which is the original source of all phenomena; the thing-in-itself, the knowledge of which is not subject to the principle of sufficient reason. We must be content for the present not to understand this thing-in-itself, for it can only be made intelligible by means of the following book, in which we shall resume this consideration of the possible achievements of the sciences. But at the point at which natural science, and indeed every science, leaves things, because not only its explanation of them, but even the principle of this explanation, the principle of sufficient reason, does not extend beyond this point; there philosophy takes them up and treats them after its own method, which is quite distinct from the method of science. In my essay on the principle of sufficient reason, § 51, I have shown how in the different sciences the chief guiding clue is one or other form of that principle; and, in fact, perhaps the most appropriate classification of the sciences might be based upon this circumstance. Every explanation arrived at by the help of this clue is, as we have said, merely relative; it explains things in relation to each other, but something which indeed is presupposed is always left unexplained. In mathematics, for example, this is space and time; in mechanics, physics, and chemistry it is matter, qualities, original forces and laws of nature; in botany and zoology it is the difference of species, and life itself; in history it is the human race with all its properties of thought

and will: in all it is that form of the principle of sufficient reason which is respectively applicable. It is peculiar to *philosophy* that it presupposes nothing as known, but treats everything as equally external and a problem; not merely the relations of phenomena, but also the phenomena themselves, and even the principle of sufficient reason to which the other sciences are content to refer everything. In philosophy nothing would be gained by such a reference, as one member of the series is just as external to it as another; and, moreover, that kind of connection is just as much a problem for philosophy as what is joined together by it, and the latter again is just as much a problem after its combination has been explained as before it. For, as we have said, just what the sciences presuppose and lay down as the basis and the limits of their explanation, is precisely and peculiarly the problem of philosophy, which may therefore be said to begin where science ends. It cannot be founded upon demonstrations, for they lead from known principles to unknown, but everything is equally unknown and external to philosophy. There can be no principle in consequence of which the world with all its phenomena first came into existence, and therefore it is not possible to construct, as Spinoza wished, a philosophy which demonstrates *ex firmis principiis*. Philosophy is the most general rational knowledge, the first principles of which cannot therefore be derived from another principle still more general. The principle of contradiction establishes merely the agreement of concepts, but does not itself produce concepts. The principle of sufficient reason explains the connections of phenomena, but not the phenomena themselves; therefore philosophy cannot proceed upon these principles to seek a *causa efficiens* or a *causa finalis* of the whole world. My philosophy, at least, does not by any means seek to know *whence* or *wherefore* the world exists, but merely *what* the world is. But the *why* is here subordinated to the *what*, for it already belongs to the world, as it arises and has meaning and validity only through the form of its phenomena, the principle of sufficient reason. We might indeed say that every one knows what the world is without help, for he is himself that subject of knowledge of which the world is the idea; and so far this would be true. But that knowledge is empirical, is in the concrete; the task of philosophy is to reproduce this in the abstract to raise to permanent rational knowledge the successive changing perceptions, and in general, all that is contained under the wide concept of feeling and merely negatively defined as not abstract, distinct, rational knowledge. It must therefore consist of a statement in the abstract, of the nature of the whole world, of the whole, and of all the parts. In order then that it may not lose itself in the endless multitude of particular judgments, it must make use of abstraction and think everything individual in the universal, and its differences also in the universal. It must therefore partly separate and partly unite, in order to present to rational knowledge the whole manifold of the world generally, according to its nature, comprehended in a few abstract concepts. Through these concepts, in which it fixes the nature of the world, the whole individual must be known as well as the universal, the knowledge of both therefore must be bound together to the minutest point. Therefore the capacity for philosophy consists just in that in which Plato placed it, the knowledge of the one in the many, and the many in the one. Philosophy will therefore be a sum-total of general judgments, whose ground of knowledge is immediately the world itself in its entirety, without excepting anything; thus all that is to be found in human consciousness; it will be *a complete recapitulation, as it were, a reflection, of the world in abstract concepts*, which is only possible by the union of the essentially identical in *one* concept and the relegation of the different to another. This task was already prescribed to philosophy by Bacon of Verulam when he said: *ea demum vera est philosophia, quae mundi ipsius voces fidelissime reddit, et veluti dictante mundo conscripta est, et nihil aliud est, quam ejusdem simulacrum et reflectio, neque addit quidquam de proprio, sed tantum iterat et resonat* (De Augm. Scient., L. 2, c. 13). But we take this in a wider sense than Bacon could then conceive.

The agreement which all the sides and parts of the world have with each other, just because they belong to a whole, must also be found in this abstract copy of it. Therefore the judgments in this sum-total could to a certain extent be deduced from each other, and indeed always reciprocally so deduced. Yet to make the first judgment possible, they must all be present, and thus implied as

prior to it in the knowledge of the world in the concrete, especially as all direct proof is more certain than indirect proof; their harmony with each other by virtue of which they come together into the unity of *one* thought, and which arises from the harmony and unity of the world of perception itself, which is their common ground of knowledge, is not therefore to be made use of to establish them, as that which is prior to them, but is only added as a confirmation of their truth. This problem itself can only become quite clear in being solved.<sup>23</sup>

§ 16. After this full consideration of reason as a special faculty of knowledge belonging to man alone, and the results and phenomena peculiar to human nature brought about by it, it still remains for me to speak of reason, so far as it is the guide of human action, and in this respect may be called *practical*. But what there is to say upon this point has found its place elsewhere in the appendix to this work, where I controvert the existence of the so-called practical reason of Kant, which he (certainly very conveniently) explained as the immediate source of virtue, and as the seat of an absolute (*i. e.*, fallen from heaven) imperative. The detailed and thorough refutation of this Kantian principle of morality I have given later in the “Fundamental Problems of Ethics.” There remains, therefore, but little for me to say here about the actual influence of reason, in the true sense of the word, upon action. At the commencement of our treatment of reason we remarked, in general terms, how much the action and behaviour of men differs from that of brutes, and that this difference is to be regarded as entirely due to the presence of abstract concepts in consciousness. The influence of these upon our whole existence is so penetrating and significant that, on account of them, we are related to the lower animals very much as those animals that see are related to those that have no eyes (certain larvae, worms, and zoophytes). Animals without eyes know only by touch what is immediately present to them in space, what comes into contact with them; those which see, on the contrary, know a wide circle of near and distant objects. In the same way the absence of reason confines the lower animals to the ideas of perception, *i. e.*, the real objects which are immediately present to them in time; we, on the contrary, on account of knowledge in the abstract, comprehend not only the narrow actual present, but also the whole past and future, and the wide sphere of the possible; we view life freely on all its sides, and go far beyond the present and the actual. Thus what the eye is in space and for sensuous knowledge, reason is, to a certain extent, in time and for inner knowledge. But as the visibility of objects has its worth and meaning only in the fact that it informs us of their tangibility, so the whole worth of abstract knowledge always consists in its relation to what is perceived. Therefore men naturally attach far more worth to immediate and perceived knowledge than to abstract concepts, to that which is merely thought; they place empirical knowledge before logical. But this is not the opinion of men who live more in words than in deeds, who have seen more on paper and in books than in actual life, and who in their greatest degeneracy become pedants and lovers of the mere letter. Thus only is it conceivable that Leibnitz and Wolf and all their successors could go so far astray as to explain knowledge of perception, after the example of Duns Scotus, as merely confused abstract knowledge! To the honour of Spinoza, I must mention that his truer sense led him, on the contrary, to explain all general concepts as having arisen from the confusion of that which was known in perception (Eth. II., prop. 40, Schol. 1). It is also a result of perverted opinion that in mathematics the evidence proper to it was rejected, and logical evidence alone accepted; that everything in general which was not abstract knowledge was comprehended under the wide name of feeling, and consequently was little valued; and lastly that the Kantian ethics regarded the good will which immediately asserts itself upon knowledge of the circumstances, and guides to right and good action as mere feeling and emotion, and consequently as worthless and without merit, and would only recognise actions which proceed from abstract maxims as having moral worth.

The many-sided view of life as a whole which man, as distinguished from the lower animals, possesses through reason, may be compared to a geometrical, colourless, abstract, reduced plan of

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<sup>23</sup> Cf. Ch. 17 of Supplement.

his actual life. He, therefore, stands to the lower animals as the navigator who, by means of chart, compass, and quadrant, knows accurately his course and his position at any time upon the sea, stands to the uneducated sailors who see only the waves and the heavens. Thus it is worth noticing, and indeed wonderful, how, besides his life in the concrete, man always lives another life in the abstract. In the former he is given as a prey to all the storms of actual life, and to the influence of the present; he must struggle, suffer, and die like the brute. But his life in the abstract, as it lies before his rational consciousness, is the still reflection of the former, and of the world in which he lives; it is just that reduced chart or plan to which we have referred. Here in the sphere of quiet deliberation, what completely possessed him and moved him intensely before, appears to him cold, colourless, and for the moment external to him; he is merely the spectator, the observer. In respect of this withdrawal into reflection he may be compared to an actor who has played his part in one scene, and who takes his place among the audience till it is time for him to go upon the stage again, and quietly looks on at whatever may happen, even though it be the preparation for his own death (in the piece), but afterwards he again goes on the stage and acts and suffers as he must. From this double life proceeds that quietness peculiar to human beings, so very different from the thoughtlessness of the brutes, and with which, in accordance with previous reflection, or a formed determination, or a recognised necessity, a man suffers or accomplishes in cold blood, what is of the utmost and often terrible importance to him; suicide, execution, the duel, enterprises of every kind fraught with danger to life, and, in general, things against which his whole animal nature rebels. Under such circumstances we see to what an extent reason has mastered the animal nature, and we say to the strong: σιδηρειον νυ τοι ἦτορ! (*ferreum certe tibi cor*), Il. 24, 521. Here we can say truly that reason manifests itself practically, and thus wherever action is guided by reason, where the motives are abstract concepts, wherever we are not determined by particular ideas of perception, nor by the impression of the moment which guides the brutes, there *practical reason* shows itself. But I have fully explained in the Appendix, and illustrated by examples, that this is entirely different from and unrelated to the ethical worth of actions; that rational action and virtuous action are two entirely different things; that reason may just as well find itself in connection with great evil as with great good, and by its assistance may give great power to the one as well as to the other; that it is equally ready and valuable for the methodical and consistent carrying out of the noble and of the bad intention, of the wise as of the foolish maxim; which all results from the constitution of its nature, which is feminine, receptive, retentive, and not spontaneous; all this I have shown in detail in the Appendix, and illustrated by examples. What is said there would have been placed here, but on account of my polemic against Kant's pretended practical reason I have been obliged to relegate it to the Appendix, to which I therefore refer.

The ideal explained in the *Stoical philosophy* is the most complete development of *practical reason* in the true and genuine sense of the word; it is the highest summit to which man can attain by the mere use of his reason, and in it his difference from the brutes shows itself most distinctly. For the ethics of Stoicism are originally and essentially, not a doctrine of virtue, but merely a guide to a rational life, the end and aim of which is happiness through peace of mind. Virtuous conduct appears in it as it were merely by accident, as the means, not as the end. Therefore the ethical theory of Stoicism is in its whole nature and point of view fundamentally different from the ethical systems which lay stress directly upon virtue, such as the doctrines of the Vedas, of Plato, of Christianity, and of Kant. The aim of Stoical ethics is happiness: τέλος το εὐδαιμονεῖν (*virtutes omnes finem habere beatitudinem*) it is called in the account of the Stoa by Stobæus (Ecl., L. ii. c. 7, p. 114, and also p. 138). Yet the ethics of Stoicism teach that happiness can only be attained with certainty through inward peace and quietness of spirit (αταραξία), and that this again can only be reached through virtue; this is the whole meaning of the saying that virtue is the highest good. But if indeed by degrees the end is lost sight of in the means, and virtue is inculcated in a way which discloses an interest entirely different from that of one's own happiness, for it contradicts this too distinctly; this is just one of those inconsistencies by means of which, in every system, the immediately known, or, as it is

called, felt truth leads us back to the right way in defiance of syllogistic reasoning; as, for example, we see clearly in the ethical teaching of Spinoza, which deduces a pure doctrine of virtue from the egoistical *suum utile quærere*

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