Preface

These prolegomena are not for the use of apprentices, but of future teachers, and indeed are not to help them to organize the presentation of an already existing science, but to discover this science itself for the first time. [4:255]

There are scholars for whom the history of philosophy (ancient as well as modern) is itself their philosophy; the present prolegomena have not been written for them. They must wait until those who endeavor to draw from the wellsprings of reason itself have finished their business, and then it will be their turn to bring news of these events to the world. Otherwise, in their opinion nothing can be said that has not already been said before; and in fact this opinion can stand for all time as an infallible prediction, for since the human understanding has wandered over countless subjects in various ways through many centuries, it can hardly fail that for anything new something old should be found that has some similarity with it.

My intention is to convince all of those who find it worthwhile to occupy themselves with metaphysics that it is unavoidably necessary to suspend their work for the present, to consider all that has happened until now as if it had not happened, and before all else to pose the question: "whether such a thing as metaphysics is even possible at all."

If metaphysics is a science, why is it that it cannot, as other sciences, attain universal and lasting acclaim? If it is not, how does it happen that, under the pretense of a science it incessantly shows off, and strings along the human understanding with hopes that never dim but are never fulfilled? Whether, therefore, we demonstrate our knowledge or our ignorance, for once we must arrive at something certain concerning the nature of this self-proclaimed science; for things cannot possibly remain on their present footing. It seems almost laughable that, while every other science [4:256]

makes continuous progress, metaphysics, which desires to be wisdom itself, and which everyone consults as an oracle, perpetually turns round on the same spot without coming a step further. Further, it has lost a great many of its adherents, and one does not find that those who feel strong enough to shine in other sciences wish to risk their reputations in this one, where anyone, usually ignorant in all other things, lays claim to a decisive opinion, since in this region there are in fact still no reliable weights and measures with which to distinguish profundity from shallow babble.

It is, after all, not completely unheard of, after long cultivation of a science, that in considering with wonder how much progress has been made someone should finally allow the question to arise: whether and how such a science is possible at all. For human reason is so keen on building that more than once it has erected a tower, and has afterwards torn it down again in order to see how well constituted its foundation may have been. It is never too late to grow reasonable and wise; but if the insight comes late, it is always harder to bring it into play.

To ask whether a science might in fact be possible assumes a doubt about its actuality.[a] Such a doubt, though, offends everyone whose entire belongings may perhaps consist in this supposed jewel; hence he who allows this doubt to develop had better prepare for opposition from all sides. Some, with their metaphysical compendia in hand, will look down on him with scorn, in proud consciousness of their ancient, and hence ostensibly legitimate, possession; others, who nowhere see anything that is not similar to something they have seen somewhere else before, will not understand him; and for a time everything will remain as if nothing at all had happened that might yield fear or hope of an impending change.

Nevertheless I venture to predict that the reader of these prolegomena who thinks for himself will not only come to doubt his previous science,
[4:257] but subsequently will be fully convinced that there can be no such science unless the requirements expressed here, on which its possibility rests, are met, and, as this has never yet been done, that there is as yet no metaphysics at all. Since, however, the demand for it can never be exhausted,*

* Rusticus exspectat, dum defluat amnis, at ille
Labitur et labetur in omne volubilis aevum. Horace.[1]

[a] *Wirklichkeit*

[1] "A rustic waits for the river to flow away, but it flows on, and will so flow for all eternity." Horace *Epistles*, I. ii. 42–3.

because the interest of human reason in general is much too intimately interwoven with it, the reader will admit that a complete reform or rather a rebirth of metaphysics, according to a plan completely unknown before now, is inevitably approaching, however much it may be resisted in the meantime.

Since the Essays of *Locke* and *Leibniz*,[2] or rather since the rise of metaphysics as far as the history of it reaches, no event has occurred that could have been more decisive with respect to the fate of this science than the attack made upon it by *David Hume*.[3] He brought no light to this kind of knowledge,[b] but he certainly struck a spark from which a light could well have been kindled, if it had hit some welcoming tinder whose glow was carefully kept going and made to grow.

Hume started mainly from a single but important concept in metaphysics, namely, that of the *connection of cause and effect* (and also its derivative concepts, of force and action, etc.), and called upon reason, which pretends to have generated this concept in her womb, to give him an account of by what right she thinks: that something could be so constituted that, if it is posited, something else necessarily must thereby also be posited; for that is what the concept of cause says. He indisputably proved that it is wholly impossible for reason to think such a connection *a priori* and from concepts, because this connection contains necessity; and it is simply not to be seen how it could be, that because something is, something else necessarily must also be, and therefore how the concept of such a connection could be introduced *a priori*. From this he concluded that reason completely and fully deceives herself with this concept, falsely taking it for her own child, when it is really nothing but a bastard of the [4:258] imagination, which, impregnated by experience, and having brought certain representations under the law of association, passes off the resulting subjective necessity (i.e., habit) for an objective necessity (from insight). From which he concluded that reason has no power at all to think such connections, not even merely in general, because its concepts would then be bare fictions, and all of its cognitions allegedly established *a priori*

[b] *Erkenntnis*; in most instances, this word has been translated as "cognition."

[2] John Locke (1632–1704), *An Essay Concerning Human Understanding*. Gottfried Wilhelm Leibniz (1646–1716), *Nouveaux essais sur l'entendement humain*, in his *Œuvres philosophiques* (Amsterdam and Leipzig, 1765); German translation, 1778–80, though Kant read the French edition soon after its appearance; English translation, *New Essays on Human Understanding*, trans. by P. Remnant and J. Bennett (Cambridge, Cambridge University Press, 1981).

[3] David Hume (1711–76). On Kant's relation to the relevant works by Hume, see the Introduction.

would be nothing but falsely marked ordinary experiences; which is so much as to say that there is no metaphysics at all, and cannot be any.*

As premature and erroneous as his conclusion was, nevertheless it was at least founded on inquiry, and this inquiry was of sufficient value, that the best minds of his time might have come together to solve (more happily if possible) the problem in the sense in which he presented it, from which a complete reform of the science must soon have arisen.

But fate, ever ill-disposed toward metaphysics, would have it that *Hume* was understood by no one. One cannot, without feeling a certain pain, behold how utterly and completely his opponents, *Reid, Oswald, Beattie*, and finally *Priestley*,[6] missed the point of his problem, and misjudged his hints for improvement – constantly taking for granted just what he doubted, and, conversely, proving with vehemence and, more often than not, with great insolence exactly what it had never entered his mind to doubt – so that everything remained in its old condition, as if nothing had happened. The question was not, whether the concept of cause is right, useful, and, with respect to all cognition of nature, indispensable, for this Hume had never put in doubt; it was rather whether it is thought
[4:259] through reason *a priori*, and in this way has an inner truth independent

* All the same, *Hume* named this destructive philosophy itself metaphysics and placed great value on it. "Metaphysics and morals," he said (*Essays*, 4th pt., p. 214, German translation), "are the most important branches of science; mathematics and natural science are not worth half so much."[4] The acute man was, however, looking only to the negative benefit that curbing the excessive claims of speculative reason would have, in completely abolishing so many endless and continual conflicts that perplex the human species; he meanwhile lost sight of the positive harm that results if reason is deprived of the most important vistas, from which alone it can stake out for the will the highest goal of all the will's endeavors.[5]

[4] This quotation in Kant's text contains an ellipsis that somewhat distorts Hume's statement, which reads in full: "Monarchies, receiving their chief Stability from a superstitious Reverence to Priests and Princes, have abridged the Liberty of Reasoning, with Regard to Religion and Politics, and consequently Metaphysics and Morals. All these form the most considerable Branches of Science. Mathematics and natural Philosophy, which are the only ones that remain, are not half so valuable" (Essay 5, "Of the Rise and Progress of the Arts and Sciences," *Essays, Moral and Political*, 2 vols. [Edinburgh, 1741–2], vol. 2, p. 79).

[5] Kant considered the overextension of empirical concepts to be a threat to the idea of freedom and hence to morality; see Selections, pp. 152–4.

[6] Thomas Reid (1710–96), *An Inquiry into the Human Mind, on the Principles of Common Sense* (Dublin and Edinburgh, 1764), French translation, 1768, German, 1782; James Oswald (d. 1793), *An Appeal to Common Sense in Behalf of Religion* (Edinburgh, 1766), German translation, 1774; James Beattie (1735–1803), *An Essay on the Nature and Immutability of Truth, in Opposition to Sophistry and Scepticism* (Edinburgh, 1770), German translation, 1772; Joseph Priestley (1733–1804), *An Examination of Dr. Reid's Inquiry into the Human Mind, on the Principles of Common Sense, Dr. Beattie's Essay on the Nature and Immutability of Truth, and Dr. Oswald's Appeal to Common Sense in Behalf of Religion* (London, 1774).

of all experience, and hence also a much more widely extended use that is not limited merely to objects of experience: regarding this *Hume* awaited enlightenment. The discussion was only about the origin of this concept, not about its indispensability in use; if the former were only discovered, the conditions of its use and the sphere in which it can be valid would already be given.

In order to do justice to the problem, however, the opponents of this celebrated man would have had to penetrate very deeply into the nature of reason so far as it is occupied solely with pure thought, something that did not suit them. They therefore found a more expedient means to be obstinate without any insight, namely, the appeal to **ordinary common sense**.[7] It is in fact a great gift from heaven to possess right (or, as it has recently been called, plain) common sense. But it must be proven through deeds, by the considered and reasonable things one thinks and says, and not by appealing to it as an oracle when one knows of nothing clever to advance in one's defense. To appeal to ordinary common sense when insight and science[c] run short, and not before, is one of the subtle discoveries of recent times, whereby the dullest windbag can confidently take on the most profound thinker and hold his own with him. So long as a small residue of insight remains, however, one would do well to avoid resorting to this emergency help. And seen in the light of day, this appeal is nothing other than a call to the judgment of the multitude; applause at which the philosopher blushes, but at which the popular wag becomes triumphant and defiant. I should think, however, that *Hume* could lay just as much claim to sound common sense as *Beattie*, and on top of this to something that the latter certainly did not possess, namely, a critical reason, which keeps ordinary common sense in check, so that it doesn't lose itself in speculations, or, if these are the sole topic of discussion, doesn't want to decide anything, since it doesn't understand the justification for its own principles; for only so will it remain sound common sense. Hammer and chisel are perfectly fine for working raw lumber, but for copperplate one must use an etching needle. Likewise, sound common sense and speculative understanding are both useful, but each in its own way; the [4:260] one, when it is a matter of judgments that find their immediate application in experience, the other, however, when judgments are to be made in a

[c] *Wissenschaft*

[7] The words translated as "common sense" include the German root *Verstand*, or "understanding."

universal mode, out of mere concepts, as in metaphysics, where what calls itself (but often *per antiphrasin*)[8] sound common sense has no judgment whatsoever.

I freely admit that the remembrance[9] of *David Hume* was the very thing that many years ago first interrupted my dogmatic slumber and gave a completely different direction to my researches in the field of speculative philosophy. I was very far from listening to him with respect to his conclusions, which arose solely because he did not completely set out his problem, but only touched on a part of it, which, without the whole being taken into account, can provide no enlightenment. If we begin from a well-grounded though undeveloped thought that another bequeaths us, then we can well hope, by continued reflection, to take it further than could the sagacious man whom one has to thank for the first spark of this light.

So I tried first whether *Hume*'s objection might not be presented in a general manner, and I soon found that the concept of the connection of cause and effect is far from being the only concept through which the understanding thinks connections of things *a priori*; rather, metaphysics consists wholly of such concepts. I sought to ascertain their number, and as I had successfully attained this in the way I wished, namely from a single principle, I proceeded to the deduction of these concepts,[10] from which I henceforth became assured that they were not, as *Hume* had feared, derived from experience, but had arisen from the pure understanding. This deduction, which appeared impossible to my sagacious predecessor, and which had never even occurred to anyone but him, even though everyone confidently made use of these concepts without asking what their objective validity is based on – this deduction, I say, was the most difficult thing that could ever be undertaken on behalf of metaphysics; and the worst thing about it is that metaphysics, as much of it as might be present anywhere at all, could not give me even the slightest help with this, because this very deduction must first settle the possibility of a metaphysics. As I had now succeeded in the solution of the Humean problem not only in a single case but with respect to the entire faculty of

[8] "by way of expression through the opposite."

[9] The German word *Erinnerung* can mean a "memory" or "remembrance" (as shown here), or it can mean a "reminder," "admonition," or "warning." Kant used the term both ways (e.g., Ak 1:173, 472; 2:267, 291, 362; *Critique* A vii, A 30 / B 45, A 98, B 414 note). Thus, his words here need not imply a specific act of remembering Hume's work, but may simply be invoking Hume's admonition or warning about the use of the causal concept in traditional metaphysics.

[10] On the idea of a "deduction," see Selections, pp. 166–8.

pure reason, I could therefore take sure, if still always slow, steps toward [4:261]
finally determining, completely and according to universal principles, the entire extent of pure reason with regard to its boundaries as well as its content, which was indeed the very thing that metaphysics requires in order to build its system according to a sure plan.

But I fear that the *elaboration* of the Humean problem in its greatest possible amplification (namely, the *Critique of Pure Reason*) may well fare just as the *problem* itself fared when it was first posed. It will be judged incorrectly, because it is not understood; it will not be understood, because people will be inclined just to skim through the book, but not to think through it; and they will not want to expend this effort on it, because the work is dry, because it is obscure, because it opposes all familiar concepts and is long-winded as well. Now I admit that I do not expect to hear complaints from a philosopher regarding lack of popularity, entertainment, and ease, when the matter concerns the existence of highly prized knowledge that is indispensable to humanity, knowledge that cannot be constituted except according to the strictest rules of scholarly exactitude, and to which even popularity may indeed come with time but can never be there at the start. But with regard to a certain obscurity – arising in part from the expansiveness of the plan, which makes it difficult to survey the main points upon which the investigation depends – in this respect the complaint is just; and I will redress it through the present *Prolegomena*.

The previous work, which presents the faculty of pure reason in its entire extent and boundaries, thereby always remains the foundation to which the *Prolegomena* refer only as preparatory exercises; for this critique must stand forth as science, systematic and complete to its smallest parts, before one can think of permitting metaphysics to come forward, or even of forming only a distant hope for metaphysics.

We have long been accustomed to seeing old, threadbare cognitions newly trimmed by being taken from their previous connections and fitted out by someone in a systematic garb of his own preferred cut, but under new titles; and most readers will beforehand expect nothing else even from this critique. Yet these *Prolegomena* will bring them to understand that there exists a completely new science, of which no one had previously [4:262]
formed merely the thought, of which even the bare idea was unknown, and for which nothing from all that has been provided before now could be used except the hint that *Hume*'s doubts had been able to give; Hume also foresaw nothing of any such possible formal science, but deposited

his ship on the beach (of skepticism) for safekeeping,[11] where it could then lie and rot, whereas it is important to me to give it a pilot, who, provided with complete sea-charts and a compass, might safely navigate the ship wherever seems good to him, following sound principles of the helmsman's art drawn from a knowledge of the globe.

To approach a new science – one that is entirely isolated and is the only one of its kind – with the prejudice that it can be judged by means of one's putative cognitions already otherwise obtained, even though it is precisely the reality of those that must first be completely called into question, results only in believing that one sees everywhere something that was already otherwise known, because the expressions perhaps sound similar; except that everything must seem to be extremely deformed, contradictory, and nonsensical, because one does not thereby make the author's thoughts fundamental, but always simply one's own, made natural through long habit. Yet the copiousness of the work, insofar as it is rooted in the science itself and not in the presentation, and the inevitable dryness and scholastic exactitude that result, are qualities that indeed may be extremely advantageous to the subject matter itself, but must of course be detrimental to the book itself.

It is not given to everyone to write so subtlely and yet also so alluringly as *David Hume*, or so profoundly and at the same time so elegantly as *Moses Mendelssohn*;[12] but I could well have given my presentation popularity (as I flatter myself) if all I had wanted to do was to sketch a plan and to commend its execution to others, and had I not taken to heart the well-being of the science that kept me occupied for so long; for after all it requires great perseverance and also indeed not a little self-denial to set aside the enticement of an earlier, favorable reception for the expectation of an admittedly later, but lasting approval.

To make plans is most often a presumptuous, boastful mental preoccupation, through which one presents the appearance of creative genius,
[4:263] in that one requires what one cannot himself provide, censures what one

[11] Hume, *Treatise* (Bk. x, pt. 4, sec. 7), compared his skeptical turn with a decision "to perish on the barren rock, on which I am at present, rather than venture myself upon that boundless ocean, which runs out to immensity," having narrowly escaped shipwreck. Hamann translated and published this passage in his excerpt of 1771 (cited in the Introduction). On the notion of skepticism in Kant's time and in relation to Hume, see Introduction, pp. xxv, xxvi.

[12] Moses Mendelssohn (1729–86) was an acclaimed and prolific writer. His *Abhandlung über die Evidenz in metaphysischen Wissenschaften* (Berlin, 1764) won the prize competition set by the Royal Academy of Sciences in Berlin for 1763 (Kant took second place).

cannot do better, and proposes what one does not know how to attain oneself – though merely for a sound plan for a general critique of reason, somewhat more than might be expected would already have been required if it were not, as is usual, to be merely a recitation of pious wishes. But pure reason is such an isolated domain, within itself so thoroughly connected, that no part of it can be encroached upon without disturbing all the rest, nor adjusted without having previously determined for each part its place and its influence on the others; for, since there is nothing outside of it that could correct our judgment within it, the validity and use of each part depends on the relation in which it stands to the others within reason itself, and, as with the structure of an organized body, the purpose of any member can be derived only from the complete concept of the whole. That is why it can be said of such a critique, that it is never trustworthy unless it is *entirely complete* down to the least elements of pure reason, and that in the domain of this faculty one must determine and settle either *all* or *nothing*.

But although a mere plan that might precede the *Critique of Pure Reason* would be unintelligible, undependable, and useless, it is by contrast all the more useful if it comes after. For one will thereby be put in the position to survey the whole, to test one by one the main points at issue in this science, and to arrange many things in the exposition better than could be done in the first execution of the work.

Here then is such a *plan* subsequent to the completed work, which now can be laid out according to the *analytic method*, whereas the *work* itself absolutely had to be composed according to the *synthetic method*, so that the science might present all of its articulations, as the structural organization of a quite peculiar faculty of cognition, in their natural connection. Whosoever finds this plan itself, which I send ahead as prolegomena for any future metaphysics, still obscure, may consider that it simply is not necessary for everyone to study metaphysics, that there are some talents that proceed perfectly well in fundamental and even deep sciences that are closer to intuition, but that will not succeed in the investigation of purely abstract concepts, and that in such a case one should apply one's mental [4:264] gifts to another object; that whosoever undertakes to judge or indeed to construct a metaphysics must, however, thoroughly satisfy the challenge made here, whether it happens that they accept my solution, or fundamentally reject it and replace it with another – for they cannot dismiss it; and finally, that the much decried obscurity (a familiar cloaking for one's own indolence or dimwittedness) has its use as well, since everybody, who

with respect to all other sciences observes a wary silence, speaks masterfully, and boldly passes judgment in questions of metaphysics, because here to be sure their ignorance does not stand out clearly in relation to the science of others, but in relation to genuine critical principles, which therefore can be praised:

> *Ignavum, fucos, pecus a praesepibus arcent.*
>
> Virg.[13]

[13] "They protect the hives from the drones, an idle bunch." Virgil, *Georgica*, IV. 168.

Preamble on the Distinguishing Feature of All Metaphysical Cognition [4:265]

§ 1

On the sources of metaphysics

If one wishes to present a body of cognition as *science*,[a] then one must first be able to determine precisely the differentia it has in common with no other science, and which is therefore its *distinguishing feature*; otherwise the boundaries of all the sciences run together, and none of them can be dealt with thoroughly according to its own nature.

Whether this distinguishing feature consists in a difference of the *object* or the *source of cognition*, or even of the *type of cognition*, or some if not all of these things together, the idea of the possible science and its territory depends first of all upon it.

First, concerning the *sources* of metaphysical cognition, it already lies in the concept of metaphysics that they cannot be empirical. The principles[b] of such cognition (which include not only its fundamental propositions[c] or basic principles, but also its fundamental concepts) must therefore never be taken from experience; for the cognition is supposed to be not physical but metaphysical, i.e., lying beyond experience. Therefore it will be based upon neither outer experience, which constitutes the source of physics proper, nor inner, which provides the foundation of empirical psychology.[d] It is therefore cognition *a priori*, or from pure understanding [4:266] and pure reason.

[a] *eine Erkenntnis als Wissenschaft* [b] *Prinzipien*
[c] *Grundsätze*; the next three words are added by the translator as a gloss. [d] *empirischen Psychologie*

In this, however, there would be nothing to differentiate it from pure mathematics; it must therefore be denominated *pure philosophical cognition*; but concerning the meaning of this expression I refer to the *Critique of Pure Reason*, pp. 712 f.,[1] where the distinction between these two types of use of reason has been presented clearly and sufficiently. – So much on the sources of metaphysical cognition.

§2

On the type of cognition that alone can be called metaphysical

(a) On the distinction between synthetic and analytic judgments in general

Metaphysical cognition must contain nothing but judgments *a priori*, as required by the distinguishing feature of its sources. But judgments may have any origin whatsoever, or be constituted in whatever manner according to their logical form, and yet there is nonetheless a distinction between them according to their content, by dint of which they are either merely *explicative* and add nothing to the content of the cognition, or *ampliative* and augment the given cognition; the first may be called *analytic* judgments, the second *synthetic*.

Analytic judgments say nothing in the predicate except what was actually thought already in the concept of the subject, though not so clearly nor with the same consciousness. If I say: All bodies are extended, then I have not in the least amplified my concept of body, but have merely resolved it, since extension, although not explicitly said of the former concept prior to the judgment, nevertheless was actually thought of it; the judgment is therefore analytic. By contrast, the proposition: Some bodies are heavy, contains something in the predicate that is not actually thought in the general concept of body; it therefore augments my cognition,
[4:267] since it adds something to my concept, and must therefore be called a synthetic judgment.[2]

[1] See pp. 195–7.

[2] The modern concept of body as developed by Descartes and other so-called "mechanical philosophers" was restricted to extension alone, and hence not weight, which was thought to arise from an external inflence on bodies (such as, in Kant's time, Newton's attractive force). In *Metaphysical Foundations of Natural Science*, Second Chapter, Kant retained the definition of matter as extension (or spatial volume, Ak 4:525), but explained the extension and cohesion of bodies through repulsive and attractive forces.

(b) The common principle of all analytic judgments is the principle of contradiction

All analytic judgments rest entirely on the principle of contradiction and are by their nature *a priori* cognitions, whether the concepts that serve for their material be empirical or not. For since the predicate of an affirmative analytic judgment is already thought beforehand in the concept of the subject, it cannot be denied of that subject without contradiction; exactly so is its opposite necessarily denied of the subject in an analytic, but negative, judgment, and indeed also according to the principle of contradiction. So it stands with the propositions: Every body is extended, and: No body is unextended (simple).

For that reason all analytic propositions are still *a priori* judgments even if their concepts are empirical, as in: Gold is a yellow metal; for in order to know this, I need no further experience outside my concept of gold, which includes that this body is yellow and a metal; for this constitutes my very concept, and I did not have to do anything except analyze it, without looking beyond it to something else.

(c) Synthetic judgments require a principle other than the principle of contradiction

There are synthetic judgments *a posteriori* whose origin is empirical; but there are also synthetic judgments that are *a priori* certain and that arise from pure understanding and reason. Both however agree in this, that they can by no means arise solely from the principle[e] of analysis, namely the principle of contradiction; they demand yet a completely different principle,[f] though they always must be derived from some fundamental proposition,[g] whichever it may be, *in accordance with the principle of contradiction*; for nothing can run counter to this principle, even though everything cannot be derived from it. I shall first classify the synthetic judgments.

1. *Judgments of experience* are always synthetic. For it would be absurd [4:268] to base an analytic judgment on experience, since I do not at all need to go beyond my concept in order to formulate the judgment and therefore have no need for any testimony from experience. That a body is extended, is a proposition that stands certain *a priori*, and not a judgment of experience.

[e] *Grundsätze* [f] *Prinzip* [g] *Grundsätze*

For before I go to experience, I have all the conditions for my judgment already in the concept, from which I merely extract the predicate in accordance with the principle of contradiction, and by this means can simultaneously become conscious of the *necessity* of the judgment, which experience could never teach me.

2. *Mathematical judgments* are one and all synthetic. This proposition appears to have completely escaped the observations of analysts of human reason up to the present, and indeed to be directly opposed to all of their conjectures, although it is incontrovertibly certain and very important in its consequences. Because they found that the inferences of the mathematicians all proceed in accordance with the principle of contradiction (which, by nature, is required of any apodictic certainty), they were persuaded that the fundamental propositions were also known through the principle of contradiction, in which they were very mistaken; for a synthetic proposition can of course be discerned in accordance with the principle of contradiction, but only insofar as another synthetic proposition is presupposed from which the first can be deduced, never however in itself.

First of all it must be observed: that properly mathematical propositions are always *a priori* and not empirical judgments, because they carry necessity with them, which cannot be taken from experience. But if this will not be granted me, very well, I will restrict my proposition to *pure mathematics*, the concept of which already conveys that it contains not empirical but only pure cognition *a priori*.

One might well at first think: that the proposition $7 + 5 = 12$ is a purely analytic proposition that follows from the concept of a sum of seven and five according to the principle of contradiction. However, upon closer inspection, one finds that the concept of the sum of 7 and 5 contains nothing further than the unification of the two numbers into one, through which by no means is thought what this single number may be that combines the two. The concept of twelve is in no way already thought because I merely think to myself this unification of seven and five, and I may analyze my concept of such a possible sum for as long as may be,
[4:269] still I will not meet with twelve therein. One must go beyond these concepts, in making use of the intuition that corresponds to one of the two, such as one's five fingers, or (like *Segner* in his arithmetic)[3] five points,

[3] Johann Andreas Segner (1704–77), *Anfangsgründe der Mathematik*, 2nd edn. (Halle, 1773).

and in that manner adding the units of the five given in intuition step by step to the concept of seven. One therefore truly amplifies one's concept through this proposition $7 + 5 = 12$ and adds to the first concept a new one that was not thought in it; that is, an arithmetical proposition is always synthetic, which can be seen all the more plainly in the case of somewhat larger numbers, for it is then clearly evident that, though we may turn and twist our concept as we like, we could never find the sum through the mere analysis of our concepts, without making use of intuition.

Nor 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 the straight contains nothing of magnitude,[h] but only a quality. The concept of the shortest is therefore wholly an addition and cannot be extracted by any analysis from the concept of the straight line. Intuition must therefore be made use of here, by means of which alone the synthesis is possible.[4]

Some other fundamental propositions that geometers presuppose are indeed actually analytic and rest on the principle of contradiction; however, they serve only, like identical propositions, as links in the chain of method and not as principles: e.g., $a = a$, the whole is equal to itself, or $(a + b) > a$, i.e., the whole is greater than its part. And indeed even these, although they are valid from concepts alone, are admitted into mathematics only because they can be exhibited in intuition.

It[i] is merely ambiguity of expression which makes us commonly believe here that the predicate of such apodictic judgments already lies in our concept and that the judgment is therefore analytic. Namely, we *are required* to add in thought a particular predicate to a given concept, and this necessity is already attached to the concepts. But the question is not, what we *are required to add in thought* to a given concept, but what we *actually think* in it, even if only obscurely, and then it becomes evident that the predicate attaches to such concepts indeed necessarily, though not immediately, but rather through an intuition that has to be added.[j]

[h] *Grösse*

[i] Paragraph break added to reflect continuity with the three paragraphs prior to the preceding two sentences.

[j] The following five paragraphs are taken from §4 in accordance with Vaihinger's galley-switching thesis (see Note on texts and translation).

[4] On the terms "intuition," "concept," "judgment," and "synthesis," see Selections, pp. 156–7, 161–6.

[4:272] The essential feature of pure *mathematical* cognition, differentiating it from all other *a priori* cognition, is that it must throughout proceed *not from concepts*, but always and only through the construction of concepts (*Critique*, p. 713).[5] Because pure mathematical cognition, in its propositions, must therefore go beyond the concept to that which is contained in the intuition corresponding to it, its propositions can and must never arise through the analysis of concepts, i.e., analytically, and so are one and all synthetic.

I cannot, however, refrain from noting the damage that neglect of this otherwise seemingly insignificant and unimportant observation has brought upon philosophy. *Hume*, when he felt the call, worthy of a philosopher, to cast his gaze over the entire field of pure *a priori* cognition, in which the human understanding claims such vast holdings, inadvertently lopped off a whole (and indeed the most considerable) province of the same, namely pure mathematics, by imagining that the nature and so to speak the legal constitution of this province rested on completely different principles, namely solely on the principle of contradiction; and although he had by no means made a classification of propositions as formally and generally, or with the nomenclature, as I have here, it was nonetheless just as if he had said: Pure mathematics contains only *analytic* propositions, but metaphysics contains synthetic propositions *a priori*. Now he erred severely in this, and this error had decisively damaging consequences for his entire conception. For had he not done this, he would have expanded his question about the origin of our synthetic judgments far beyond his metaphysical concept of causality and extended it also to the possibility
[4:273] of *a priori* mathematics; for he would have had to accept mathematics as synthetic as well. But then he would by no means have been able to found his metaphysical propositions on mere experience, for otherwise he would have had to subject the axioms of pure mathematics to experience as well, which he was much too reasonable to do.[6] The good company in which metaphysics would then have come to be situated would have

[5] See pp. 195–6.

[6] In fact, in the *Treatise* Hume had raised objections to the notions of equality and congruence (among others) in geometry, which objections appealed to experience (*Treatise*, I.ii.4.4, pp. 42–53), thereby subjecting mathematics to experience, and he also rejected the conception that mathematics considers its objects independently of their existence in nature; in the *Inquiry* he ascribed the basis of mathematics to judgments of relations of ideas, that is, to propositions which "are discoverable by the mere operation of thought, without dependence on what is any where existent in the universe" (sec. 4, pt. 1). (In 1783 Kant would not have been directly acquainted with the passage from the *Treatise*.)

secured it against the danger of scornful mistreatment; for the blows that were intended for the latter would have had to strike the former as well, which was not his intention, and could not have been; and so the acute man would have been drawn into reflections which must have been similar to those with which we are now occupied, but which would have gained infinitely from his inimitably fine presentation.[7]

3.[k] *Properly metaphysical* judgments are one and all synthetic. Judgments *belonging to metaphysics* must be distinguished from *properly metaphysical* judgments. Very many among the former are analytic, but they merely provide the means to metaphysical judgments, toward which the aim of the science is completely directed, and which are always synthetic. For if concepts belong to metaphysics, e.g., that of substance, then the judgments arising from their mere analysis necessarily belong to metaphysics as well, e.g., substance is that which exists only as subject, etc., and through several such analytic judgments we try to approach the definition of those concepts. Since, however, the analysis of a pure concept of the understanding (such as metaphysics contains) does not proceed in a different manner from the analysis of any other, even empirical, concept which does not belong to metaphysics (e.g., air is an elastic fluid, the elasticity of which is not lost with any known degree of cold), therefore the concept may indeed be properly metaphysical, but not the analytic judgment; for this science possesses something special and proper to it in the generation of its *a priori* cognitions, which generation must therefore be distinguished from what this science has in common with all other cognitions of the understanding; thus, e.g., the proposition: All that is substance in things persists, is a synthetic and properly metaphysical proposition.

If one has previously assembled, according to fixed principles, the *a priori* concepts that constitute the matter of metaphysics and its building material, then the analysis of these concepts is of great value; it can even be presented separately from all the synthetic propositions that constitute [4:274] metaphysics itself, as a special part (as it were as *philosophia definitiva*)[8] containing nothing but analytic propositions belonging to metaphysics.

[k] The numeral three is added in accordance with Vaihinger's thesis.

[7] In the corresponding section of the *Critique of Pure Reason* (B 17–18), a paragraph on natural science occurs here, with the heading: "Natural science (*physica*) contains within itself synthetic judgments *a priori*"; as examples of such judgments, it gives the conservation of the quantity of matter in the world, and the equality of action and reaction.

[8] Compare Friedrich Christian Baumeister (1709–85), *Philosophia definitiva*, new edn. (Vienna, 1775; first published in Wittenberg, 1733).

For in fact such analyses do not have much use anywhere except in metaphysics, that is, with a view toward the synthetic propositions that are to be generated from such previously analyzed concepts.

The conclusion of this section is therefore: that metaphysics properly has to do with synthetic propositions *a priori*, and these alone constitute its aim, for which it indeed requires many analyses of its concepts (therefore many analytic judgments), in which analyses, though, the procedure is no different from that in any other type of cognition when one seeks simply to make its concepts clear through analysis. But the *generation* of cognition *a priori* in accordance with both intuition and concepts, ultimately of synthetic propositions *a priori* as well, and specifically in philosophical cognition, forms the essential content of metaphysics.

[4:270]

§3

Note on the general division of judgments into analytic and synthetic

This division is indispensable with regard to the critique of human understanding, and therefore deserves to be *classical* in it; other than that I don't know that it has much utility anywhere else. And in this I find the reason why dogmatic philosophers (who always sought the sources of metaphysical judgments only in metaphysics itself, and not outside it in the pure laws of reason in general) neglected this division, which appears to come forward of itself, and, like the famous *Wolff*, or the acute *Baumgarten* following in his footsteps,[9] could try to find the proof of the principle of sufficient reason, which obviously is synthetic, in the principle of contradiction.[10] By contrast I find a hint of this division already in *Locke's* essays on human understanding. For in Book 4, chapter 3, §9 f., after he had already discussed the various connections of representations[11] in judgments and the sources of the connections, of which he located the one in identity or contradiction (analytic judgments) but the other in the existence of representations in a subject (synthetic judgments), he then

[9] Christian Wolff (1679–1754) was the most important German philosopher of the mid-eighteenth century; Alexander Gottlieb Baumgarten (1714–62) was an important follower.

[10] Baumgarten, *Metaphysica*, 7th edn. (Halle, 1779), §§10, 20–2. (On this work and Kant's familiarity with it, see the Introduction.)

[11] In his description of Locke's work, Kant uses the term *Vorstellungen* for what Locke called "ideas"; Kant's term is here translated as "representation," as in the rest of this volume.

acknowledges in §10 that our cognition (*a priori*) of these last is very constricted and almost nothing at all. But there is so little that is definite and reduced to rules in what he says about this type of cognition, that it is no wonder if no one, and in particular not even *Hume*, was prompted by it to contemplate propositions of this type. For such general yet nonetheless definite principles are not easily learned from others who have only had them floating obscurely before them. One must first have come to them oneself through one's own reflection, after which one also finds them elsewhere, where one certainly would not have found them before, because the authors did not even know themselves that their own remarks were grounded on such an idea. Those who never think for themselves in this way nevertheless possess the quick-sightedness to spy everything, after it has been shown to them, in what has already been said elsewhere, where no one at all could see it before.

[4:271]

General Question of the Prolegomena
Is metaphysics possible at all?

§4

If a metaphysics that could assert itself as science were actual, if one could say: here is metaphysics, you need only to learn it, and it will convince you of its truth irresistibly and immutably, then this question would be unnecessary, and there would remain only that question which would pertain more to a test of our acuteness than to a proof of the existence of the subject matter itself, namely: *how it is possible*, and how reason should set about attaining it. Now it has not gone so well for human reason in this case. One can point to no single book, as for instance one presents a *Euclid*, and say: this is metaphysics, here you will find the highest aim of this science, knowledge[a] of a supreme being and a future life, proven from principles of pure reason. For one can indeed show us many propositions that are apodictically certain and have never been disputed; but they are one and all analytic and pertain more to the materials and implements of metaphysics than to the expansion of knowledge, which after all ought to be our real aim for it (§2c). But although you present synthetic propositions as well (e.g., the principle of sufficient reason), which you have never proven from bare reason and consequently *a priori*, as was indeed your obligation, and which are gladly ceded to you all the same: then if you want to use them toward your main goal, you still fall into assertions so illicit and precarious that one metaphysics has always contradicted the other, either in regard to the assertions themselves or their proofs, and thereby metaphysics has itself

[a] *Erkenntnis*

destroyed its claim to lasting approbation. The very attempts to bring such a science into existence were without doubt the original cause of the skepticism that arose so early, a way of thinking in which reason moves against itself with such violence that it never could have arisen except in complete despair as regards satisfaction of reason's most important aims. For long before we began to question nature methodically, we questioned just our isolated reason, which already was practiced to a certain extent [4:272] through common experience: for reason surely is present to us always, but laws of nature must normally be sought out painstakingly; and so metaphysics was floating at the top like foam, though in such a way that as soon as what had been drawn off had dissolved, more showed itself on the surface, which some always gathered up eagerly, while others, instead of seeking the cause of this phenomenon in the depths, thought themselves wise in mocking the fruitless toil of the former.[b]

Weary therefore of dogmatism, which teaches us nothing, and also [4:274] of skepticism, which promises us absolutely nothing at all, not even the tranquility of a permitted ignorance; summoned by the importance of the knowledge[c] that we need, and made mistrustful, through long experience, with respect to any knowledge that we believe we possess or that offers itself to us under the title of pure reason, there remains left for us but one critical question, the answer to which can regulate our future conduct: *Is metaphysics possible at all?* But this question must not be answered by skeptical objections to particular assertions of an actual metaphysics (for at present we still allow none to be valid), but out of the still *problematic* concept of such a science.

In the *Critique of Pure Reason* I worked on this question *synthetically*, namely by inquiring within pure reason itself, and seeking to determine within this source both the elements and the laws of its pure use, according to principles. This work is difficult and requires a resolute reader to think himself little by little into a system that takes no foundation as given except reason itself, and that therefore tries to develop cognition out of its original seeds without relying on any fact whatever. *Prolegomena* should by contrast be preparatory exercises; they ought more to indicate what needs to be done in order to bring a science into existence if possible, than to present the science itself. They must therefore rely on something [4:275] already known to be dependable, from which we can go forward with

[b] Here followed the five paragraphs that have been placed in §2 (pp. 19–22).

[c] *Erkenntnis*

confidence and ascend to the sources, which are not yet known, and whose discovery not only will explain what is known already, but will also exhibit an area with many cognitions that all arise from these same sources. The methodological procedure of prolegomena, and especially of those that are to prepare for a future metaphysics, will therefore be *analytic*.

Fortunately, it happens that, even though we cannot assume that metaphysics as science is *actual*, we can confidently say that some pure synthetic cognition *a priori* is actual and given, namely, *pure mathematics* and *pure natural science*; for both contain propositions that are fully acknowledged, some as apodictically certain through bare reason, some from universal agreement with experience (though these are still recognized as independent of experience). We have therefore some at least *uncontested* synthetic cognition *a priori*, and we do not need to ask whether it is possible (for it is actual), but only: *how it is possible*, in order to be able to derive, from the principle of the possibility of the given cognition, the possibility of all other synthetic cognition *a priori*.

Prolegomena
General Question
How is cognition from pure reason possible?

§5

We have seen above the vast difference between analytic and synthetic judgments. The possibility of analytic propositions could be comprehended very easily; for it is founded solely upon the principle of contradiction. The possibility of synthetic propositions *a posteriori*, i.e., of such as are drawn from experience, also requires no special explanation; for experience itself is nothing other than a continual conjoining (synthesis) of perceptions. There remain for us therefore only synthetic propositions *a priori*, whose possibility must be sought or investigated, since it must rest on principles other than the principle of contradiction.

Here, however, we do not need first to seek the *possibility* of such propo- [4:276]
sitions, i.e., to ask whether they are possible. For there are plenty of them actually given, and indeed with indisputable certainty, and since the method we are now following is to be analytic, we will consequently start from the position: that such synthetic but pure rational cognition is actual; but we must nonetheless next *investigate* the ground of this possibility, and ask: *how* this cognition is possible, so that we put ourselves in a position to determine, from the principles of its possibility, the conditions of its use and the extent and boundaries of the same. Expressed with scholastic precision, the exact problem on which everything hinges is therefore:

How are synthetic propositions a priori *possible?*

For the sake of popularity I have expressed this problem somewhat differently above, namely as a question about cognition from pure reason, which I could well have done on this occasion without disadvantage for the desired insight; for, since we assuredly have to do here only with metaphysics and its sources, it will, I hope, always be kept in mind, following the earlier reminders, that when we here speak of cognition from pure reason, the discussion is never about analytic cognition, but only synthetic.*

Whether metaphysics is to stand or fall, and hence its existence, now depends entirely on the solving of this problem. Anyone may present his contentions on the matter with ever so great a likelihood, piling conclu-
[4:277] sion on conclusion to the point of suffocation; if he has not been able beforehand to answer this question satisfactorily then I have the right to say: it is all empty, baseless philosophy and false wisdom. You speak through pure reason and pretend as it were to create *a priori* cognitions, not only by analyzing given concepts, but by alleging new connections that are not based on the principle of contradiction and that you nonetheless presume to understand completely independently of all experience; now how do you come to this, and how will you justify such pretenses? You cannot be allowed to call on the concurrence of general common sense; for that is a witness whose standing is based solely on public rumor.

> *Quodcunque ostendis mihi sic, incredulus odi.*
>
> Horat.[1]

* When knowledge[a] moves forward little by little, it cannot be helped that certain expressions which already have become classical, having been present from the very infancy of science, subsequently should be found insufficient and badly suited, and that a certain newer and more apt usage should fall into danger of being confused with the old one. The analytic method, insofar as it is opposed to the synthetic, is something completely different from a collection of analytic propositions; it signifies only that one proceeds from that which is sought as if it were given, and ascends to the conditions under which alone it is possible. In this method one often uses nothing but synthetic propositions, as mathematical analysis exemplifies, and it might better be called the *regressive* method to distinguish it from the synthetic or *progressive* method. Again the name analytic is also found as a principal division of logic, and there it is the logic of truth and is opposed to dialectic, without actually looking to see whether the cognitions belonging to that logic are analytic or synthetic.

[a] *Erkenntnis*

[1] "Whatsoever you show me thusly, unbelieving, I hate it." Horace, *Epistles*, II. iii.188.

As indispensable as it is, however, to answer this question, at the same time it is just as difficult; and although the principal reason why the answer has not long since been sought rests in the fact that it had occurred to no one that such a thing could be asked, nonetheless a second reason is that a satisfactory answer to this one question requires more assiduous, deeper, and more painstaking reflection than the most prolix work of metaphysics ever did, which promised its author immortality on its first appearance. Also, every perceptive reader, if he carefully ponders what this problem demands, being frightened at first by its difficulty, is bound to consider it insoluble and, if such pure synthetic cognitions *a priori* were not actual, altogether impossible; which is what actually befell *David Hume*, although he was far from conceiving the question in such universality as it is here, and as it must be if the reply is to be decisive for all metaphysics. For how is it possible, asked the acute man, that when I am given one concept I can go beyond it and connect another one to it that is not contained in it, and can indeed do so, as though the latter *necessarily* belonged to the former? Only experience can provide us with such connections (so he concluded from this difficulty, which he took for an impossibility), and all of this supposed necessity – or, what is the same – this cognition taken for *a priori*, is nothing but a long-standing habit of finding something to be true and consequently of taking subjective necessity to be objective.

If the reader complains about the toil and trouble that I will give him with the solution to this problem, he need only make the attempt to solve [4:278] it more easily himself. Perhaps he will then feel himself obliged to the one who has taken on a task of such profound inquiry for him, and will rather allow himself to express some amazement over the ease with which the solution could still be given, considering the nature of the matter; for indeed it cost years of toil to solve this problem in its full universality (as this word is understood by the mathematicians, namely, as sufficient for all cases), and also ultimately to be able to present it in analytic form, as the reader will find it here.

All metaphysicians are therefore solemnly and lawfully suspended from their occupations until such a time as they will have satisfactorily answered the question: *How are synthetic cognitions* a priori *possible?* For in this answer alone consists the credential which they must present if they have something to advance to us in the name of pure reason; in default of

which, however, they can expect only that reasonable persons, who have been deceived so often already, will reject their offerings without any further investigation.

If, on the contrary, they want to put forth their occupation not as *science*, but as an *art* of beneficial persuasions accommodated to general common sense, then they cannot justly be barred from this trade. They will then use the modest language of reasonable belief, they will acknowledge that it is not allowed them even once *to guess*, let alone to *know*,[b] something about that which lies beyond the boundaries of all possible experience, but only *to assume* something about it (not for speculative use, for they must renounce that, but solely for practical use), as is possible and even indispensable for the guidance of the understanding and will in life. Only thus will they be able to call themselves useful and wise men, the more so, the more they renounce the name of metaphysicians; for metaphysicians want to be speculative philosophers, and since one cannot aim for vapid probabilities when judgments *a priori* are at stake (for what is alleged to be cognized *a priori* is thereby announced as necessary), it cannot be
[4:279] permitted them to play with guesses, but rather their assertions must be science or they are nothing at all.

It can be said that the whole of transcendental philosophy, which necessarily precedes all of metaphysics, is itself nothing other than simply the complete solution of the question presented here, but in systematic order and detail, and that until now there has therefore been no transcendental philosophy; for what goes under this name is really a part of metaphysics, but this science is to settle the possibility of metaphysics in the first place, and therefore must precede all metaphysics.[2] Hence there need be no surprise because a science is required that is utterly deprived of assistance from other sciences, hence is itself completely new, in order just to answer a single question adequately, when the solution to it is conjoined with trouble and difficulty and even with some obscurity.

In now setting to work on this solution – and indeed following the analytic method, in which we presuppose that such cognitions from pure reason are actual – we can appeal to only two *sciences* of theoretical knowledge (which alone is being discussed here), namely, *pure mathematics* and *pure natural science*; for only these can present objects to us in intuition,

[b] *wissen*

[2] On transcendental philosophy, see Selections, pp. 154–5, 162–3, and Gotha Review, p. 209.

and consequently, if they happen to contain an *a priori* cognition, can show its truth or correspondence with the object *in concreto*, i.e., *its actuality*, from which one could then proceed along the analytic path to the ground of its possibility. This greatly facilitates the work, in which general considerations are not only applied to facts, but even start from them, instead of, as in the synthetic procedure, having to be derived wholly *in abstracto* from concepts.

But in order to ascend from these pure *a priori* cognitions (which are not only actual but also well-founded) to a possible cognition that we seek – namely, a metaphysics as science – we need to comprehend under our main question that which gives rise to metaphysics and which underlies its purely naturally given (though not above suspicion as regards truth) cognition *a priori* (which cognition, when pursued without any critical investigation of its possibility, is normally called metaphysics already) – in a word, the natural disposition to such a science; and so the main transcendental question, divided into four other questions, will be [4:280] answered step by step:

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 science possible?

It can be seen that even if the solution to these problems is intended principally to present the essential content of the *Critique*, still it also possesses something distinctive that is worthy of attention in its own right, namely, the search for the sources of given sciences in reason itself, in order to investigate and to survey for reason, by way of the deed itself, its power to cognize something *a priori*; whereby these sciences themselves then benefit, if not with respect to their content, nonetheless as regards their proper practice, and, while bringing light to a higher question regarding their common origin, they simultaneously provide occasion for a better explanation of their own nature.