WHETHER the treatment of such knowledge as lies within the province of reason does or does not follow the secure path of a science, is easily to be determined from the outcome. For if after elaborate preparations, frequently renewed, it is brought to a stop immediately it nears its goal; if often it is compelled to retrace its steps and strike into some new line of approach; or again, if the various participants are unable to agree in any common plan of procedure, then we may rest assured that it is very far from having entered upon the secure path of a science, and is indeed a merely random groping. In these circumstances, we shall be rendering a service to reason should we succeed in discovering the path upon which it can securely travel, even if, as a result of so doing, much that is comprised in our original aims, adopted without reflection, may have to be abandoned as fruitless.

That logic has already, from the earliest times, proceeded B viii. upon this sure path is evidenced by the fact that since Aristotle it has not required to retrace a single step, unless, indeed, we care to count as improvements the removal of certain needless subtleties or the clearer exposition of its recognised teaching, features which concern the elegance rather than the certainty of the science. It is remarkable also that to the present day this logic has not been able to advance a single step, and is thus to all appearance a closed and completed body of doctrine. If some of the moderns have thought to enlarge it by introducing psychological chapters on the different faculties of knowledge (imagination, wit, etc.), metaphysical chapters on the origin of knowledge or on the different kinds of certainty according to difference in the objects (idealism, scepticism, etc.), or anthropological chapters on prejudices, their causes and remedies, this could only arise from their ignorance of the

peculiar nature of logical science. We do not enlarge but disfigure sciences, if we allow them to trespass upon one Bix. another's territory. The sphere of logic is quite precisely delimited; its sole concern is to give an exhaustive exposition and a strict proof of the formal rules of all thought, whether it be a priori or empirical, whatever be its origin or its object, and whatever hindrances, accidental or natural, it may encounter in our minds.

That logic should have been thus successful is an advantage which it owes entirely to its limitations, whereby it is justified in abstracting—indeed, it is under obligation to do so—from all objects of knowledge and their differences, leaving the understanding nothing to deal with save itself and its form. But for reason to enter on the sure path of science is, of course, much more difficult, since it has to deal not with itself alone but also with objects. Logic, therefore, as a propaedeutic, forms, as it were, only the vestibule of the sciences; and when we are concerned with specific modes of knowledge, while logic is indeed presupposed in any critical estimate of them, yet for the actual acquiring of them we have to look to the sciences properly so called, that is, to the objective sciences.

Now if reason is to be a factor in these sciences, something in them must be known a priori, and this knowledge may be related to its object in one or other of two ways, either as merely determining it and its concept (which must be supplied Bx from elsewhere) or as also making it actual. The former is theoretical, the latter practical knowledge of reason. In both, that part in which reason determines its object completely a priori, namely, the pure part—however much or little this part may contain—must be first and separately dealt with, in case it be confounded with what comes from other sources. For it is bad management if we blindly pay out what comes in, and are not able, when the income falls into arrears, to distinguish which part of it can justify expenditure, and in which I line we must make reductions.

Mathematics and physics, the two sciences in which reason yields theoretical knowledge, have to determine their objects a priori, the former doing so quite purely, the latter having

^{1 [}Reading, with Erdmann, von welchem for von welcher.]

to reckon, at least partially, with sources of knowledge other than reason.

In the earliest times to which the history of human reason extends, mathematics, among that wonderful people, the Greeks, had already entered upon the sure path of science. But it must not be supposed that it was as easy for mathematics as it was for logic-in which reason has to deal with itself aloneto light upon, or rather to construct for itself, that royal road. B xi. On the contrary, I believe that it long remained, especially among the Egyptians, in the groping stage, and that the transformation must have been due to a revolution brought about by the happy thought of a single man, the experiment which he devised marking out the path upon which the science must enter, and by following which, secure progress throughout all time and in endless expansion is infallibly secured. The history of this intellectual revolution—far more important than the discovery of the passage round the celebrated Cape of Good Hope—and of its fortunate author, has not been preserved. But the fact that Diogenes Laertius, in handing down an account of these matters, names the reputed author of even the least important among the geometrical demonstrations, even of those which, for ordinary consciousness, stand in need of no such proof, does at least show that the memory of the revolution, brought about by the first glimpse of this new path, must have seemed to mathematicians of such outstanding importance as to cause it to survive the tide of oblivion. A new light flashed upon the mind of the first man (be he Thales or some other) who demonstrated the properties of the isosceles triangle. The true method, so he found, was not to inspect what he dis- B xii. cerned either in the figure, or in the bare concept of it, and from this, as it were, to read off its properties; but to bring out what 1 was necessarily implied in the concepts that he had himself formed a priori, and had put into the figure in the construction by which he presented it to himself. If he is to know anything with a priori certainty he must not ascribe to the figure anything save what necessarily follows from what he has himself set into it in accordance with his concept.

Natural science was very much longer in entering upon the highway of science. It is, indeed, only about a century and a

^{1 [}Reading, with Adickes, sondern das for sondern durch das.]

half since Bacon, by his ingenious proposals, partly initiated this discovery, partly inspired fresh vigour in those who were already on the way to it. In this case also the discovery can be explained as being the sudden outcome of an intellectual revolution. In my present remarks I am referring to natural science only in so far as it is founded on *empirical* principles.

When Galileo caused balls, the weights of which he had himself previously determined, to roll down an inclined plane; when Torricelli made the air carry a weight which he had calculated beforehand to be equal to that of a definite volume of water; or in more recent times, when Stahl changed metal B xiii. into lime, and lime back into metal, by withdrawing something and then restoring it, a light broke upon all students of nature. They learned that reason has insight only into that which it produces after a plan of its own, and that it must not allow itself to be kept, as it were, in nature's leading-strings, but must itself show the way with principles of judgment based upon fixed laws, constraining nature to give answer to questions of reason's own determining. Accidental observations, made in obedience to no previously thought-out plan, can never be made to yield a necessary law, which alone reason is concerned to discover. Reason, holding in one hand its principles, according to which alone concordant appearances can be admitted as equivalent to laws, and in the other hand the experiment which it has devised in conformity with these principles, must approach nature in order to be taught by it. It must not, however, do so in the character of a pupil who listens to everything that the teacher chooses to say, but of an appointed judge who compels the witnesses to answer questions which he has himself formulated. Even physics, therefore, owes the beneficent revolution in its point of view B xiv. entirely to the happy thought, that while reason must seek in nature, not fictitiously ascribe to it, whatever as not being knowable through reason's own resources has to be learnt. if learnt at all, only from nature, it must adopt as its guide. in so seeking, that which it has itself put into nature. It is thus that the study of nature has entered on the secure path of a

^a I am not, in my choice of examples, tracing the exact course of the history of the experimental method; we have indeed no very precise knowledge of its first beginnings.

science, after having for so many centuries been nothing but a process of merely random groping.

Metaphysics is a completely isolated speculative science of reason, which soars far above the teachings of experience, and in which reason is indeed meant to be its own pupil. Metaphysics rests on concepts alone—not, like mathematics, on their application to intuition. But though it is older than all other sciences, and would survive even if all the rest were swallowed up in the abyss of an all-destroying barbarism, it has not yet had the good fortune to enter upon the secure path of a science. For in it reason is perpetually being brought to a stand, even when the laws into which it is seeking to have, as it professes, an a priori insight are those that are confirmed by our most common experiences. Ever and again we have to retrace our steps, as not leading us in the direction in which we desire to go. So far, too, are the students of metaphysics from exhibiting any B xv. kind of unanimity in their contentions, that metaphysics has rather to be regarded as a battle-ground quite peculiarly suited for those who desire to exercise themselves in mock combats, and in which no participant has ever yet succeeded in gaining even so much as an inch of territory, not at least in such manner as to secure him in its permanent possession. This shows, beyond all questioning, that the procedure of metaphysics has hitherto been a merely random groping, and, what is worst of all, a groping among mere concepts.

What, then, is the reason why, in this field, the sure road to science has not hitherto been found? Is it, perhaps, impossible of discovery? Why, in that case, should nature have visited our reason with the restless endeavour whereby it is ever searching for such a path, as if this were one of its most important concerns. Nay, more, how little cause have we to place trust in our reason, if, in one of the most important domains of which we would fain have knowledge, it does not merely fail us, but lures us on by deceitful promises, and in the end betrays us! Or if it be only that we have thus far failed to find the true path, are there any indications to justify the hope that by renewed efforts we may have better fortune than has fallen to our predecessors?

The examples of mathematics and natural science, which by a single and sudden revolution have become what they B xvi.

considering what may have been the essential features in the changed point of view by which they have so greatly benefited. Their success should incline us, at least by way of experiment, to imitate their procedure, so far as the analogy which, as species of rational knowledge, they bear to metaphysics may permit. Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them a priori, by means of concepts, have, on this assumption, ended in failure. We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge. This would agree better with what is desired, namely, that it should be possible to have knowledge of objects a priori, determining something in regard to them prior to their being given. We should then be proceeding precisely on the lines of Copernicus' primary hypothesis.1 Failing of satisfactory progress in explaining the movements of the heavenly bodies on the supposition that they all revolved round the spectator, he tried whether he might not have better success if he made the spectator B xvii. to revolve and the stars to remain at rest. A similar experiment can be tried in metaphysics, as regards the intuition of objects. If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter a priori; but if the object (as object of the senses) must conform to the constitution of our faculty of intuition. I have no difficulty in conceiving such a possibility. Since I cannot rest in these intuitions if they are to become known, but must relate them as representations to something as their object, and determine this latter through them, either I must assume that the concepts, by means of which I obtain this determination, conform to the object, or else I assume that the objects, or what is the same thing, that the experience in which alone, as given objects, they can be known, conform to the concepts. In the former case, I am again in the same perplexity as to how I can know anything a priori in regard to the objects. In the latter case the outlook is more hopeful. For experience is itself a species of knowledge which involves

^{1 [}mit den ersten Gedanken des Kopernikus.]

understanding; and understanding has rules which I must presuppose as being in me prior to objects being given to me, and therefore as being a priori. They find expression in a priori concepts to which all objects of experience necessarily con-B xviii form, and with which they must agree. As regards objects which are thought solely through reason, and indeed as necessary, but which can never—at least not in the manner in which reason thinks them—be given in experience, the attempts at thinking them (for they must admit of being thought) will furnish an excellent test of what we are adopting as our new method of thought, namely, that we can know a priori of things only what we ourselves put into them.^a

This experiment succeeds as well as could be desired, and promises to metaphysics, in its first part—the part that is occupied with those concepts a priori to which the corresponding objects, commensurate with them, can be given in experience—the secure path of a science. For the new point of B xix. view enables us to explain how there can be knowledge a priori; and, in addition, to furnish satisfactory proofs of the laws which form the a priori basis of nature, regarded as the sum of the objects of experience—neither achievement being possible on the procedure hitherto followed. But this deduction of our power of knowing a priori, in the first part of metaphysics, has a consequence which is startling, and which has the appear-

a This method, modelled on that of the student of nature, consists in looking for the elements of pure reason in what admits of confirmation or refutation by experiment. Now the propositions of pure reason, especially if they venture out beyond all limits of possible experience, cannot be brought to the test through any experiment with their objects, as in natural science. In dealing with those concepts and principles which we adopt a priori, all that we can do is to contrive that they be used for viewing objects from two different points of view—on the one hand, in connection with experience, as B xix. objects of the senses and of the understanding, and on the other hand, for the isolated reason that strives to transcend all1 limits of experience, as objects which are thought merely. If, when things are viewed from this twofold standpoint, we find that there is agreement with the principle of pure reason, but that when we regard them only from a single point of view reason is involved in unavoidable self-conflict, the experiment decides in favour of the correctness of this distinction.

^{1 [}Reading, with Adickes, über alle for über.]

ance of being highly prejudicial to the whole purpose of metaphysics, as dealt with in the second part. For we are brought to the conclusion that we can never transcend the limits of possible experience, though that is precisely what this science B xx. is concerned, above all else, to achieve. This situation yields. however, just the very experiment by which, indirectly, we are enabled to prove the truth of this first estimate of our a priori knowledge of reason, namely, that such knowledge has to do only with appearances, and must leave the thing in itself as indeed real per se, but as not known by us. For what necessarily forces us to transcend the limits of experience and of all appearances is the unconditioned, which reason, by necessity and by right, demands in things in themselves, as required to complete the series of conditions. If, then, on the supposition that our empirical knowledge conforms to objects as things in themselves, we find that the unconditioned cannot be thought without contradiction. and that when, on the other hand, we suppose that our representation of things, as they are given to us, does not conform to these things as they are in themselves, but that these objects. as appearances, conform to our mode of representation, the contradiction vanishes; and if, therefore, we thus find that the unconditioned is not to be met with in things, so far as we know them, that is, so far as they are given to us, but only so far as we do not know them, that is, so far as they are things in themselves, we are justified in concluding that what we at first assumed for the purposes of experiment is B xxi. now definitely confirmed." But when all progress in the field of the supersensible has thus been denied to speculative reason, it is still open to us to enquire whether, in the practical

^a This experiment of pure reason bears a great similarity to what in chemistry is sometimes entitled the experiment of reduction, or more usually the synthetic process. The analysis of the metaphysician separates pure a priori knowledge into two very heterogeneous elements, namely, the knowledge of things as appearances, and the knowledge of things in themselves; his dialectic combines these two again, in harmony with the necessary idea of the unconditioned demanded by reason, and finds that this harmony can never be obtained except through the above distinction, which must therefore be accepted.

^{1 [}die Sache an sich selbst.]

knowledge of reason, data may not be found sufficient to determine reason's transcendent concept of the unconditioned, and so to enable us, in accordance with the wish of metaphysics, and by means of knowledge that is possible a priori, though only from a practical point of view, to pass beyond the limits of all possible experience. Speculative reason has thus at least made room for such an extension; and if it must at the same time leave it empty, yet none the less we are at B xxii. liberty, indeed we are summoned, to take occupation of it, if we can, by practical data of reason.^a

This attempt to alter the procedure which has hitherto prevailed in metaphysics, by completely revolutionising it in accordance with the example set by the geometers and physicists, forms indeed the main purpose of this critique of pure speculative reason. It is a treatise on the method, not a system of the science itself. But at the same time it marks out the whole plan of the science, both as regards its limits and as regards its entire internal structure. For pure speculative reason B xxiii. has this peculiarity, that it can measure its powers according to the different ways in which it chooses the objects of its thinking, and can also give an exhaustive enumeration of the various ways in which it propounds its problems, and so is able, nay bound, to trace the complete outline of a system of metaphysics. As regards the first point, nothing in a priori knowledge can be ascribed to objects save what the thinking subject derives from itself; as regards the second point, pure reason, so far as the principles of its knowledge are concerned,

a Similarly, the fundamental laws of the motions of the heavenly bodies gave established certainty to what Copernicus had at first assumed only as an hypothesis, and at the same time yielded proof of the invisible force (the Newtonian attraction) which holds the universe together. The latter would have remained for ever undiscovered if Copernicus had not dared, in a manner contradictory of the senses, but yet true, to seek the observed movements, not in the heavenly bodies, but in the spectator. The change in point of view, analogous to this hypothesis, which is expounded in the *Critique*, I put forward in this preface as an hypothesis only, in order to draw attention to the character of these first attempts at such a change, which are always hypothetical. But in the *Critique* itself it will be proved, apodeictically not hypothetically, from the nature of our representations of space and time and from the elementary concepts of the understanding.

is a quite separate self-subsistent unity, in which, as in an organised body, every member exists for every other, and all for the sake of each, so that no principle can safely be taken in any one relation, unless it has been investigated in the entirety of its relations to the whole employment of pure reason. Consequently, metaphysics has also this singular advantage, such as falls to the lot of no other science which deals with objects (for logic is concerned only with the form of thought in general), that should it, through this critique, be set upon the secure path of a science, it is capable of ac-B xxiv. quiring exhaustive knowledge of its entire field. Metaphysics has to deal only with principles, and with the limits of their employment as determined by these principles themselves, and it can therefore finish its work and bequeath it to posterity as a capital to which no addition can be made. Since it is a fundamental science, it is under obligation to achieve this completeness. We must be able to say of it: nil actum reputans, si quid superesset agendum.

But, it will be asked, what sort of a treasure is this that

we propose to bequeath to posterity? What is the value of the metaphysics that is alleged to be thus purified by criticism and established once for all? On a cursory view of the present work it may seem that its results are merely negative. warning us that we must never venture with speculative reason beyond the limits of experience. Such is in fact its primary use. But such teaching at once acquires a positive value when we recognise that the principles with which speculative reason ventures out beyond its proper limits do not in effect extend the employment of reason, but, as we find on closer scrutiny. inevitably narrow it. These principles properly belong [not to reason but to sensibility, and when thus employed they B xxv. threaten to make the bounds of sensibility coextensive with the real, and so to supplant reason in its pure (practical) employment. So far, therefore, as our Critique limits speculative reason, it is indeed negative; but since it thereby removes an obstacle which stands in the way of the employment of practical reason, nay threatens to destroy it, it has in reality a positive and very important use. At least this is so, immediately we are convinced that there is an absolutely necessary practical employment of pure reason—the moral—in which it

inevitably goes beyond the limits of sensibility. Though [practical] reason, in thus proceeding, requires no assistance from speculative reason, it must yet be assured against its opposition, that reason may not be brought into conflict with itself. To deny that the service which the Critique renders is positive in character, would thus be like saying that the police are of no positive benefit, inasmuch as their main business is merely to prevent the violence of which citizens stand in mutual fear, in order that each may pursue his vocation in peace and security. That space and time are only forms of sensible intuition, and so only conditions of the existence of things as appearances; that, moreover, we have no concepts of understanding, and consequently no elements for the knowledge of things, save in so far as intuition can be given corresponding B xxvi. to these concepts; and that we can therefore have no knowledge of any object as thing in itself, but only in so far as it 1 is an object of sensible intuition, that is, an appearance—all this is proved in the analytical part of the Critique. Thus it does indeed follow that all possible speculative knowledge of reason is limited to mere objects of experience. But our further contention must also be duly borne in mind, namely, that though we cannot know these objects as things in themselves, we must yet be in position at least to think them as things in themselves: a otherwise we should be landed in the absurd conclusion that there can be appearance without anything that appears. B xxvii. Now let us suppose that the distinction, which our Critique has shown to be necessary, between things as objects of experience and those same things as things in themselves, had not been made. In that case all things in general, as far as they are

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^a To know an object I must be able to prove its possibility, either from its actuality as attested by experience, or a priori by means of reason. But I can think whatever I please, provided only that I do not contradict myself, that is, provided my concept is a possible thought. This suffices for the possibility of the concept, even though I may not be able to answer for there being, in the sum of all possibilities, an object corresponding to it. But something more is required before I can ascribe to such a concept objective validity, that is, real possibility; the former possibility is merely logical. This something more need not, however, be sought in the theoretical sources of knowledge: it may lie in those that are practical.

^{1 [}Reading, with Erdmann, er for es.]

efficient causes, would be determined by the principle of causality, and consequently by the mechanism of nature. I could not, therefore, without palpable contradiction, say of one and the same being, for instance the human soul, that its will is free and yet is subject to natural necessity, that is, is not free. For I have taken the soul in both propositions in one and the same sense, namely as a thing in general, that is, as a thing in itself; and save by means of a preceding critique, could not have done otherwise. But if our Critique is not in error in teaching that the object is to be taken in a twofold sense, namely as appearance and as thing in itself; if the deduction of the concepts of understanding is valid, and the principle of causality therefore applies only to things taken in the former sense, namely, in so far as they are objects of experience—these same objects. taken in the other sense, not being subject to the principle then there is no contradiction in supposing that one and the B xxviii. same will is, in the appearance, that is, in its visible acts, necessarily subject to the law of nature, and so far not free, while yet, as belonging to a thing in itself, it is not subject to that law, and is therefore free. My soul, viewed from the latter standpoint, cannot indeed be known by means of speculative reason (and still less through empirical observation); and freedom as a property of a being to which I attribute effects in the sensible world, is therefore also not knowable in any such fashion. For I should then have to know such a being as determined in its existence, and yet as not determined in time which is impossible, since I cannot support my concept by any intuition. But though I cannot know, I can yet think freedom; that is to say, the representation of it is at least not self-contradictory, provided due account be taken of our critical distinction between the two modes of representation, the sensible and the intellectual, and of the resulting limitation of the pure concepts of understanding and of the principles which flow from them.

If we grant that morality necessarily presupposes freedom (in the strictest sense) as a property of our will; if, that is to say, we grant that it yields practical principles—original principles, proper to our reason—as a priori data of reason, and B xxix. that this would be absolutely impossible save on the assump-

tion of freedom; and if at the same time we grant that speculative reason has proved that such freedom does not allow of being thought, then the former supposition—that made on behalf of morality—would have to give way to this other contention, the opposite of which involves a palpable contradiction. For since it is only on the assumption of freedom that the negation of morality contains any contradiction, freedom, and with it morality, would have to yield to the mechanism of nature.

Morality does not, indeed, require that freedom should be understood, but only that it should not contradict itself, and so should at least allow of being thought, and that as thus thought it should place no obstacle in the way of a free act (viewed in another relation) likewise conforming to the mechanism of nature. The doctrine of morality and the doctrine of nature may each, therefore, make good its position. This, however, is only possible in so far as criticism has previously established our unavoidable ignorance of things in themselves, and has limited all that we can theoretically *know* to mere appearances.

. This discussion as to the positive advantage of critical principles of pure reason can be similarly developed in regard to the concept of God and of the simple nature of our soul; but for the sake of brevity such further discussion may be omitted. [From what has already been said, it is evident that] even the assumption—as made on behalf of the necessary practical em- B xxx. ployment of my reason—of God, freedom, and immortality is not permissible unless at the same time speculative reason be deprived of its pretensions to transcendent insight. For in order to arrive at such insight it must make use of principles which, in fact, extend only to objects of possible experience, and which, if also applied to what cannot be an object of experience, always really change this into an appearance, thus rendering all practical extension of pure reason impossible. I have therefore found it necessary to deny knowledge, in order to make room for faith.1 The dogmatism of metaphysics, that is, the preconception that it is possible to make headway in metaphysics without a previous criticism of pure reason, is the source of all that unbelief,² always very dogmatic, which wars against morality.

1 [Glaube.]

* [Unglaube.]

Though it may not, then, be very difficult to leave to posterity the bequest of a systematic metaphysic, constructed in conformity with a critique of pure reason, yet such a gift is not to be valued lightly. For not only will reason be enabled to follow the secure path of a science, instead of, as hitherto. B xxxi. groping at random, without circumspection or self-criticism; our enquiring youth will also be in a position to spend their time more profitably than in the ordinary dogmatism by which they are so early and so greatly encouraged to indulge in easy speculation about things of which they understand nothing, and into which neither they nor anyone else will ever have any insight—encouraged, indeed, to invent new ideas and opinions, while neglecting the study of the better-established sciences. But, above all, there is the inestimable benefit, that all objections to morality and religion will be for ever silenced, and this in Socratic fashion, namely, by the clearest proof of the ignorance of the objectors. There has always existed in the world, and there will always continue to exist, some kind of metaphysics, and with it the dialectic that is natural to pure reason. It is therefore the first and most important task of philosophy to deprive metaphysics, once and for all, of its injurious influence, by attacking its errors at their very source.

Notwithstanding this important change in the field of the sciences, and the loss of its fancied possessions which specula-B xxxii. tive reason must suffer, general human interests remain in the same privileged position as hitherto, and the advantages which the world has hitherto derived from the teachings of pure reason are in no way diminished. The loss affects only the monopoly of the schools, in no respect the interests of humanity. I appeal to the most rigid dogmatist, whether the proof of the continued existence of our soul after death, derived from the simplicity of substance, or of the freedom of the will as opposed to a universal mechanism, arrived at through the subtle but ineffectual distinctions between subjective and objective practical necessity, or of the existence of God as deduced from the concept of an ens realissimum (of the contingency of the changeable and of the necessity of a prime mover), have ever, upon passing out from the schools, succeeded in reaching the public mind or in exercising the slightest influence on its convictions? That has never been found to occur, and in view of the unfitness of the common human understanding for such subtle speculation, ought never to have been expected. Such widely held convictions, so far as they rest on rational grounds, are due to quite other considerations. The hope of a future life has its source in that notable characteristic of our nature. never to be capable of being satisfied by what is temporal (as insufficient for the capacities of its whole destination); the consciousness of freedom rests exclusively on the clear ex- B xxxiii. hibition of duties, in opposition to all claims of the inclinations; the belief in a wise and great Author of the world is generated solely by the glorious order, beauty, and providential care everywhere displayed in nature. When the schools have been brought to recognise that they can lay no claim to higher and fuller insight in a matter of universal human concern than that which is equally within the reach of the great mass of men (ever to be held by us in the highest esteem), and that, as Schools of philosophy, they should limit themselves to the study of those universally comprehensible, and, for moral purposes, sufficient grounds of proof, then not only do these latter possessions remain undisturbed, but through this very fact they acquire yet greater authority. The change affects only the arrogant pretensions of the Schools, which would fain be counted the sole authors and possessors of such truths (as, indeed, they can justly claim to be in many other branches of knowledge), reserving the key to themselves, and communicating to the public their use only—quod mecum nescit, solus vult scire videri. At the same time due regard is paid to the more moderate claims of the speculative philosopher. B xxxiv. He still remains the sole authority in regard to a science which benefits the public without their knowing it, namely, the critique of reason. That critique can never become popular, and indeed there is no need that it should. For just as fine-spun arguments in favour of useful truths make no appeal to the general mind, so neither do the subtle objections that can be raised against them. On the other hand, both inevitably present themselves to everyone who rises to the height of speculation; and it is therefore the duty of the Schools, by means of a thorough investigation of the rights of speculative reason, once for all to prevent the scandal which, sooner or later, is sure to

break out even among the masses, as the result of the disputes in which metaphysicians (and, as such, finally also the clergy) inevitably become involved to the consequent perversion of their teaching. Criticism alone can sever the root of materialism, fatalism, atheism, free-thinking, fanaticism, and superstition, which can be injurious universally: as well as of idealism and scepticism, which are dangerous chiefly to the Schools, and hardly allow of being handed on to the B xxxv. public. If governments think proper to interfere with the affairs of the learned, it would be more consistent with a wise regard for science as well as for mankind, to favour the freedom of such criticism, by which alone the labours of reason can be established on a firm basis, than to support the ridiculous despotism of the Schools, which raise a loud cry of public danger over the destruction of cobwebs to which the public has never paid any attention, and the loss of which it can therefore never feel.

This critique is not opposed to the dogmatic procedure of reason in its pure knowledge, as science, for that must always be dogmatic, that is, yield strict proof from sure principles a priori. It is opposed only to dogmatism, that is, to the presumption that it is possible to make progress with pure knowledge, according to principles, from concepts alone (those that are philosophical), as reason has long been in the habit of doing; and that it is possible to do this without having first investigated in what way and by what right reason has come into possession of these concepts. Dogmatism is thus the dogmatic procedure of pure reason, without previous criticism of its own powers. In withstanding dogmatism we must not allow ourselves to give free rein to that loquacious shallowness, which assumes B xxxvi. for itself the name of popularity, nor yet to scepticism, which makes short work with all metaphysics. On the contrary, such criticism is the necessary preparation for a thoroughly grounded metaphysics, which, as science, must necessarily be developed dogmatically, according to the strictest demands of system, in such manner as to satisfy not the general public but the requirements of the Schools. For that is a demand to which it stands pledged, and which it may not neglect, namely, that it carry out its work entirely a priori, to the complete satisfaction of speculative reason. In the execution of the plan prescribed

by the critique, that is, in the future system of metaphysics. we have therefore to follow the strict method of the celebrated Wolff, the greatest of all the dogmatic philosophers. He was the first to show by example (and by his example he awakened that spirit of thoroughness which is not extinct in Germany) how the secure progress of a science is to be attained only through orderly establishment of principles, clear determination of concepts, insistence upon strictness of proof, and avoidance of venturesome, non-consecutive steps in our inferences. He was thus peculiarly well fitted to raise metaphysics to the dignity of a science, if only it had occurred to him to prepare the ground beforehand by a critique of the organ, that is, of pure reason itself. The blame for his having failed to do so B xxxvii. lies not so much with himself as with the dogmatic way of thinking prevalent in his day, and with which the philosophers of his time, and of all previous times, have no right to reproach one another. Those who reject both the method of Wolff and the procedure of a critique of pure reason can have no other aim than to shake off the fetters of science altogether, and thus to change work into play, certainty into opinion, philosophy into philodoxy.

Now, as regards this second edition, I have, as is fitting, endeavoured to profit by the opportunity, in order to remove, wherever possible, difficulties and obscurity which, not perhaps without my fault, may have given rise to the many misunderstandings into which even acute thinkers have fallen in passing judgment upon my book. In the propositions themselves and their proofs, and also in the form and completeness of the [architectonic] plan, I have found nothing to alter. This is due partly to the long examination to which I have subjected them, before offering them to the public, partly to the nature of the subject-matter with which we are dealing. For pure speculative reason has a structure wherein everything is an organ, the whole being for the sake of every part, and every part for the sake of all the others, so that even the B xxxviii smallest imperfection, be it a fault (error) or a deficiency, must inevitably betray itself in use. This system will, as I hope, maintain, throughout the future, this unchangeableness. It is not self-conceit which justifies me in this confidence, but

the evidence experimentally obtained through the parity of the result, whether we proceed from the smallest elements to the whole of pure reason or reverse-wise from the whole (for this also is presented to reason through its final end in the sphere of the practical) to each part. Any attempt to change even the smallest part at once gives rise to contradictions, not merely in the system, but in human reason in general. As to the mode of exposition, on the other hand, much still remains to be done; and in this edition I have sought to make improvements which should help in removing, first, the misunderstanding in regard to the Aesthetic, especially concerning the concept of time; secondly, the obscurity of the deduction of the concepts of understanding; thirdly, a supposed want of sufficient evidence in the proofs of the principles of pure understanding; and finally, the false interpretation placed upon the paralogisms charged against rational psychology. Beyond this point, that is, beyond the end of the B xxxix. first chapter of the Transcendental Dialectic, I have made no B xl. changes in the mode of exposition. Time was too short to

a The only addition, strictly so called, though one affecting the method of proof only, is the new refutation of psychological idealism (cf. below, p. 244), and a strict (also, as I believe, the only possible) proof of the objective reality of outer intuition. However harmless idealism may be considered in respect of the essential aims of metaphysics (though, in fact, it is not thus harmless), it still remains a scandal to philosophy and to human reason in general that the existence of things outside us (from which we derive the whole material of knowledge, even for our inner sense) must be accepted merely on faith, and that if anyone thinks good to doubt their existence, we are unable to counter his doubts by any satisfactory proof. Since there is some obscurity in the expressions used in the proof, from the third line to the sixth line, I beg to alter the passage as follows: "But this permanent cannot be an intuition in me. For all grounds of determination of my existence which are to be met with in me are representations; and as representations themselves require a permanent distinct from them, in relation to which their change, and so my existence in the time wherein they change, may be determined." To this proof it will probably be objected, that I am immediately conscious only of that which is in me, that is, of my representation of outer things; and consequently that it must still remain uncertain whether outside me there is anything corresponding to it. B xl. or not. But through inner experience I am conscious of my existence

allow of further changes; and besides, I have not found among B xli. competent and impartial critics any misapprehension in regard to the remaining sections. Though I shall not venture to name these critics with the praise that is their due, the attention B xlii. which I have paid to their comments will easily be recognised in the [new] passages [above mentioned]. These improvements involve, however, a small loss, not to be prevented save by making the book too voluminous, namely, that I have had to omit or abridge certain passages, which, though not indeed essential to the completeness of the whole, may yet be missed by many readers as otherwise helpful. Only so could I obtain space for what, as I hope, is now a more intelligible exposition, which, though altering absolutely nothing in the fundamentals of the propositions put forward or even in their proofs, yet here and there departs so far from the previous method of treatment, that mere interpolations could not be made to suffice. This loss, which is small and can be remedied by consulting the first edition, will, I hope, be compensated by the greater clearness of the new

in time (consequently also of its determinability in time), and this is more than to be conscious merely of my representation. It is identical with the empirical consciousness of my existence, which is determinable only through relation to something which, while bound up with my existence, is outside me. This consciousness of my existence in time is bound up in the way of identity 1 with the consciousness of a relation to something outside me, and it is therefore experience not invention, sense not imagination, which inseparably connects this outside something with my inner sense. For outer sense is already in itself a relation of intuition to something actual outside me, and the reality of outer sense, in its distinction from imagination, rests simply on that which is here found to take place, namely, its being inseparably bound up with inner experience, as the condition of its possibility. If, with the intellectual consciousness of my existence, in the representation 'I am', which accompanies all my judgments and acts of understanding, I could at the same time connect a determination of my existence through intellectual intuition, the consciousness of a relation to something outside me would not be required. But though that intellectual consciousness does indeed come first,2 the inner intuition, in which my existence can alone be determined, is sensible and is bound up with the condition of time. This determination, however, and therefore the inner experience itself, depends

^{1 [}identisch verbunden.]

text. I have observed, with pleasure and thankfulness, in various published works—alike in critical reviews and in independent treatises—that the spirit of thoroughness is not extinct in Germany, but has only been temporarily over-Baliii, shadowed by the prevalence of a pretentiously free manner of thinking; and that the thorny paths of the Critique have not discouraged courageous and clear heads from setting themselves to master my book—a work which leads to a methodical, and as such alone enduring, and therefore most necessary, science of pure reason. To these worthy men, who so happily combine thoroughness of insight with a talent for lucid exposition—which I cannot regard myself as possessing—I leave the task of perfecting what, here and there, in its exposition, is still somewhat defective; for in this regard the danger is not that of being refuted, but of not being

upon something permanent which is not in me, and consequently B xli. can be only in something outside me, to which I must regard myself as standing in relation. The reality of outer sense is thus necessarily bound up with inner sense, if experience in general is to be possible at all: that is, I am just as certainly conscious that there are things outside me, which are in relation to my sense, as I am conscious that I myself exist as determined in time. In order to determine to which given intuitions objects outside me actually correspond, and which therefore belong to outer sense (to which, and not to the faculty of imagination, they are to be ascribed), we must in each single case appeal to the rules according to which experience in general, even inner experience, is distinguished from imagination —the proposition that there is such a thing as outer experience being always presupposed. This further remark may be added. The representation of something permanent in existence is not the same as permanent representation. For though the representation of [something permanent] 1 may be very transitory and variable like all our other representations, not excepting those of matter, it yet refers to something permanent. This latter must therefore be an external thing distinct from all my representations, and its existence must be included in the determination of my own existence, constituting with it but a single experience such as would not take place even inwardly if it were not also at the same time, in part, outer. How this should be possible we are as little capable of explaining further as we are of accounting for our being able to think the abiding in time, the coexistence of which with the changing generates the concept of alteration.

^{1 [}Reading, with Wille, jene for diese.]

understood. From now on, though I cannot allow myself to enter into controversy. I shall take careful note of all suggestions, be they from friends or from opponents, for use, in accordance with this propaedeutic, in the further elaboration of the system. In the course of these labours I have advanced somewhat far in years (this month I reach my sixty-fourth year), and I must be careful with my time if I am to succeed in my proposed scheme of providing a metaphysic of nature and of morals which will confirm the truth of my Critique in the two fields, of speculative and of practical reason. The clearing up of the obscurities in the present work—they are B xliv. hardly to be avoided in a new enterprise—and the defence of it as a whole. I must therefore leave to those worthy men who have made my teaching their own. A philosophical work cannot be armed at all points, like a mathematical treatise, and may therefore be open to objection in this or that respect, while yet the structure of the system, taken in its unity, is not in the least endangered. Few have the versatility of mind to familiarise themselves with a new system; and owing to the general distaste for all innovation, still fewer have the inclination to do so. If we take single passages, torn from their contexts, and compare them with one another, apparent contradictions are not likely to be lacking, especially in a work that is written with any freedom of expression. In the eyes of those who rely on the judgment of others, such contradictions have the effect of placing the work in an unfavourable light; but they are easily resolved by those who have mastered the idea of the whole. If a theory has in itself stability, the stresses and strains which may at first have seemed very threatening to it serve only, in the course of time, to smooth away its inequalities; and if men of impartiality, insight, and true popularity devote themselves to its exposition, it may also, in a short time, secure for itself the necessary elegance of statement.

KÜNIGSBERG, April 1787.

I. THE DISTINCTION BETWEEN PURE AND EMPIRICAL KNOWLEDGE

THERE can be no doubt that all our knowledge begins with experience. For how should our faculty of knowledge be awakened into action did not objects affecting our senses partly of themselves produce representations, partly arouse the activity of our understanding to compare these representations, and, by combining or separating them, work up the raw material of the sensible impressions into that knowledge of objects which is entitled experience? In the order of time, therefore, we have no knowledge antecedent to experience, and with experience all our knowledge begins.

But though all our knowledge begins with experience, it does not follow that it all arises out of experience. For it

I. THE IDEA OF TRANSCENDENTAL PHILOSOPHY

Experience is, beyond all doubt, the first product to which our understanding gives rise, in working up the raw material of sensible impressions. Experience is therefore our first instruction, and in its progress is so inexhaustible in new information, that in the interconnected lives of all future generations there will never be any lack of new knowledge that can be thus ingathered. Nevertheless, it is by no means

^{* [}In B the Introduction is divided into five sections, in place of the two sections of the original Introduction. The new sections I. and II. (with their headings) are substituted in B for the original two opening paragraphs (with their heading), which are as follows:]

^{1 [}sinnliche Empfindungen.]

may well be that even our empirical knowledge is made up of what we receive through impressions and of what our own faculty of knowledge (sensible impressions serving merely as the occasion) supplies from itself. If our faculty of knowledge makes any such addition, it may be that we are not in a position to distinguish it from the raw material, until with long practice of attention we have become skilled in separating it.

This, then, is a question which at least calls for closer examination, and does not allow of any off-hand answer:—whether there is any knowledge that is thus independent of experience and even of all impressions of the senses. Such knowledge is entitled a priori, and distinguished from the

the sole field to which our understanding is confined. Experience tells us, indeed, what is, but not that it must necessarily be so, and not otherwise. It therefore gives us no true universality; and reason, which is so insistent upon this A 2 kind of knowledge, is therefore more stimulated by it than satisfied. Such universal modes of knowledge, which at the same time possess the character of inner necessity, must in themselves, independently of experience, be clear and certain. They are therefore entitled knowledge a priori; whereas, on the other hand, that which is borrowed solely from experience is, as we say, known only a posteriori, or empirically.

Now we find, what is especially noteworthy, that even into our experiences there enter modes of knowledge which must have their origin a priori, and which perhaps serve only to give coherence to our sense-representations. For if we eliminate from our experiences everything which belongs to the senses, there still remain certain original concepts and certain judgments derived from them, which must have arisen completely a priori, independently of experience, inasmuch as they enable us to say, or at least lead us to believe that we can say, in regard to the objects which appear to the senses, more than mere experience would teach—giving to assertions true universality and strict necessity, such as mere empirical knowledge cannot supply.

¹ [As the term 'knowledge' cannot be used in the plural, I have usually translated *Erkenntnisse* 'modes of knowledge'.]

¹ [Vorstellungen der Sinne.]

empirical, which has its sources a posteriori, that is, in experience.

The expression 'a priori' does not, however, indicate with sufficient precision the full meaning of our question. For it has been customary to say, even of much knowledge that is derived from empirical sources, that we have it or are capable of having it a priori, meaning thereby that we do not derive it immediately from experience, but from a universal rule—a rule which is itself, however, borrowed by us from experience. Thus we would say of a man who undermined the foundations of his house, that he might have known a priori that it would fall, that is, that he need not have waited for the experience of its actual falling. But still he could not know this completely a priori. For he had first to learn through experience that bodies are heavy, and therefore fall when their supports are withdrawn.

In what follows, therefore, we shall understand by a priori knowledge, not knowledge independent of this or that experience, but knowledge absolutely independent of all experience. B 3 Opposed to it is empirical knowledge, which is knowledge possible only a posteriori, that is, through experience. A priori modes of knowledge are entitled pure when there is no admixture of anything empirical. Thus, for instance, the proposition, 'every alteration has its cause', while an a priori proposition, is not a pure proposition, because alteration is a concept which can be derived only from experience.

II. WE ARE IN POSSESSION OF CERTAIN MODES OF A PRIORI
KNOWLEDGE, AND EVEN THE COMMON UNDERSTANDING IS NEVER WITHOUT THEM

What we here require is a criterion² by which to distinguish with certainty between pure and empirical knowledge. Experience teaches us that a thing is so and so, but not that it cannot be otherwise. First, then, if we have a proposition which in being thought is thought as necessary, it is an a priori judgment; and if, besides, it is not derived from any proposition except one which also has the validity of a necessary judgment, it is an absolutely a priori judgment. Secondly,

¹ [Cf. below, pp. 44, 76, 216-7.]

experience never confers on its judgments true or strict, but only assumed and comparative universality, through induction. We can properly only say, therefore, that, so far as we have hitherto observed, there is no exception to this or that rule. If, then, a judgment is thought with strict universality, that is, in such manner that no exception is allowed as possible, it is not derived from experience, but is valid absolutely a priori. Empirical universality is only an arbitrary extension of a validity holding in most cases to one which holds in all, for instance, in the proposition, 'all bodies are heavy'. When, on the other hand, strict universality is essential to a a judgment, this indicates a special source of knowledge, namely, a faculty of a priori knowledge. Necessity and strict universality are thus sure criteria of a priori knowledge, and are inseparable from one another. But since in the employment of these criteria the contingency of judgments is sometimes more easily shown than their empirical limitation, or, as sometimes also happens, their unlimited universality can be more convincingly proved than their necessity, it is advisable to use the two criteria separately, each by itself being infallible.

Now it is easy to show that there actually are in human knowledge judgments which are necessary and in the strictest sense universal, and which are therefore pure a priori judgments. If an example from the sciences be desired, we have only to look to any of the propositions of mathematics; if we seek an example from the understanding in its quite ordinary B; employment, the proposition, 'every alteration must have a cause', will serve our purpose. In the latter case, indeed, the very concept of a cause so manifestly contains the concept of a necessity of connection with an effect and of the strict universality of the rule, that the concept would be altogether lost if we attempted to derive it, as Hume has done, from a repeated association of that which happens with that which precedes. and from a custom of connecting representations, a custom originating in this repeated association, and constituting therefore a merely subjective necessity. Even without appeal-

¹ [Reading, with Vaihinger, die Zufälligkeit in den Urteilen als die empirische Beschränktheit derselben for die empirische Beschränktheit derselben als die Zufälligkeit in den Urteilen.]

ing to such examples, it is possible to show that pure a priori principles are indispensable for the possibility of experience, and so to prove their existence a priori. For whence could experience derive its certainty, if all the rules, according to which it proceeds, were always themselves empirical, and therefore contingent? Such rules could hardly be regarded as first principles. At present, however, we may be content to have established the fact that our faculty of knowledge does have a pure employment, and to have shown what are the criteria of such an employment.

Such a priori origin is manifest in certain concepts, no less than in judgments. If we remove from our empirical concept of a body, one by one, every feature in it which is [merely] empirical, the colour, the hardness or softness, the weight, even 1 the impenetrability, there still remains the space which the body (now entirely vanished) occupied, and this cannot be removed. Again, if we remove from our em- B6 pirical concept of any object, corporeal or incorporeal, all properties which experience has taught us, we yet cannot take away that property through which the object is thought as substance or as inhering in a substance (although this concept of substance is more determinate than that of an object in general). Owing, therefore, to the necessity with which this concept of substance forces itself upon us, we have no option save to admit that it has its seat in our faculty of a priori knowledge.

III. PHILOSOPHY STANDS IN NEED OF A SCIENCE WHICH SHALL DETERMINE THE POSSIBILITY, THE PRINCIPLES, AND THE EXTENT OF ALL A PRIORI KNOWLEDGE

But what is still more extraordinary than all the preceding 2 is this, that certain modes of knowledge leave the field of all possible experiences and have the appearance of extending A 3 the scope of our judgments beyond all limits of experience, and this by means of concepts to which no corresponding object can ever be given in experience.

It is precisely by means of the latter modes of knowledge, in a realm beyond the world of the senses, where experience

^{1 [}selbst omitted in the 4th edition.]

^{2 [}als alle vorige added in B.]

can yield neither guidance nor correction, that our reason carries on those enquiries which owing to their importance B7 we consider to be far more excellent, and in their purpose far more lofty, than all that the understanding can learn in the field of appearances. Indeed we prefer to run every risk of error rather than desist from such urgent enquiries, on the ground of their dubious character, or from disdain and indifference. ¹These unavoidable problems set by pure reason itself are God, freedom, and immortality. The science which, with all its preparations, is in its final intention directed solely to their solution is metaphysics; and its procedure is at first dogmatic, that is, it confidently sets itself to this task without any previous examination of the capacity or incapacity of reason for so great an undertaking.

Now it does indeed seem natural that, as soon as we have left the ground of experience, we should, through careful enquiries, assure ourselves as to the foundations of any building that we propose to erect, not making use of any knowledge that we possess without first determining whence it has come, and not trusting to principles without knowing their origin. It is natural, that is to say, that the question should first be considered, how the understanding can arrive at all this knowledge a priori, and what extent, validity, and worth it may A 4 have. Nothing, indeed, could be more natural, if by the term B 8 'natural' 2 we signify what fittingly and reasonably ought to happen. But if we mean by 'natural' what ordinarily happens, then on the contrary nothing is more natural and more intelligible than the fact that this enquiry has been so long neglected. For one part of this knowledge, the mathematical, has long been of established reliability, and so gives rise to a favourable presumption as regards the other part, which may yet be of quite different nature. Besides, once we are outside the circle of experience, we can be sure of not being contradicted by experience. The charm of extending our knowledge is so great that nothing short of encountering a direct contradiction can suffice to arrest us in our course; and this can be avoided, if we are careful in our fabrications—which none the less will still remain fabrications. Mathematics gives us a shin-

^{1 [&}quot;These unavoidable . . ." to end of paragraph added in B.]

² [In A unter diesem Wort: in B unter dem Worte natürlich.]

ing example of how far, independently of experience, we can progress in a priori knowledge. It does, indeed, occupy itself with objects and with knowledge solely in so far as they allow of being exhibited in intuition. But this circumstance is easily overlooked, since the intuition, in being thought, can itself be given a priori, and is therefore hardly to be distinguished from a bare and pure concept. Misled by such a proof of the power of reason, the demand for the extension of knowledge recog- As nises no limits. The light dove, cleaving the air in her free flight, and feeling its resistance, might imagine that its flight would be still easier in empty space. It was thus that Plato Bo left the world of the senses, as setting too narrow limits to² the understanding, and ventured out beyond it on the wings of the ideas, in the empty space of the pure understanding. He did not observe that with all his efforts he made no advance-meeting no resistance that might, as it were, serve as a support upon which he could take a stand, to which he could apply his powers, and so set his understanding in motion. It is, indeed, the common fate of human reason to complete its speculative structures as speedily as may be, and only afterwards to enquire whether the foundations are reliable. All sorts of excuses will then be appealed to, in order to reassure us of their solidity, or rather indeed 3 to enable us to dispense altogether with so late and so dangerous an enquiry. But what keeps us, during the actual building, free from all apprehension and suspicion, and flatters us with a seeming thoroughness, is this other circumstance, namely, that a great, perhaps the greatest, part of the business of our reason consists in analysis 4 of the concepts which we already have of objects. This analysis supplies us with a considerable body of knowledge, which, while nothing but explanation or elucidation of what has already been thought in our con- A 6 cepts, though in a confused manner, is yet prized as being, at least as regards its form, new insight. But so far as the matter or content is concerned, there has been no extension of our previously possessed concepts, but only an analysis of them. Since this procedure yields real knowledge a priori, which B 10

1 [In A: Encouraged.]

² [In A: placing such manifold hindrances in the way of.]

^{3 [}lieber gar added in B.]
4 [Reading, with the 5th edition. Zergliederung for Zergliederungen.]

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progresses in an assured and useful fashion, reason is so far misled as surreptitiously to introduce, without itself being aware of so doing, assertions of an entirely different order, in which it attaches to given concepts others completely foreign to them, and moreover attaches them a priori. And yet it is not known how reason can be in position to do this. Such a question is never so much as thought of. I shall therefore at once proceed to deal with the difference between these two kinds of knowledge.

³ IV. THE DISTINCTION BETWEEN ANALYTIC AND SYNTHETIC JUDGMENTS

In all judgments in which the relation of a subject to the

predicate is thought (I take into consideration affirmative judgments only, the subsequent 4 application to negative judgments being easily made), this relation is possible in two different ways. Either the predicate B belongs to the subject A, as something which is (covertly) contained in this concept A; or B lies outside the concept A, although it does indeed stand in connection with it. In the one case I entitle the judg-A7 ment analytic, in the other synthetic. Analytic judgments (affirmative) are therefore those in which the connection of the predicate with the subject is thought through identity; those in which this connection is thought without identity should B 11 be entitled synthetic. The former, as adding nothing through the predicate to the concept of the subject, but merely breaking it up into those constituent concepts that have all along been thought in it, although confusedly, can also be entitled explicative. The latter, on the other hand, add to the concept of the subject a predicate which has not been in any wise thought in it, and which no analysis could possibly extract from it; and they may therefore be entitled ampliative. If I say, for instance, 'All bodies are extended', this is an analytic judgment. For I do not require to go beyond the concept which I connect with 'body's in order to find extension as bound up with it. To

¹ [In A: attaches a priori to given concepts others completely foreign to them.]

² [In A: This question.] ³ ["IV" added in B.] ⁴ [nachher added in B.]

⁵ [In A: outside the concept which I connect with the word body.]

meet with this predicate, I have merely to analyse the concept, that is, to become conscious to myself 1 of the manifold which I always think in that concept. The judgment is therefore analytic. But when I say, 'All bodies are heavy', the predicate is something quite different from anything that I think in the mere concept of body in general; and the addition of such a predicate therefore yields a synthetic judgment.

* Judgments of experience, as such, are one and all synthetic. For it would be absurd to found an analytic judgment on experience. Since, in framing the judgment, I must not go outside my concept, there is no need to appeal to the testimony of experience in its support. That a body is extended is a proposition that holds a priori and is not empirical. For, before B 12 appealing to experience, I have already in the concept of body all the conditions required for my judgment. I have only to extract from it, in accordance with the principle of contradiction, the required predicate, and in so doing can at the same time become conscious of the necessity of the judgment-and that is what experience could never have taught me. On the other hand, though I do not include in the concept of a body in general the predicate 'weight', none the less this concept indicates an object of experience through one of its parts, and I can add to that part other parts of this same experience, as in this way belonging together with the concept. From the start

Thus it is evident: 1. that through analytic judgments our knowledge is not in any way extended, and that the concept A8 which I already have is merely set forth and made intelligible to me; 2. that in synthetic judgments I must have besides the concept of the subject something else (X), upon which the understanding may rely, if it is to know that a predicate, not contained in this concept, nevertheless belongs to it.

In the case of empirical judgments, judgments of experience, there is no difficulty whatsoever in meeting this demand. This X is the complete experience of the object which I think through the concept A—a concept which forms only one part of this experience. For though I do not include in the concept

^{* [&}quot;Judgments of experience" to end of paragraph substituted in B in place of the following:

^{1 [}mir added in B.]

I can apprehend the concept of body analytically through the characters of extension, impenetrability, figure, etc., all of which are thought in the concept. Now, however, looking back on the experience from which I have derived this concept of body, and finding weight to be invariably connected with the above characters, I attach it as a predicate to the concept; and in doing so I attach it synthetically, and am therefore extending my knowledge. The possibility of the synthesis of the predicate 'weight' with the concept of 'body' thus rests upon experience. While the one concept is not contained in the other, they yet belong to one another, though only contingently, as parts of a whole, namely, of an experience which is itself a synthetic combination of intuitions.

Αg

But in a priori synthetic judgments this help is entirely B 13 lacking. [I do not here have the advantage of looking around in the field of experience.] Upon what, then, am I to rely, when I seek to go beyond the concept A, and to know that another concept B is connected with it? Through what is the synthesis made possible? Let us take the proposition, 'Everything which happens has its cause'. In the concept of 'something which happens', I do indeed think an existence which is preceded by a time, etc., and from this concept analytic judgments may be obtained. But the concept of a 'cause' lies entirely outside the other concept, and 2 signifies something different

of a body in general the predicate 'weight', the concept none the less indicates the complete experience through one of its parts; and to this part, as belonging to it, I can therefore add other parts of the same experience. By prior analysis I can apprehend the concept of body through the characters of extension, impenetrability, figure, etc., all of which are thought in this concept. To extend my knowledge, I then look back to the experience from which I have derived this concept of body, and find that weight is always connected with the above characters. Experience is thus the X which lies outside the concept A, and on which rests the possibility of the synthesis of the predicate 'weight' (B) with the concept (A).

¹ [In A: outside.] ² [liegt ganz ausser jenem Begriffe, und added in B.]

from 'that which happens', and is not therefore in any way contained in this latter representation. How come I then to predicate of that which happens something quite different, and to apprehend that the concept of cause, though not contained in it, yet belongs, and indeed necessarily belongs,2 to it? What is here the unknown 3 = X which gives support to the understanding when it believes that it can discover outside the concept A a predicate B foreign to this concept, which it yet at the same time considers to be connected with it?4 It cannot be experience, because the suggested principle has connected the second representation 5 with the first, not only with greater universality,6 but also with the character of necessity, and therefore completely a priori and on the basis of mere concepts. Upon such synthetic, that is, ampliative principles, all our a priori speculative knowledge must ulti- A 10 mately rest; analytic judgments? are very important, and indeed necessary, but only for obtaining that clearness in the con- B 14 cepts which is requisite for such a sure and wide synthesis as will lead to a genuinely new addition 8 to all previous knowledge.*

* [In A there follows the passage, omitted in B:]

A certain mystery lies here concealed;^a and only upon its solution can the advance into the limitless field of the knowledge yielded by pure understanding be made sure and trustworthy. What we must do is to discover, in all its proper universality, the ground of the possibility of a priori synthetic judgments, to obtain insight into the conditions which make

^a If it had occurred to any of the ancients even to raise this question, this by itself would, up to our own time, have been a powerful influence against all systems of pure reason, and would have saved us so many of those vain attempts, which have been blindly undertaken without knowledge of what it is that requires to be done.

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1 [ist also substituted in B for und ist.]
2 [und sogar notwendig added in B.]
3 [das Unbekannte = X substituted in B for das X.]
4 [In A: and yet at the same time connected with it.]
5 [Reading, with Grillo, Vorstellung for Vorstellungen.]
6 [In A: with greater universality than experience can yield, but...]
7 [Adding, with Erdmann, Urteile.]
8 [In B Erwerb substituted for Anbau.]
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¹V. In all Theoretical Sciences of Reason Synthetic *A PRIORI* JUDGMENTS ARE CONTAINED AS PRINCIPLES

1. All mathematical judgments, without exception, are synthetic. This fact, though incontestably certain and in its consequences very important, has hitherto escaped the notice of those who are engaged in the analysis of human reason, and is, indeed, directly opposed to all their conjectures. For as it was found that all mathematical inferences proceed in accordance with the principle of contradiction (which the nature of all apodeictic certainty requires), it was supposed that the fundamental propositions of the science can themselves be known to be true through that principle. This is an erroneous view. For though a synthetic proposition can indeed be discerned in accordance with the principle of contradiction, this can only be if another synthetic proposition is presupposed, and if it can then be apprehended as following from this other proposition; it can never be so discerned in and by itself.

First of all, it has to be noted that mathematical propositions, strictly so called, are always judgments a priori, not empirical; because they carry with them necessity, which B 15 cannot be derived from experience. If this be demurred to, I am willing to limit my statement to pure mathematics, the very concept of which implies that it does not contain empirical, but only pure a priori knowledge.

We might, indeed, at first suppose that the proposition 7+5=12 is a merely analytic proposition, and follows by the principle of contradiction from the concept of a sum of 7 and 5. But if we look more closely we find that the concept of the sum of 7 and 5 contains nothing save the union of the two numbers into one, and in this no thought is being taken

each kind of such judgments possible, and to mark out all this knowledge, which forms a genus by itself, not in any cursory outline, but in a system, with completeness and in a manner sufficient for any use, according to its original sources, divisions, extent, and limits. So much, meantime, as regards what is peculiar in synthetic judgments.

¹ [Sections V. and VI. added in B.]
² [In 4th edition erkannt changed to anerkannt.]

as to what that single number may be which combines both. The concept of 12 is by no means already thought in merely thinking this union of 7 and 5; and I may analyse my concept of such a possible sum as long as I please, still I shall never find the 12 in it. We have to go outside these concepts, and call in the aid of the intuition which corresponds to one of them, our five fingers, for instance, or, as Segner 1 does in his Arithmetic, five points, adding to the concept of 7, unit by unit, the five given in intuition. For starting with the number 7, and for the concept of 5 calling in the aid of the fingers of my hand as intuition, I now add one by one to the number 7 the units which I previously took together to form the number B 16 5, and with the aid of that figure 2 [the hand] see the number 12 come into being. That 5 should be added to 7,3 I have indeed already thought in the concept of a sum = 7 + 5, but not that this sum is equivalent to the number 12. Arithmetical propositions are therefore always synthetic. This is still more evident if we take larger numbers. For it is then obvious that, however we might turn and twist our concepts, we could never, by the mere analysis of them, and without the aid of intuition, discover what [the number is that] is the sum.

Just as little is any fundamental proposition of pure geometry analytic. That the straight line between two points is the shortest, is a synthetic proposition. For my concept of straight contains nothing of quantity, but only of quality. The concept of the shortest is wholly an addition, and cannot be derived, through any process of analysis, from the concept of the straight line. Intuition, therefore, must here be called in; only by its aid is the synthesis possible. What here 4 causes B 17 us commonly to believe that the predicate of such apodeictic judgments is already contained in our concept, and that the judgment is therefore analytic, is merely the ambiguous character of the terms used. We are required to join in thought a certain predicate to a given concept, and this neces-

^{1 [}Anfangsgründe der Arithmetik, translated from the Latin, second edition, Halle, 1773, pp. 27, 79.]

a [an jenem meinem Bilde.]

Reading, with Erdmann, 5 zu 7.]
 [As Vaihinger has pointed out (Commentar, i. pp. 303-4), this passage, which in both A and B is made to follow "Some few fundamental propositions... exhibited in intuition", is quite obviously displaced. In the above translation the necessary rearrangement has been made.]

sity is inherent in the concepts themselves. But the question is not what we *ought* to join in thought to the given concept, but what we *actually* think in it, even if only obscurely; and it is then manifest that, while the predicate is indeed attached necessarily to the concept, it is so in virtue of an intuition which must be added to the concept, not as thought in the concept itself.

B 16 Some few fundamental propositions, presupposed by the geometrician, are, indeed, really analytic, and rest on the principle of contradiction. But, as identical propositions, they B 17 serve only as links in the chain of method and not as principles; for instance, a=a; the whole is equal to itself; or (a+b)>a, that is, the whole is greater than its part. And even these propositions, though they are valid according to pure concepts, are only admitted in mathematics because they can be exhibited in intuition.

- 2. Natural science (physics) contains a priori synthetic judgments as principles. I need cite only two such judgments: that in all changes of the material world the quantity of matter remains unchanged; and that in all communication of motion, action and reaction must always be equal. Both propositions, it is evident, are not only necessary, and therefore in their origin a priori, but also synthetic. For in the concept of matter I do not think its permanence, but only its presence in the space which it occupies. I go outside and beyond the concept of matter, joining to it a priori in thought something which I have not thought in it. The proposition is not, therefore, analytic, but synthetic, and yet is thought a priori; and so likewise are the other propositions of the pure part of natural science.
- 3. Metaphysics, even if we look upon it as having hitherto failed in all its endeavours, is yet, owing to the nature of human reason, a quite indispensable science, and ought to contain a priori synthetic knowledge. For its business is not merely to analyse concepts which we make for ourselves a priori of things, and thereby to clarify them analytically, but to extend our a priori knowledge. And for this purpose we must employ principles which add to the given concept something that was not contained in it, and through a priori synthetic judgments venture out so far that experience is quite

¹ [Reading, with Erdmann, jenem Begriffe for jenen Begriffen.]

unable to follow us, as, for instance, in the proposition, that the world must have a first beginning, and such like. Thus metaphysics consists, at least in intention, entirely of a priori synthetic propositions.

VI. THE GENERAL PROBLEM OF PURE REASON

B 19

Much is already gained if we can bring a number of investigations under the formula of a single problem. For we not only lighten our own task, by defining it accurately, but make it easier for others, who would test our results, to judge whether or not we have succeeded in what we set out to do. Now the proper problem of pure reason is contained in the question: How are a priori synthetic judgments possible?

That metaphysics has hitherto remained in so vacillating a state of uncertainty and contradiction, is entirely due to the fact that this problem, and perhaps even the distinction between analytic and synthetic judgments, has never previously been considered. Upon the solution of this problem, or upon a sufficient proof that the possibility which it desires to have explained does in fact not exist at all, depends the success or failure of metaphysics. Among philosophers, David Hume came nearest to envisaging this problem, but still was very far from conceiving it with sufficient definiteness and universality. He occupied himself exclusively with the synthetic proposition regarding the connection of an effect with its cause (principium causalitatis), and he believed himself to have B 20 shown that such an a priori proposition is entirely impossible. If we accept his conclusions, then all that we call metaphysics is a mere delusion whereby we fancy ourselves to have rational insight into what, in actual fact, is borrowed solely from experience, and under the influence of custom has taken the illusory semblance of necessity. If he had envisaged our problem in all its universality, he would never have been guilty of this statement, so destructive of all pure philosophy. For he would then have recognised that, according to his own argument, pure mathematics, as certainly containing a priori synthetic propositions, would also not be possible; and from such an assertion his good sense would have saved him.

In the solution of the above problem, we are at the same

B 22

time deciding as to the possibility of the employment of pure reason in establishing and developing all those sciences which contain a theoretical *a priori* knowledge of objects, and have therefore to answer the questions:

How is pure mathematics possible? How is pure science of nature possible?

Since these sciences actually exist, it is quite proper to ask how they are possible; for that they must be possible is proved by the fact that they exist. But the poor progress which has hitherto been made in metaphysics, and the fact that no system yet propounded can, in view of the essential purpose of metaphysics, be said really to exist, leaves everyone sufficient ground for doubting as to its possibility.

Yet, in a certain sense, this kind of knowledge is to be looked upon as given; that is to say, metaphysics actually exists, if not as a science, yet still as natural disposition (metaphysica naturalis). For human reason, without being moved merely by the idle desire for extent and variety of knowledge, proceeds impetuously, driven on by an inward need, to questions such as cannot be answered by any empirical employment of reason, or by principles thence derived. Thus in all men, as soon as their reason has become ripe for speculation, there has always existed and will always continue to exist some kind of metaphysics. And so we have the question:

How is metaphysics, as natural disposition, possible?

that is, how from the nature of universal human reason do those questions arise which pure reason propounds to itself, and which it is impelled by its own need to answer as best it can?

But since all attempts which have hitherto been made to answer these natural questions—for instance, whether the

a Many may still have doubts as regards pure natural science. We have only, however, to consider the various propositions that are to be found at the beginning of (empirical) physics, properly so called, those, for instance, relating to the permanence in the quantity of matter, to inertia, to the equality of action and reaction, etc., in order to be soon convinced that they constitute a physica pura, or rationalis, which well deserves, as an independent science, to be separately dealt with in its whole extent, be that narrow or wide.

world has a beginning or is from eternity—have always met with unavoidable contradictions, we cannot rest satisfied with the mere natural disposition to metaphysics, that is, with the pure faculty of reason itself, from which, indeed, some sort of metaphysics (be it what it may) always arises. It must be possible for reason to attain to certainty whether we know or do not know the objects of metaphysics, that is, to come to a decision either in regard to the objects of its enquiries or in regard to the capacity or incapacity of reason to pass any judgment upon them, so that we may either with confidence extend our pure reason or set to it sure and determinate limits. This last question, which arises out of the previous general problem, may, rightly stated, take the form:

How is metaphysics, as science, possible?

Thus the critique of reason, in the end, necessarily leads to scientific knowledge; while its dogmatic employment, on the other hand, lands us in dogmatic assertions to which other B 23 assertions, equally specious, can always be opposed—that is, in scepticism.

This science cannot be of any very formidable prolixity, since it has to deal not with the objects of reason, the variety of which is inexhaustible, but only with itself and the problems which arise entirely from within itself, and which are imposed upon it by its own nature, not by the nature of things which are distinct from it. When once reason has learnt completely to understand its own power in respect of objects which can be presented to it in experience, it should easily be able to determine, with completeness and certainty, the extent and the limits of its attempted employment beyond the bounds of all experience.

We may, then, and indeed we must, regard as abortive all attempts, hitherto made, to establish a metaphysic dogmatically. For the analytic part in any such attempted system, namely, the mere analysis of the concepts that inhere in our reason a priori, is by no means the aim of, but only a preparation for, metaphysics proper, that is, the extension of its a priori synthetic knowledge. For such a purpose, the analysis of concepts is useless, since it merely shows what is contained in these concepts, not how we arrive at them a priori. A solution

of this latter problem is required, that we may be able to determine the valid employment of such concepts in regard to
the objects of all knowledge in general. Nor is much self-denial
needed to give up these claims, seeing that the undeniable,
and in the dogmatic procedure of reason also unavoidable,
contradictions of reason with itself have long since undermined
the authority of every metaphysical system yet propounded.
Greater firmness will be required if we are not to be deterred
by inward difficulties and outward opposition from endeavouring, through application of a method entirely different from
any hitherto employed, at last to bring to a prosperous and
fruitful growth a science indispensable to human reason—a
science whose every branch may be cut away but whose root
cannot be destroyed.¹

VII. THE IDEA AND DIVISION OF A SPECIAL SCIENCE, UNDER THE TITLE "CRITIQUE OF PURE REASON" 2

In view of all these considerations, we arrive at the idea of a special science which can be entitled 3 the Critique of Pure Reason.* For reason is the faculty which supplies the principles of a priori knowledge. Pure reason is, therefore, that which contains the principles whereby we know anything absolutely a priori. An organon of pure reason would be the sum-total of those principles according to which all modes of pure a priori knowledge can be acquired and actually brought into being. The exhaustive application of such an organon would give rise to a system of pure reason. But as this would be asking rather much, and as it is still doubtful whether, and in what cases, any 4 extension of our knowledge be here 5 possible, we

Any knowledge is entitled pure, if it be not mixed with anything extraneous. But knowledge is more particularly to be called absolutely pure, if no experience or sensation whatsoever be mingled with it, and if it be therefore possible completely a priori.

^{* [}In A follow two sentences, omitted in B]:

^{1 [}End of the new sections added in B.]

In A: dienen könne for heissen kann.]

[[]hier added in B.]

² [Heading added in B.]

^{4 [}In A: eine solche.]

can regard a science of the mere examination of pure reason, of its sources and limits, as the propaedeutic to the system of pure reason. As such, it should be called a critique, not a doctrine, of pure reason. Its utility, in speculation, ought properly to be only negative, not to extend, but only to clarify our reason, and keep it free from errors—which is already a very great gain. I entitle transcendental all knowledge which is occupied not so much with objects as with the mode of our knowledge of objects in so far as this mode of A 12 knowledge is to be possible a priori.2 A system of such concepts might be entitled transcendental philosophy. But that is still,3 at this stage, too large an undertaking. For since such a science must contain, with completeness, both kinds of a priori knowledge, the analytic no less than the synthetic, it is, so far as our present purpose is concerned, much too comprehensive. We have to carry the analysis so far only as is indispensably necessary in order to comprehend, in their whole extent, the principles of a priori synthesis, with which alone we are called upon to deal. It is upon this B 26 enquiry, which should be entitled not a doctrine, but only a transcendental critique, that we are now engaged. Its purpose is not to extend knowledge, but only to correct it, and to supply a touchstone of the value, or lack of value, of all a priori knowledge. Such a critique is therefore a preparation, so far as may be possible, for an organon; and should this turn out not to be possible, then at least for a canon, according to which, in due course, the complete system of the philosophy of pure reason—be it in extension or merely in limitation of its knowledge-may be carried into execution, analytically as well as synthetically. That such a system is possible, and indeed that it may not be of such great extent as to cut us off from the hope of entirely completing it, may already be gathered from the fact that what here constitutes our subject-matter is not the nature of things, which is inexhaustible, but the understand- A 13 ing which passes judgment upon the nature of things; and this understanding, again, only in respect of its a priori knowledge. These a priori possessions of the understanding, since they

1 [in Ansehung der Spekulation added in B.]

* [noch added in B.]

² [In A: as with our a priori concepts of objects in general.]

have not to be sought for without, cannot remain hidden from us, and in all probability are sufficiently small in extent to allow of our apprehending them in their completeness, of judging as to their value or lack of value, and so of rightly appraising them. Still less¹ may the reader here expect a critique of books and systems of pure reason; we are concerned only with the critique of the faculty of pure reason itself. Only in so far as we build upon this foundation do we have a reliable touchstone for estimating the philosophical value of old and new works in this field. Otherwise the unqualified historian or critic is passing judgments upon the groundless assertions of others by means of his own, which are equally groundless.

² Transcendental philosophy is only the idea of a science,³ for which the critique of pure reason has to lay down the complete architectonic plan. That is to say, it has to guarantee, as following from principles, the completeness and certainty of the structure in all its parts. It is the system of all principles of pure reason.4 And if this critique is not itself to be entitled a transcendental philosophy, it is solely because, to be a complete system, it would also have to contain an exhaustive analysis of the whole of a priori human knowledge. Our critique must, indeed, supply a complete enumeration of all the fundamental concepts that go to constitute such pure knowledge. But it is not required to give an exhaustive analysis of these concepts, nor a complete review of those that can be derived from them. Such a demand would be A 14 unreasonable, partly because this analysis would not be appropriate to our main purpose, inasmuch as there is no such uncertainty in regard to analysis as we encounter in the case of synthesis, for the sake of which alone our whole critique is undertaken; and partly because it would be inconsistent with the unity of our plan to assume responsibility for the completeness of such an analysis and derivation, when in view of our purpose we can be excused from doing so. The analysis of these a priori concepts, which later we shall have to enumerate, and the derivation of other concepts from them, can easily, how-

^{1 [&}quot;Still less . . ." to end of paragraph added in B.]

² [In A this paragraph is preceded by the heading: The Division of Transcendental Philosophy.]

In A: as here referred to, is only an idea.]

^{4 [}This sentence added in B.]

ever, be made complete when once they have been established as exhausting the principles of synthesis, and if in this essential respect nothing be lacking in them.

The critique of pure reason therefore will contain all that is essential in transcendental philosophy. While it is the complete idea of transcendental philosophy, it is not equivalent to that latter science; for it carries the analysis only so far as is requisite for the complete examination of knowledge which is a priori and synthetic.

What has chiefly to be kept in view in the division of such a science, is that no concepts be allowed to enter which contain in themselves anything empirical, or, in other words, that it consist in knowledge wholly a priori. Accordingly, although the highest principles and fundamental concepts of morality are a priori knowledge, they have no place in tran- A 15 scendental philosophy, because, although they do not lay at B 29 the foundation of their precepts the concepts of pleasure and pain, of the desires and inclinations, etc., all of which are of empirical origin, yet in the construction of a system of pure morality these empirical concepts must necessarily be brought into the concept of duty, as representing either a hindrance, which we have to overcome, or an allurement, which must not be made into a motive. Transcendental philosophy is therefore a philosophy of pure and merely speculative reason. All that is practical, so far as it contains motives, relates to feelings, and these belong to the empirical sources of knowledge.

If we are to make a systematic division of the science which we are engaged in presenting, it must have first a doctrine of the elements, and secondly, a doctrine of the method of pure reason. Each of these chief divisions will have its subdivisions, but the grounds of these we are not yet in a position to explain. By way of introduction or anticipation we need only say that there are two stems of human knowledge, namely, sensibility and understanding, which perhaps spring from a common, but to us unknown, root. Through the former, objects are given to us; through the latter, they are

^{1 [&}quot;Because, although they . . . made into a motive" substituted in B for: since the concepts of pleasure and pain, of the desires and inclinations, of freewill, etc., have to be presupposed.]

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thought. Now in so far as sensibility may be found to contain B 30 a priori representations constituting the condition under which objects are given to us, it will belong to transcendental A 16 philosophy. And since the conditions under which alone the objects of human knowledge are given must precede those under which they are thought, the transcendental doctrine of sensibility will constitute the first part of the science of the elements.

¹ [In A: conditions.]