My purpose is to persuade all those who think metaphysics worth studying that it is absolutely necessary to pause a moment and, regarding all that has been done as though undone, to propose first the preliminary question, “Whether such a thing as metaphysics be even possible at all?”

If it be science, how is it that it cannot, like other sciences, obtain universal and lasting recognition? If not, how can it maintain its pretensions and keep the human mind in suspense with hopes never ceasing, yet never fulfilled?

... Since the *Essays* of Locke and Leibniz, or rather since the origin of metaphysics so far as we know its history, nothing has ever happened which could have been more decisive to its fate than the attack made upon it by David Hume. . . .

Hume started chiefly from a single but important concept in metaphysics, namely, that of the connection of cause and effect (including its derivatives force and action, and so on). He challenged reason, which pretends to have given birth to this concept of herself, to answer him by what right she thinks anything could be so constituted that if that thing be posited, something else also must necessarily be posited; for this is the meaning of the concept of cause. He demonstrated irrefutably that it was perfectly impossible for reason to think *a priori* and by means of concepts such a combination, for it implies
necessity. We cannot at all see why, in consequence of the existence of one thing, another must necessarily exist or how the concept of such a combination can arise \textit{a priori}. Hence he inferred that reason was altogether deluded with reference to this concept, which she erroneously considered as one of her own children, whereas in reality it was nothing but a bastard of imagination, impregnated by experience, which subsumed certain representations under the law of association and mistook a subjective necessity (habit) for an objective necessity arising from insight. Hence he inferred that reason had no power to think such combinations, even in general, because her concepts would then be purely fictitious and all her pretended \textit{a priori} cognitions nothing but common experiences marked with a false stamp. In plain language, this means that there is not and cannot be any such thing as metaphysics at all.

\textbf{...}

I openly confess my recollection of David Hume was the very thing which many years ago first interrupted my dogmatic slumber and gave my investigations in the field of speculative philosophy a quite new direction. . . . I . . . first tried whether Hume’s objection could not be put into a general form, and soon found that the concept of the connection of cause and effect was by no means the only concept by which the understanding thinks the connection of things \textit{a priori}, but rather that metaphysics consists altogether of such concepts. I sought to ascertain their number; and when I had satisfactorily succeeded in this by starting from a single principle, I proceeded to the deduction of these concepts, which I was now certain were not derived from experience, as Hume had attempted to derive them, but sprang from the pure understanding. . . . [A]s soon as I had succeeded in solving Hume’s problem, not merely in a particular case, but with respect to the whole faculty of pure reason, I could proceed safely, though slowly, to determine the whole sphere of pure reason completely and from universal principles, in its boundaries as well as in its contents. This was required for metaphysics in order to construct its system according to a safe plan.

But I fear that the execution of Hume’s problem in its widest extent (namely, my \textit{Critique of Pure Reason}) will . . . be misjudged because it is misunderstood, and misunderstood because men choose to skim through the book and not to think through it—a disagreeable task, because the work is dry, obscure, opposed to all ordinary notions, and moreover long-winded. . . . [A]s regards a certain obscurity, arising partly from the diffuseness of the plan, owing to which the principal points of the investigation are easily lost
sight of, the complaint is just, and I intend to remove it by the present Prolegomena . . . a perfectly new science.

I offer here a sketch based on an analytical method, while the Critique itself had to be executed in the synthetical style, in order that the science may present all its articulations, as the structure of a peculiar cognitive faculty, in their natural combination.

First, as concerns the sources of metaphysical knowledge, its very concept implies that they cannot be empirical. Its principles (including not only its maxims but its basic notions) must never be derived from experience. . . . It is therefore a priori knowledge, coming from pure understanding and pure reason. But so far metaphysics would not be distinguishable from pure mathematics; it must therefore be called pure philosophical knowledge. . . .

The peculiarity of its sources demands that metaphysical knowledge must consist of nothing but a priori judgments. But whatever be their origin or their logical form, there is a distinction in judgments, as to their content, according to which they are either merely explicative, adding nothing to the content of knowledge, or expansive, increasing the given knowledge. The former may be called analytical, the latter synthetical, judgments.

Analytical judgments express nothing in the predicate but what has been already actually thought in the concept of the subject, though not so distinctly or with the same (full) consciousness. When I say: “All bodies are extended,” I have not amplified in the least my concept of body, but have only analyzed it, as extension was really thought to belong to that concept before the judgment was made, though it was not expressed. This judgment is therefore analytical. On the contrary, this judgment, “All bodies have weight,” contains in its predicate something not actually thought in the universal concept of body; it amplifies my knowledge by adding something to my concept, and must therefore be called synthetical.

All analytical judgments depend wholly on the law of contradiction, and are in their nature a priori cognitions, whether the concepts that supply them with matter be empirical or not. For the predicate of an affirmative analytical judgment is already contained in the concept of the subject, of which it cannot be denied without contradiction. In the same way its opposite is necessarily denied of the subject in an analytical, but negative, judgment, by the same law of contradiction. . . .
There are synthetical *a posteriori* judgments of empirical origin; but there are also others which are certain *a priori*, and which spring from pure understanding and reason. Yet they both agree in this, that they cannot possibly spring from the principle of analysis, namely, the law of contradiction, alone. They require a quite different principle from which they may be deduced, subject, of course, always to the law of contradiction, which must never be violated, even though everything cannot be deduced from it. I shall first classify synthetical judgments.

1. **Judgments of Experience** are always synthetical. For it would be absurd to base an analytical judgment on experience, as our concept suffices for the purpose without requiring any testimony from experience.

2. **Mathematical Judgments** are all synthetical. First of all, we must observe that all strictly mathematical judgments are *a priori*, and not empirical, because they carry with them necessity, which cannot be obtained from experience. It must at first be thought that the proposition $7 + 5 = 12$ is a mere analytical judgment, following from the concept of the sum of seven and five, according to the law of contradiction. But on closer examination it appears that the concept of the sum of $7 + 5$ contains merely their union in a single number, without its being at all thought what the particular number is that unites them. The concept of twelve is by no means thought by merely thinking of the combination of seven and five; and, analyze this possible sum as we may, we shall not discover twelve in the concept.

Just as little is any principle of geometry analytical. That a straight line is the shortest path between two points is a synthetical proposition. For my concept of straight contains nothing of quantity, but only a quality. The concept “shortest” is therefore altogether additional and cannot be obtained by any analysis of the concept “straight line.” Here, too, intuition must come to aid us. It alone makes the synthesis possible.

3. **Metaphysical Judgments**, properly so called, are all synthetical. We must distinguish judgments pertaining to metaphysics from metaphysical judgments properly so called. Many of the former are analytical, but they only afford the means for metaphysical judgments, which are the whole end of the science and which are always synthetical. This science has something peculiar in the production of its *a priori* cognitions, which must therefore be distinguished from the features it has in common with other rational knowledge. Thus the judgment that all the substance in things is permanent is a synthetical and properly metaphysical judgment.
The conclusion drawn in this section then is that metaphysics is properly concerned with synthetical propositions \textit{a priori}; \ldots the generation of \textit{a priori} knowledge by intuition as well as by concepts, in fine, of synthetical propositions \textit{a priori}, especially in philosophical knowledge, constitutes the essential subject of metaphysics.

\ldots

But it happens, fortunately, that though we cannot assume metaphysics to be an actual science, we can say with confidence that there is actually given certain pure \textit{a priori} synthetical cognitions, pure mathematics and pure physics; for both contain propositions which are unanimously recognized, partly apodictically certain by mere reason, partly by general consent arising from experience and yet as independent of experience. We have therefore at least some uncontested synthetical knowledge \textit{a priori} and need not ask \textit{whether} it be possible, for it is actual, but \textit{how} it is possible, in order that we may deduce from the principle which makes the given knowledge possible the possibility of all the rest.

We have already learned the significant distinction between analytical and synthetical judgments. The possibility of analytical propositions was easily comprehended, being entirely founded on the law of contradiction. The possibility of synthetical \textit{a posteriori} judgments, of those which are gathered from experience, also requires no particular explanations, for experience is nothing but a continued synthesis of perceptions. There remain therefore only synthetical propositions \textit{a priori}, of which the possibility must be sought or investigated, because they must depend upon other principles than the law of contradiction.

But here we need not first establish the possibility of such propositions so as to ask whether they are possible. For there are enough of them which indeed are of undoubted certainty; \ldots but we must now inquire into the ground of this possibility and ask \textit{how} such knowledge is possible. \ldots The real problem upon which all depends, when expressed with scholastic precision, is therefore: “How are synthetic propositions \textit{a priori} possible?” \ldots

Metaphysics stands or falls with the solution of this problem.

\ldots

All metaphysicians are therefore solemnly and legally suspended from their occupations till they shall have adequately answered the question, “How are synthetic cognitions \textit{a priori} possible?” \ldots
If they, on the other hand, desire to carry on their business, not as a science, but as an art of wholesome persuasion suitable to the common sense of man, this calling cannot in justice be denied them. . . . In this manner alone can they be called useful and wise men, and the more so as they renounce the title of metaphysicians. . . .

It may be said that the entire transcendental philosophy, which necessarily precedes all metaphysics, is nothing but the complete solution of the problem here propounded, in systematic order and completeness, and hence we have hitherto never had any transcendental philosophy.

[W]e must comprehend the natural conditions of such a science as a part of our inquiry, and thus the transcendental problem will be gradually answered by a division into four questions:

1. How is pure mathematics possible?
2. How is pure natural science possible?
3. How is metaphysics in general possible?
4. How is metaphysics as a science possible? . . .

[1] HOW IS PURE MATHEMATICS POSSIBLE? Here is a great and established branch of knowledge, encompassing even now a wonderfully large domain and promising an unlimited extension in the future, yet carrying with it thoroughly apodictic certainty, that is, absolute necessity, and therefore resting upon no empirical grounds. Consequently it is a pure product of reason; and, moreover, it is thoroughly synthetical. [Hence the question arises:] “How then is it possible for human reason to produce such knowledge entirely a priori?”

Does not this faculty [which produces mathematics], as it neither is nor can be based upon experience, presuppose some ground of knowledge a priori, which lies deeply hidden but which might reveal itself by these its effects if their first beginnings were but diligently ferreted out?

But we find that all mathematical cognition has this peculiarity: it must first exhibit its concept in intuition and indeed a priori; therefore in an intuition which is not empirical but pure. Without this mathematics cannot take a single step; hence its judgments are always intuitive; whereas philosophy must be satisfied with discursive judgments from mere concepts, and though it may illustrate its doctrines through an intuition, can never derive them from
it. This observation on the nature of mathematics gives us a clue to the first and highest condition of its possibility, which is that some pure intuition must form its basis, in which all its concepts can be exhibited or constructed, *in concreto* and yet *a priori*. If we can uncover this pure intuition and its possibility, we may thence easily explain how synthetical propositions *a priori* are possible in pure mathematics and consequently how this science itself is possible. For just as empirical intuition [namely, sense-perception] enables us without difficulty to enlarge the concept which we frame of an object of intuition by new predicates which intuition itself presents synthetically in experience, so also pure intuition does likewise, only with this difference, that in the latter case the synthetical judgment is *a priori* certain and apodictic, in the former only *a posteriori* and empirically certain; . . .

But with this step our perplexity seems rather to increase than to lessen. For the question now is, “How is it possible to intuit anything *a priori*?” . . .

[I]n one way only can my intuition anticipate the actuality of the object, and be a cognition *a priori*, namely: *if my intuition contains nothing but the form of sensibility, antedating in my mind all the actual impressions through which I am affected by objects.*

For that objects of sense can only be intuited according to this form of sensibility I can know *a priori*. Hence it follows that propositions which concern this form of sensuous intuition only are possible and valid for objects of the senses; as also, conversely, that intuitions which are possible *a priori* can never concern any other things than objects of our senses.

Accordingly, it is only the form of sensuous intuition by which we can intuit things *a priori*, but by which we can know objects only as they appear to us (to our senses), not as they are in themselves; . . .

Now, the intuitions which pure mathematics lays at the foundation of all its cognitions and judgments which appear at once apodictic and necessary are space and time. For mathematics must first present all its concepts in intuition, and pure mathematics in pure intuition; that is, it must construct them. If it proceeded in any other way, it would be impossible to take a single step; for mathematics proceeds, not analytically by dissection of concepts, but synthetically, and if pure intuition be wanting there is nothing in which the matter for synthetical judgments *a priori* can be given. Geometry is based upon the pure intuition of space. Arithmetic achieves its concept of number by the successive addition of units in time, and pure mechanics cannot attain its concepts of motion without employing the representation of time. Both representations, however, are only intuitions; for if we omit from the empirical
intuitions of bodies and their alterations (motion) everything empirical, that is, belonging to sensation, space and time still remain, which are therefore pure intuitions that lie *a priori* at the basis of the empirical. . . .

The problem of the present section is therefore solved. Pure mathematics, as synthetical cognition *a priori*, is possible only by referring to no other objects than those of the senses. At the basis of their empirical intuition lies a pure intuition (of space and of time) which is *a priori*, because the latter intuition is nothing but the mere form of sensibility, which precedes the actual appearance of the objects, since in fact it makes them possible. . . .

In order to add something by way of illustration and confirmation, we need only watch the ordinary and unavoidable procedure of geometers. All proofs of the complete congruence of two given figures (where the one can in every respect be substituted for the other) come ultimately to this, that they may be made to coincide, which is evidently nothing else than a synthetical proposition resting upon immediate intuition.

What can be more similar in every respect and in every part more alike to my hand and to my ear than their images in a mirror? And yet I cannot put such a hand as is seen in the glass in the place of its original; for if this is a right hand, that in the glass is a left one, and the image or reflection of the right ear is a left one, which never can take the place of the other. There are in this case no internal differences which our understanding could determine by thinking alone. Yet the differences are internal as the senses teach, for, notwithstanding their complete equality and similarity, the left hand cannot be enclosed in the same bounds as the right one (they are not congruent); the glove of one hand cannot be used for the other. What is the solution? These objects are not representations of things as they are in themselves and as some mere understanding would know them, but sensuous intuitions, that is, appearances whose possibility rests upon the relation of certain things unknown in themselves to something else, namely, to our sensibility. Space is the form of the external intuition of this sensibility, and the internal determination of every space is possible only by the determination of its external relation to the whole of space, of which it is a part (in other words, by its relation to the outer sense). That is to say, the part is possible only through the whole, which is never the case with things in themselves, as objects of the mere understanding, but which may well be the case with mere appearances. Hence the difference between similar and equal things which are not congruent (for instance, two symmetric helices) cannot be made intelligible by
any concept, but only by the relation to the right and the left hands which immediately refers to intuition.

Pure mathematics, and especially pure geometry, can have objective reality only on condition that they refer merely to objects of sense. But in regard to the latter the principle holds good that our sense representation is not a representation of things in themselves, but of the way in which they appear to us. Hence it follows that the propositions of geometry are not the results of a mere creation of our poetic imagination, and that therefore they cannot be referred with assurance to actual objects; but rather that they are necessarily valid of space, and consequently of all that may be found in space, because space is nothing else than the form of all external appearances, and it is this form alone in which objects of sense can be given to us. Sensibility, the form of which is the basis of geometry, is that upon which the possibility of external appearance depends. Therefore these appearances can never contain anything but what geometry prescribes to them.

Hence, we may at once dismiss an easily foreseen but futile objection, “that by admitting the ideality of space and of time the whole sensible world would be turned into mere sham.” After all philosophical insight into the nature of sensuous cognition was spoiled by making the sensibility merely a confused mode of representation, according to which we still know things as they are, but without being able to reduce everything in this our representation to a clear consciousness, I proved that sensibility consists, not in this logical distinction of clearness and obscurity, but in the genetic one of the origin of knowledge itself. For sensuous perception represents things not at all as they are, but only the mode in which they affect our senses; and consequently by sensuous perception appearances only, and not things themselves, are given to the understanding for reflection. After this necessary correction an objection rises from an unpardonable and almost intentional misconception, as if my doctrine turned all the things of the world of sense into mere illusion.

When an appearance is given us, we are still quite free as to how we should judge the matter. The appearance depends upon the senses, but the judgment upon the understanding;... And it is not the fault of the appearances if our cognition takes illusion for truth,... The senses represent to us the course of the planets as now progressive, now retrogressive; and herein is neither falsehood nor truth, because as long as we hold this to be nothing but appearance we do not judge of the objective character of their motion.
My doctrine of the ideality of space and of time, therefore, far from reducing the whole sensible world to mere illusion, is the only means of securing the application of one of the most important kinds of knowledge (that which mathematics propounds a priori) to actual objects and of preventing its being regarded as mere illusion. For without this observation it would be quite impossible to make out whether the intuitions of space and time, which we borrow from no experience and which yet lie in our representation a priori, are not mere phantasms of our brain to which objects do not correspond, at least not adequately; and, consequently, whether we have been able to show its unquestionable validity with regard to all the objects of the sensible world just because they are mere appearances.

Secondly, though these my principles make appearances of the representations of the senses, they are so far from turning the truth of experience into mere illusion that they are rather the only means of preventing the transcendental illusion, by which metaphysics has hitherto been deceived and led to the childish endeavor of catching at bubbles, because appearances, which are mere representations, were taken for things in themselves.

I have myself given this my theory the name of transcendental idealism, but that cannot authorize anyone to confound it either with the empirical idealism of Descartes (indeed, his was only an insoluble problem, owing to which he thought everyone at liberty to deny the existence of the corporeal world because it could never be proved satisfactorily), or with the mystical and visionary idealism of Berkeley. My idealism concerns not the existence of things (the doubting of which, however, constitutes idealism in the ordinary sense), since it never came into my head to doubt it, but it concerns the sensuous representation of things to which space and time especially belong. Of these [namely, space and time], consequently of all appearances in general, I have only shown that they are neither things (but mere modes of representation) nor determinations belonging to things in themselves. But the word “transcendental,” which with me never means a reference of our knowledge to things, but only to the cognitive faculty, was meant to obviate this misconception. Yet rather than give further occasion to it by this word, I now retract it and desire this idealism of mine to be called “critical.”

[2] HOW IS PURE SCIENCE OF NATURE POSSIBLE? Nature is the existence of things, so far as it is determined according to universal laws. Should nature signify the existence of things in themselves, we could never know it either a priori or a posteriori. Not a priori, for how can we know what
belongs to things in themselves, since this never can be done by the dissection of our concepts (in analytical propositions)? For I do not want to know what is contained in my concept of a thing (for that belongs to its logical essence), but what in the actuality of the thing is superadded to my concept and by which the thing itself is determined in its existence apart from the concept. . . .

But knowledge of the nature of things in themselves *a posteriori* would be equally impossible. For, if experience is to teach us laws to which the existence of things is subject, these laws, if they have reference to things in themselves, would have to hold them of necessity even outside our experience. But experience teaches us what exists and how it exists, but never that it must necessarily exist so and not otherwise. Experience therefore can never teach us the nature of things in themselves.

We nevertheless actually possess a pure science of nature in which are propounded, *a priori* and with all the necessity requisite to apodictical propositions, laws to which nature is subject. I need only call to witness that propaedeutic of natural science which, under the title of the universal science of nature, precedes all physics (which is founded upon empirical principles). In it we have mathematics applied to appearances, and also merely discursive principles (or those derived from concepts), which constitute the philosophical part of the pure knowledge of nature, . . . for instance, the propositions that “substance is permanent,” that “every event is determined by a cause according to constant laws,” etc. These are actually universal laws of nature, which hold completely *a priori*. There is then in fact a pure science of nature, and the question arises, *How is it possible?* . . .

The formal aspect of nature in this narrower sense is therefore the conformity to law of all the objects of experience and, so far as it is known *a priori*, their necessary conformity. But it has just been shown that the laws of nature can never be known *a priori* in objects so far as they are considered, not in reference to possible experience, but as things in themselves. And our inquiry here extends, not to things in themselves (the properties of which we pass by), but to things as objects of possible experience, and the complex of these is what we here properly designate as nature. And now I ask, when the possibility of knowledge of nature *a priori* is in question, whether it is better to arrange the problem thus: “How can we know *a priori* that things as objects of experience necessarily conform to law?” or thus: “How is it possible to know *a priori* the necessary conformity to law of experience itself as regards all its objects generally?”

Closely considered, the solution of the problem represented in either way amounts, with regard to the pure knowledge of nature (which is the point
of the question at issue), entirely to the same thing. . . . It is, however, more suitable to choose the first formula. For we can \textit{a priori} and prior to all given objects have a knowledge of those conditions on which alone experience of them is possible, but never of the laws to which things may in themselves be subject, without reference to possible experience. We cannot, therefore, study the nature of things \textit{a priori} otherwise than by investigating the conditions and the universal (though subjective) laws, under which alone such a cognition as experience (as to mere form) is possible, and we determine accordingly the possibility of things as objects of experience. . . .

Accordingly, we shall here be concerned with experience only and the universal conditions of its possibility, which are given \textit{a priori}.

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Empirical judgments, so far as they have objective validity, are \textit{judgments of experience}, but those which are only subjectively valid I name mere \textit{judgments of perception}. The latter require no pure concept of the understanding, but only the logical connection of perception in a thinking subject. But the former always require, besides the representation of the sensuous intuition, special \textit{concepts originally begotten in the understanding}, which make possible the objective validity of the judgment of experience. . . .

Therefore objective validity and necessary universality (for everybody) are equivalent terms, and though we do not know the object in itself, yet when we consider a judgment as universal, and hence necessary, we thereby understand it to have objective validity. By this judgment we know the object (though it remains unknown as it is in itself) by the universal and necessary connection of the given perceptions. As this is the case with all objects of sense, judgments of experience take their objective validity, not from the immediate knowledge of the object (which is impossible), but from the condition of universal validity of empirical judgments, which, as already said, never rests upon empirical or, in short, sensuous conditions, but upon a pure concept of the understanding. The object in itself always remains unknown; but when by the concept of the understanding the connection of the representations of the object, which it gives to our sensibility, is determined as universally valid, the object is determined by this relation, and the judgment is objective.

To illustrate the matter: when we say, “The room is warm, sugar sweet, and wormwood bitter,” we have only subjectively valid judgments. I do not at all expect that I or any other person shall always find it as I now do; each of these sentences only expresses a relation of two sensations to the same
subject, that is, myself, and that only in my present state of perception; consequently they are not valid of the object. Such are judgments of perception. Judgments of experience are of quite a different nature. What experience teaches me under certain circumstances, it must always teach me and everybody; and its validity is not limited to the subject nor to its state at a particular time. Hence I pronounce all such judgments objectively valid. For instance, when I say the air is elastic, this judgment is as yet a judgment of perception only; I do nothing but refer two of my sensations to each other. But if I would have it called a judgment of experience, I require this connection to stand under a condition which makes it universally valid. I desire therefore that I and everybody else should always connect necessarily the same perceptions under the same circumstances.

We must consequently analyze experience in general in order to see what is contained in this product of the senses and of the understanding, and how the judgment of experience itself is possible. The foundation is the intuition of which I become conscious, that is, perception (perceptio), which pertains merely to the senses. But in the next place, there is judging (which belongs only to the understanding). But this judging may be twofold: first, I may merely compare perceptions and connect them in a consciousness of my particular state; or, secondly, I may connect them in consciousness in general. The former judgment is merely a judgment of perception, and hence is of subjective validity only; it is merely a connection of perceptions in my mental state, without reference to the object. . . .

Quite another judgment therefore is required before perception can become experience. The given intuition must be subsumed under a concept which determines the form of judging in general relatively to the intuition, connects empirical consciousness of intuition in consciousness in general, and thereby procures universal validity for empirical judgments. A concept of this nature is a pure a priori concept of the understanding, which does nothing but determine for an intuition the general way in which it can be used for judgments. Let the concept be that of cause; then it determines the intuition which is subsumed under it. . . . The concept of cause accordingly is a pure concept of the understanding, which is totally disparate from all possible perception and only serves to determine the representation subsumed under it, with respect to judging in general, and so to make a universally valid judgment possible.

Before, therefore, a judgment of perception can become a judgment of experience, it is requisite that the perception should be subsumed under some such concept of the understanding. . . . The judgment, “Air is elastic,” becomes
universally valid and a judgment of experience only because certain judgments precede it which subsume the intuition of air under the concept of cause and effect; and they thereby determine the perceptions, not merely with respect to one another in me, but with respect to the form of judging in general . . ., and in this way they render the empirical judgment universally valid. . . .

To prove, then, the possibility of experience so far as it rests upon pure concepts of the understanding a priori, we must first represent what belongs to judging in general and the various functions of the understanding in a complete table. For the pure concepts of the understanding must run parallel to these functions. . . .

**Logical Table of Judgments**

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<tr>
<td>As to Quantity</td>
<td>As to Quality</td>
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<tr>
<td>Universal</td>
<td>Affirmative</td>
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<td>Particular</td>
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<td>Singular</td>
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<tbody>
<tr>
<td>As to Relation</td>
<td>As to Modality</td>
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<tr>
<td>Categorical</td>
<td>Problematic</td>
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<tr>
<td>Hypothetical</td>
<td>Assertoric</td>
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<tr>
<td>Disjunctive</td>
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**Transcendental Table of the Concepts of the Understanding**

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<td>As to Quality</td>
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<tr>
<td>Unity (Measure)</td>
<td>Reality</td>
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<tr>
<td>Plurality (Magnitude)</td>
<td>Negation</td>
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<td>Totality (Whole)</td>
<td>Limitation</td>
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<td>As to Relation</td>
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<td>Substance</td>
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Experience consists of intuitions, which belong to the sensibility, and of judgments, which are entirely a work of the understanding. But the judgments which the understanding forms solely from sensuous intuitions are far from being judgments of experience. For in the one case the judgment connects only the perceptions as they are given in sensuous intuition, while in the other the judgments must express what experience in general and not what the mere perception (which possesses only subjective validity) contains. The judgment of experience must therefore add to the sensuous intuition and its logical connection in a judgment (after it has been rendered universal by comparison) something that determines the synthetical judgment as necessary and therefore as universally valid. This can be nothing else than that concept which represents the intuition as determined in itself with regard to one form of judgment rather than another, namely, a concept of that synthetical unity of intuitions which can only be represented by a given logical function of judgments.

The sum of the matter is this: the business of the senses is to intuit, that of the understanding is to think. But thinking is uniting representations in one consciousness. This union originates either merely relative to the subject and is accidental and subjective, or takes place absolutely and is necessary or objective. The union of representations in one consciousness is judgment. Thinking, therefore, is the same as judging or referring representations to judgments in general. Hence judgments are either merely subjective, when representations are referred to a consciousness in one subject only and united in it, or objective, when they are united in consciousness in general, that is, necessarily. The logical functions of all judgments are but various modes of uniting representations in consciousness. But if they serve for concepts, they are concepts of the necessary union of representations in [any] consciousness,
and so are principles of objectively valid judgments. This union in consciousness is either analytical, by identity, or synthetical, by the combination and addition of various representations one to another. Experience consists in the synthetical connection of phenomena (perceptions) in consciousness, so far as this connection is necessary. Hence the pure concepts of the understanding are those under which all perceptions must be subsumed ere they can serve for judgments of experience, in which the synthetical unity of the perceptions is represented as necessary and universally valid.

Judgments, when considered merely as the condition of the union of given representations in a consciousness, are rules. These rules, so far as they represent the union as necessary, are rules a priori, and, insofar as they cannot be deduced from higher rules, are principles. But in regard to the possibility of all experience, merely in relation to the form of thinking in it, no conditions of judgments of experience are higher than those which bring the appearances, according to the various form of their intuition, under pure concepts of the understanding, which render the empirical judgment objectively valid. These are therefore the a priori principles of possible experience.

The principles of possible experience are then at the same time universal laws of nature, which can be known a priori. And thus the problem of our second question, “How is the pure science of nature possible?” is solved.

The first of the physical principles subsumes all phenomena, as intuitions in space and time, under the concept of quantity, and is thus a principle of the application of mathematics to experience. The second one subsumes the strictly empirical element, namely, sensation, which denotes the real in intuitions.

Hence appearances must be subsumed under the concept of substance, which as a concept of a thing is the foundation of all determination of existence; or, secondly—so far as a succession is found among appearances, that is, an event—under the concept of an effect with reference to cause; or lastly—so far as coexistence is to be known objectively, that is, by a judgment of experience—under the concept of community (action and reaction). Thus a priori principles form the basis of objectively valid, though empirical, judgments—that is, of the possibility of experience so far as it must connect objects as existing in nature. These principles are the real laws of nature.

The third table of principles drawn by the critical method from the nature of the understanding itself shows an inherent perfection, which raises it far above every other table which has hitherto, though in vain, been tried or may yet be tried by analyzing the objects themselves dogmatically. It exhibits all synthetical a priori principles completely and according to one
principle, namely, the faculty of judging in general, constituting the essence of experience as regards the understanding. . . .

We must carefully bear in mind the premise which shows the possibility of this cognition a priori and, at the same time, limits all such principles to a condition which must never be lost sight of. . . . This limit is that they contain nothing but the conditions of possible experience in general so far as it is subjected to laws a priori. Consequently, I do not say that things in themselves possess a magnitude; . . . The essential limitation of the concepts in these principles then is that all things as objects of experience only stand necessarily a priori under the aforementioned conditions.

Now we are prepared to remove Hume’s doubt. He justly maintains that we cannot comprehend by reason the possibility of causality, that is, of the reference of the existence of one thing to the existence of another which is necessitated by the former. I add that we comprehend just as little the concept of subsistence, that is, the necessity that at the foundation of the existence of things there lies a subject which cannot itself be a predicate of any other thing; . . . But I am very far from holding these concepts to be derived merely from experience, and the necessity represented in them to be imaginary and a mere illusion produced in us by long habit. On the contrary, I have amply shown that they and the principles derived from them are firmly established a priori before all experience and have their undoubted objective value, though only with regard to experience.

Although I have no notion of such a connection of things in themselves, how they can either exist as substances, or act as causes, or stand in community with others (as parts of a real whole), . . . we have yet a concept of such a connection of representations in our understanding and in judgments generally. This concept is: that representations appear, in one sort of judgments, as subject in relation to predicates; in another, as ground in relation to consequent; and, in a third, as parts which constitute together a total possible cognition. Furthermore, we know a priori that without considering the representation of an object as determined in one or the other of these respects, we can have no valid knowledge of the object; . . . [The] question is not how things in themselves but how the empirical knowledge of things is determined, as regards the above aspects of judgments in general; that is, how things, as objects of experience, can and must be subsumed under these concepts of the understanding. And then it is clear that I completely comprehend, not only the possibility, but also the necessity, of subsuming all appearances
under these concepts—that is, of using them for principles of the possibility of experience.

Hence if even the pure concepts of the understanding are thought to go beyond objects of experience to things in themselves (*noumena*), they have no meaning whatever. They serve, as it were, only to decipher appearances, that we may be able to read them as experience. The principles which arise from their reference to the sensible world only serve our understanding for empirical use. Beyond this they are arbitrary combinations without objective reality,

This complete (though to its originator unexpected) solution of Hume’s problem rescues for the pure concepts of the understanding their *a priori* origin and for the universal laws of nature their validity as laws of the understanding, yet . . . with a completely reversed mode of connection which never occurred to Hume—they do not derive from experience, but experience derives from them.

This is, therefore, the result of all our foregoing inquiries: “All synthetrical principles *a priori* are nothing more than principles of possible experience and can never be referred to things in themselves, but to appearances as objects of experience.”

Since the oldest days of philosophy, inquirers into pure reason have conceived, besides the things of sense, or appearances (*phenomena*), which make up the sensible world, certain beings of the understanding (*noumena*), which should constitute an intelligible world. And as appearance and illusion were by those men identified (a thing which we may well excuse in an undeveloped epoch), actuality was only conceded to the beings of the understanding.

And we indeed, rightly considering objects of sense as mere appearances, confess thereby that they are based upon a thing in itself, though we know not this thing as it is in itself but only know its appearances, namely, the way in which our senses are affected by this unknown something. The understanding, therefore, by assuming appearances, grants the existence of things in themselves also; and to this extent we may say that the representation of such things as are the basis of appearances, consequently of mere beings of the understanding, is not only admissible but unavoidable.
There is indeed something seductive in our pure concepts of the understanding which tempts us to a transcendent use—a use which transcends all possible experience. Not only are our concepts of substance, of power, of action, of reality, and others, quite independent of experience, containing nothing of sense appearance, and so apparently applicable to things in themselves (noumena), but, what strengthens this conjecture, they contain a necessity of determination in themselves, which experience never attains. The concept of cause implies a rule according to which one state follows another necessarily; but experience can only show us that one state of things often or, at most, commonly follows another, and therefore affords neither strict universality nor necessity.

Hence the concepts of the understanding seem to have a deeper meaning and import than can be exhausted by their merely empirical use, and so the understanding inadvertently adds for itself to the house of experience a much more extensive wing, which it fills with nothing but beings of thought, without ever observing that it has transgressed with its otherwise legitimate concepts the bounds of their use.

...But there is no use in trying to moderate these fruitless endeavors of pure reason by all manner of cautions as to the difficulties of solving questions so occult, by complaints of the limits of our reason, and by degrading our assertions into mere conjectures. For if their impossibility is not distinctly shown, and reason's knowledge of itself does not become a true science, in which the field of its right use is distinguished, so to say, with geometrical certainty from that of its worthless and idle use, these fruitless efforts will never be wholly abandoned.

How is nature itself possible? This question—the highest point that transcendental philosophy can ever reach, and to which, as its boundary and completion, it must proceed—really contains two questions.

First: How is nature in the material sense, that is, as to intuition, or considered as the totality of appearances, possible; how are space, time, and that which fills both—the object of sensation—possible generally? The answer is: By means of the constitution of our sensibility, according to which it is in its own way affected by objects which are in themselves unknown to it and totally distinct from those appearances. . . .

Secondly: How is nature possible in the formal sense, as the totality of the rules under which all appearances must come in order to be thought as
connected in experience? The answer must be this: It is only possible by means of the constitution of our understanding, according to which all the above representations of the sensibility are necessarily referred to a consciousness, and by which the peculiar way in which we think (namely, by rules) and hence experience also are possible, but must be clearly distinguished from an insight into the objects in themselves.

But we must distinguish the empirical laws of nature, which always presuppose particular perceptions, from the pure or universal laws of nature, which, without being based on particular perceptions, contain merely the conditions of their necessary union in experience. In relation to the latter, nature and possible experience are quite the same; and as the conformity to law in the latter depends upon the necessary connection of appearances in experience (without which we cannot know any object whatever in the sensible world), consequently upon the original laws of the understanding, it seems at first strange, but is not the less certain, to say: The understanding does not derive its laws (a priori) from, but prescribes them to, nature.

[3] HOW IS METAPHYSICS IN GENERAL POSSIBLE? . . . Metaphysics has to do not only with concepts of nature, which always find their application in experience, but also with pure rational concepts, which never can be given in any possible experience whatever. . . .

As the understanding stands in need of categories for experience, reason contains in itself the source of Ideas, by which I mean necessary concepts whose object cannot be given in any experience. The latter are inherent in the nature of reason, as the former are in that of the understanding. While the former carry with them an illusion likely to mislead, the illusion of the latter is inevitable, though it certainly can be kept from misleading us.

Since all illusion consists in holding the subjective ground of our judgments to be objective, a self-knowledge of pure reason in its transcendent (presumptuous) use is the sole preservative from the aberrations into which reason falls when it mistakes its calling and transcendently refers to the object that which concerns only its own subject and its guidance in all immanent use. . . .

All pure cognitions of the understanding have this feature that their concepts present themselves in experience, and their principles can be confirmed
by it; whereas the transcendent cognitions of reason cannot either, as Ideas, appear in experience or, as propositions, ever be confirmed or refuted by it.

The concepts of reason . . . contain, . . . first, the Idea of the complete subject (the substantial); secondly, the Idea of the complete series of conditions; thirdly, the determination of all concepts in the Idea of a complete complex of that which is possible. The first idea is psychological, the second cosmological, the third theological; and, as all three give occasion to dialectic, yet each in its own way, the division of the whole dialectic of pure reason into its paralogism, its antinomy, and its Ideal was arranged accordingly. . . .

In these general considerations it is also remarkable that the Ideas of reason, unlike the categories, are of no service to the use of our understanding in experience, but quite dispensable, and become even an impediment to the maxims of a rational knowledge of nature. Yet in another aspect still to be determined they are necessary. Whether the soul is or is not a simple substance is of no consequence to us in the explanation of its phenomena. For we cannot render the concept of a simple being sensuous and thus concretely intelligible by any possible experience. The concept is therefore quite void as regards all hoped-for insight into the cause of appearances and cannot at all serve as a principle of the explanation of that which inner or outer experience supplies. Similarly, the cosmological Ideas of the beginning of the world or of its eternity . . . cannot be of any service to us for the explanation of any event in the world itself. And finally we must, according to a right maxim of the philosophy of nature, refrain from explaining the design of nature as drawn from the will of a Supreme Being, because this would not be natural philosophy but a confession that we have come to the end of it. The use of these Ideas, therefore, is quite different from that of those categories by which (and by the principles built upon which) experience itself first becomes possible. But our laborious Analytic of the understanding would be superfluous if we had nothing else in view than the mere knowledge of nature as it can be given in experience; for reason does its work, both in mathematics and in the science of nature, quite safely and well without any of this subtle deduction. Therefore our critical examination of the understanding combines with the Ideas of pure reason for a purpose which lies beyond the empirical use of the understanding; but such an extended use of the understanding we have above declared to be totally inadmissible and without any object or meaning. Yet there must be a harmony between the nature of reason and that of the understanding, and
the former must contribute to the perfection of the latter and cannot possibly upset it.

The solution of this question is as follows: Pure reason does not in its Ideas point to particular objects which lie beyond the field of experience, but only requires completeness of the use of the understanding in the system of experience. But this completeness can be a completeness of principles only, not of intuitions and of objects. In order, however, to represent the Ideas definitely, reason conceives them after the fashion of the knowledge of an object. This knowledge is, as far as these rules are concerned, completely determined; but the object is only an Idea [invented for the purpose of] bringing the knowledge of the understanding as near as possible to the completeness indicated by that Idea.

The objects which are given us by experience are in many respects incomprehensible, and many questions to which the law of nature leads us when carried beyond a certain point (though still quite conformably to the laws of nature) admit of no answer. An example is the question: Why do material things attract one another? But if we entirely quit nature or, in pursuing its combinations, exceed all possible experience, and so enter the realm of mere Ideas, we cannot then say that the object is incomprehensible and that the nature of things proposes to us insoluble problems. For we are not then concerned with nature or even with given objects, but with mere concepts which have their origin solely in our reason, and with mere beings of thought; and all the problems that arise from our concepts of them must be solved, because of course reason can and must give a full account of its own procedure. As the psychological, cosmological, and theological Ideas are nothing but pure concepts of reason which cannot be given in any experience, the questions which reason asks us about them are put to us, not by the objects, but by mere maxims of our reason for the sake of its own satisfaction. They must all be capable of satisfactory answers, which are given by showing that they are principles which bring our use of the understanding into thorough agreement, completeness, and synthetical unity, and that they thus hold good of experience only, but of experience as a whole.

Although an absolute whole of experience is impossible, the Idea of a whole of knowledge according to principles must impart to our knowledge a peculiar kind of unity, that of a system, without which it is nothing but piece-work and cannot be used for proving the existence of a highest purpose (which can only be the general system of all purposes). I do not here refer
only to the practical, but also to the highest purpose of the speculative use of reason.

The transcendental Ideas therefore express the peculiar vocation of reason as a principle of systematic unity in the use of the understanding. Yet if we assume this unity of the mode of knowledge to pertain to the object of knowledge, if we regard that which is merely regulative to be constitutive, and if we persuade ourselves that we can by means of these Ideas widen our knowledge transcendentally or far beyond all possible experience, while it only serves to render experience within itself as nearly complete as possible, that is, to limit its progress by nothing that cannot belong to experience—if we do this, I say—we suffer from a mere misunderstanding in our estimate of the proper role of our reason and of its principles, and a dialectic arises which both confuses the empirical use of reason and sets reason at variance with itself.

But it would be, on the other hand, a still greater absurdity if we conceded no things in themselves or set up our experience as the only possible mode of knowing things, our intuition of them in space and in time for the only possible intuition and our discursive understanding for the archetype of every possible understanding; for this would be to wish to have the principles of the possibility of experience considered universal conditions of things in themselves. . . .

We cannot indeed, beyond all possible experience, form a definite concept of what things in themselves may be. Yet we are not at liberty to abstain entirely from inquiring into them; for experience never satisfies reason fully but, in answering questions, refers us further and further back and leaves us dissatisfied with regard to their complete solution. This anyone may gather from the dialectic of pure reason, which therefore has its good subjective grounds. Having acquired, as regards the nature of our soul, a clear conception of the subject, and having come to the conviction that its manifestations cannot be explained materialistically, who can refrain from asking what the soul really is and, if no concept of experience suffices for the purpose, from accounting for it by a concept of reason (that of a simple immaterial being), though we cannot by any means prove its objective reality? Who can satisfy himself with mere empirical knowledge in all the cosmological questions of the duration and of the magnitude of the world, of freedom or of natural necessity, since every answer given on principles of experience begets a fresh question, which likewise requires its answer and thereby clearly shows the insufficiency of all physical modes of explanation to satisfy reason? Finally, who does not see in the thoroughgoing contingency and dependence of all his
thoughts and assumptions on mere principles of experience the impossibility of stopping there? And who does not feel himself compelled, notwithstanding all interdictions against losing himself in transcendent Ideas, to seek rest and contentment, beyond all the concepts which he can vindicate by experience, in the concept of a Being the possibility of the Idea of which cannot be conceived but at the same time cannot be refuted, because it relates to a mere being of the understanding and without it reason must needs remain forever dissatisfied?

Bounds (in extended beings) always presuppose a space existing outside a certain definite place and inclosing it; limits do not require this, but are mere negations which affect a quantity so far as it is not absolutely complete. But our reason, as it were, sees in its surroundings a space for knowledge of things in themselves, though we can never have definite concepts of them and are limited to appearances only.

We must therefore think an immaterial being, a world of understanding, and a Supreme Being (all mere noumena), because in them only, as things in themselves, reason finds that completion and satisfaction which it can never hope for in the derivation of appearances from their homogeneous grounds, and because these actually have reference to something distinct from them (and totally heterogeneous), as appearances always presuppose an object in itself and therefore suggest its existence whether we can know more of it or not.

But as we can never know these beings of understanding as they are in themselves, that is, as definite, yet must assume them as regards the sensible world and connect them with it by reason, we are at least able to think this connection by means of such concepts as express their relation to the world of sense.

Thus the transcendental Ideas serve, if not to instruct us positively, at least to destroy the narrowing assertions of materialism, of naturalism, and of fatalism, and thus to afford scope for the moral Ideas beyond the field of speculation. . . .

And thus I conclude the analytical solution of the main question which I had proposed: “How is metaphysics in general possible?” by ascending from the data of its actual use, as shown in its consequences, to the grounds of its possibility.