

Critique of Pure Reason up to the end of the Analytic

Immanuel Kant

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Each four-point ellipsis. . . indicates the omission of a brief passage that seems to present more difficulty than it is worth. Longer omissions are reported between square brackets in normal-sized type. This version follows (B) the second edition of the *Critique*, though it also includes the (A) first-edition version of the Preface and of one other extended passage. Numerals like vii and 27 in the margins refer to page-numbers in B; ones like A xii and A 242 refer to A, and are given only for passages that don't also occur in B; and the likes of ..68 mean that B 68 (or whatever) started during the immediately preceding passage that has been omitted. These references can help you to connect this version with other translations or with the original German. Cross-references to other parts of this work include the word 'page(s)', and refer to page-numbers at the foot of each page. When something is referred to as 'on page n' it may run over onto the next page.

First launched: January 2007

Last amended: May 2007

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Prefaces and Introduction

Preface (first edition)

A vii In one of the ways of using it, human reason is burdened with questions that it •has to face up to, because the nature of reason itself insists on them. Yet these questions go beyond the limits of anything that reason can manage, which means that reason •can't answer them!

It isn't reason's fault that it is caught in this embarrassing situation. Its starting-point is with principles that it uses in the course of experience—it can't help using them there, and experience justifies them well enough. It takes these principles and does what its own nature requires it to do: it *rises* up and up, to ever more remote conditions—i.e. to ever earlier times, larger stretches of space, more general causes, smaller parts of bodies, and so on. But it becomes aware that it can't ever complete its job in this way, because there is no end to the questions that will arise. So reason sees itself as *having to* take a different tack, that will make the questions stop. What it does is to resort to principles that go so wide that they •can't possibly be used in experience, and yet •seem so innocent that even ordinary common sense is on good terms with them. But by working with those principles, reason stumbles into darkness and contradictions! When it becomes aware of these, reason may well infer that the source of the trouble must be some hidden errors that it has committed somewhere; but it can't uncover them, because the principles that it is using go beyond the limits of all possible experience and therefore can't be tested and revealed to be wrong by appeals to experience. Thinkers take opposite sides in the contradictions, which starts them quarrelling, and the battlefield of these endless controversies is what we call 'metaphysics'.

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[The word 'science', which we shall encounter often, is to be thought of as applying to every disciplined, rigorous branch of knowledge, not necessarily an empirical one; though on page 7 we'll find Kant implying that logic is not a science 'properly and objectively so-called'.] Metaphysics used to be called 'the queen of all the sciences'; and if we go by its *aims*, we'll think that it deserved this honorific title because its *topic* is so important. Current fashions, however, have poured scorn on the 'queen'; and the good lady mourns as Hecuba did: 'Greatest of all by race and birth, I am now cast out, powerless' [Kant gives this in Latin; it is from Ovid's *Metamorphoses*]. In the beginning, when the •dogmatists were in charge, the queen ruled as a despot. But her legislation still retained traces of ancient barbarism, so that her rule gradually sank down into complete anarchy (helped along by civil wars); and the •sceptics—a species of nomads who loathe the idea of settling down and raising crops—shattered civil unity from time to time. There weren't many of them, fortunately, so they couldn't prevent the dogmatists from continually trying to rebuild, though never according to a unanimously agreed plan. [We are about to meet the term 'physiology'. It means, roughly, 'empirical study'; Kant calls Locke's theory of mind a 'physiology' because he sees it as reporting empirical facts about how the mind works; this will later—at page 58—be contrasted with Kant's own 'transcendental' account of the mind, which consists in a theory about how the mind *must* work, and about what makes certain of its activities *legitimate*.] More recently it seemed as though a certain physiology of the human understanding (that of the famous Locke) would put an end to all these controversies by sorting out right from wrong among all the competing claims. But that's not how things turned out. Attempts were made by Locke and others to trace the birth of the supposed 'queen' back to the common rabble, back to common experience, casting doubt on her claims to the throne, i.e. to supremacy among intellectual endeavours;

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A x but she still asserted her claims, because in fact this family tree was a fiction. So metaphysics fell back into the same old worm-eaten dogmatism, and once more incurred the contempt from which science was to have rescued her (·by showing her descent from experience, which, though pulling her off her throne, would make her scientifically testable and thus respectable·). After every approach has been tried in vain (or so it is thought), the dominant mood now is one of weariness. And now we have complete indifferentism—the ‘common-sense’ attitude that refuses to take sides on any questions in metaphysics·. This attitude is the mother of chaos and night in the sciences; but at the same time it is the source for—or at least a herald of—the coming rebuilding and clarifying of parts of the sciences that clumsy efforts have made obscure, confused, and useless.

[The word ‘popular’, which we’ll meet here and in other places, means ‘suitable for plain ordinary not very educated people’.] It’s pointless to pretend to have an ‘I-don’t-care’ attitude regarding such inquiries ·as those of metaphysics·, whose subject-matter human nature *has to* care about. As for those so-called ‘indifferentists’:

they try hard to disguise themselves ·as something other than metaphysicians· by exchanging academic scholastic language for a popular style,

and yet

whenever they *think* at all, they inevitably slide back into metaphysical assertions of the sort they have so loudly claimed to hold in contempt ·when the scholastics assert them·.

Still, we should attend to and think about this ‘I don’t care’ attitude when it •occurs at a time when all the sciences are flourishing, and •is aimed precisely at the sciences whose results (if we could get any) we would be least willing to do without. This ·attitude· is obviously an effect not of our

age’s light-mindedness but of its ripened power of judgment,¹ which now refuses to be fobbed off with illusory knowledge, and makes two demands of reason:

- Take up again the hardest of all your tasks, namely, that of coming to know *yourself*;

- Institute a court of justice through which you can secure your rightful claims while dismissing all your groundless pretensions, doing this not by mere decrees but according to your own eternal and unchangeable laws.

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What is this ‘court’? It is *the critique of pure reason* itself.

By this I *don’t* mean a critique of books and systems, ·i.e. of how reason has been used by this or that *individual* thinker or cult·. I am talking about a critique of the faculty of reason *as such*, in regard to *every* attempt it might make to gain knowledge independently of all experience. [In that sentence, ‘knowledge’ translates *Erkenntnisse*, which is a plural noun. We can’t say ‘knowledges’; and in contexts where the singular ‘knowledge’ won’t do (as it will here), the phrase ‘items of knowledge’, or one of its

¹ One occasionally hears complaints about the superficiality of our age’s way of thinking, and about the decline of solid science. But I can’t see that the sciences whose grounds are well laid—mathematics, physics, and so on—in the least deserve this charge. They are •as entitled as they ever were to a reputation for solidity, and natural science is •even more entitled. This same ·critical· spirit would also have been effective in other branches of knowledge, ·including metaphysics·, if only proper attention had been paid to first principles. In the absence of this, ·there is another route to a similar end, namely· •the ‘I don’t care’ attitude, then •doubt, and finally •strict criticism; and these are proofs of a well-grounded way of thinking. Our age is the genuine age of criticism, to which everything must submit. Religion and law-giving have often tried to exempt themselves from it—one as too holy to be critically examined, the other as too majestic. But this has made them suspect, and deprived them of any claim to the sincere respect that reason grants only to things that have survived free and public examination.

kin, will be used. One translator used 'modes of knowledge' for the plural, but that is wrong: the topic is not modes=kinds of knowledge but merely items=bits=portions of knowledge. Other translators have used 'cognition' and 'cognitions'. That is better, and reminds us that this word of Kant's doesn't carry the heavy implications of 'knowledge' as used by many philosophers writing in English; for example, a Kantian item of knowledge doesn't have to be *true*. But 'cognition' sounds academic and artificial, in a way that this version is trying to avoid.] That critique will yield a decision about whether any metaphysics is possible, and will settle what its sources are and what its limits are—all this being extracted from first principles.

A xiii ·With all the others having failed·, this was the only approach left, and I took it. I flatter myself that by adopting it I have succeeded in removing all the errors that until now have set reason *against itself* when its use has lost contact with experience. I haven't dodged reason's questions by pleading that human reason can't answer them. Rather, I have •provided a principled list of all these questions, and after •locating the point where reason has misunderstood itself, I have •resolved the questions in a way that completely satisfies reason. The answer won't satisfy the craving for knowledge of fanatical dogmatists; but to satisfy *them* I'd have needed something that I lack—magical powers! Anyway, providing answers that would satisfy the dogmatists is not on our reason's natural agenda; philosophy's job is to *confront and challenge* the hocus-pocus arising from misunderstandings, however many prized and beloved delusions are annihilated in the process. In this project I have aimed above all at *completeness*, and I venture to say that there can't be a single metaphysical problem that hasn't been solved here, or for which at least the key to the solution hasn't been provided. The fact is that pure reason is such a perfect unity that if its principle were inadequate to deal with even *one* of the questions that its own nature faces it

with, then we might as well discard the principle entirely, because it couldn't be *relied on* to deal with any of the other questions either.

[In this work Kant doesn't ever address the reader directly; but in the present version he is sometimes made to do so, as a change from 'the reader' and 'he', because it makes for clarity and brevity.] AS I say this, I think I see in your face indignation mixed with contempt at claims that seem so pretentious and immodest! Yet any author of the most run-of-the-mill system in which he purports to prove that the soul is simple, or that the world must have had a beginning, makes claims that are incomparably less moderate than mine. *He* promises to extend human knowledge beyond the bounds of all possible experience, while I humbly admit that this totally exceeds my powers. My concern is only with •reason itself and its •pure [= 'non-empirical'] thinking; and to know all about them I don't have to look far beyond *myself*, because that's where I encounter •reason—in myself—and ·as for the •uses of reason·, common logic shows the way to make a complete and systematic list of all the simple acts of reason. The question to be answered is 'How much can I hope to achieve through these simple acts of reason, if I don't have experience to help me and provide me with raw material?' A xiv

So much for completeness in achieving each of our purposes, and comprehensiveness in achieving all of them together. These are not optional aims that we choose to adopt; they are laid on us by the subject-matter of our investigation, knowledge itself. A xv

When a writer embarks on something as tricky as this, it is right to demand that what he produces shall have two formal features—it must be (1) *certain* and (2) *clear*.

(1) Regarding certainty: I have instructed myself that in this kind of inquiry •opinions are absolutely not allowed, and that anything that even *looks like* an •hypothesis is

to be thrown out as condemned goods the moment it is discovered—not offered for sale even at a discounted price! Any item of knowledge that purports to be certain *a priori* [= ‘known for certain without consulting experience’] announces that it is to be regarded as *absolutely necessary*, so that there’s no room in my enquiry, which is precisely into what reason can do *without* consulting experience, for anything that is merely conjectural or hypothetical. . . . Whether I have kept my promise to myself about this is for you to judge; the author’s job is only to •present reasons, not to •comment on how they affect his judges. Still, it is all right for an author to take steps to avoid unknowingly weakening his arguments in the minds of readers—steps such as calling attention to passages that might cause reader to distrust him, trying to head off that distrust before it starts. Even if a passage is relevant only to one of the work’s lesser goals, any slight doubts that it raises in the reader’s mind could carry over to his judgment on the main goal of the work.

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[We are about to meet the unavoidable word ‘deduction’. In Kant’s sense of it, a ‘deduction’ of the concepts of a certain kind is *the production of a complete list of them*—not a jumbled list but, in a phrase he will use on page 5, ‘a systematically ordered inventory’. On page 57 we’ll find that he also takes a ‘deduction’ of some concepts to include a demonstration that they are *legitimate*.] That was all about *reason*. There is also the faculty or power that we call ‘the understanding’; and I have tried to get to the bottom of *that*, and also to identify the rules for—and the limits to—its use, in the chapter called ‘Deduction of the Pure Concepts of the Understanding’. . . . This part of the work gave me more trouble than any other, but I hope the results will reward the effort. I haven’t encountered any inquiry into the understanding that has tackled the task more seriously—more *weightily*—than I have. This inquiry, which goes pretty deep, has two sides.

•One side concerns the objects of the pure understand-

ing [= ‘the items that pure understanding thinks *about*’]. It aims to prove that its *a priori* concepts are **objectively** valid, and to make it comprehensible that they should be so.

So the results of that side of my inquiry are essential to my over-all purpose.

•The other side deals with the pure understanding itself, what makes it possible, and what cognitive powers underlie it; so it is dealing with pure understanding from the **subjective** angle.

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This subjective inquiry matters a lot for my main purpose, but it’s not an essential part of it, because the main question is always: ‘How much can understanding and reason know when they are cut loose from all experience? And *what* can they know in this way?’ The question is *not*: ‘What makes it possible for people to think?’ (An aside: Asking this latter question is rather like asking for the cause of a given effect, so that there’s a whiff of the hypothetical about it (though I’ll show later that that’s not in fact how matters stand); so that question might seem to lead to my expressing my *opinion*, leaving it to you to hold yours!) Because my subjective deduction isn’t an essential part of my main purpose, I remark in advance that if it doesn’t convince you as completely as I expect it to do, the objective deduction that is my primary concern will still have its full force. What I say about this on page 60 can stand alone.

(2) Regarding clarity: You are entitled to ask for two sorts of clarity: •logical clarity, through concepts, and also intuitive clarity, through intuitions—i.e. through examples or other concrete illustrations. [Roughly speaking, Kant uses ‘intuition’ to stand for any particular item presented in a •sensory confrontation or through •imagination. That’s enough for now; we’ll have to refine it later. •In the next paragraph, and occasionally later on, Kant will use the word ‘speculative’. It is applied to theories or systems or bodies

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of knowledge or inquiries, and all it says about such an item is that it is *not concerned with morality*; ones that *are* concerned with morality are 'practical'.]

I have thoroughly taken care of logical clarity, which is essential to my purpose; but that led to my not satisfying the demand for intuitive clarity—a less stringent demand, but still a fair one—for reasons having to do with my particular circumstances, as I'll now explain. In the course of my work I have been almost constantly unsure what to do about examples and illustrations. It always seemed to me that I needed them, and my first draft contained them, each in its proper place. But when I took in how big a task I had tackled, and how many topics I would have to deal with, I realized that it was going to take a big book just to cover all this in an unadorned, merely academic manner. Including examples and illustrations would have made it even bigger, and I thought that was a bad idea. Examples etc. would have been necessary if my aim had been to succeed with a general readership; but there was in any case no way I could have fitted my work for that kind of public. Examples etc. would be nice for expert metaphysicians too, though even with them there might be disadvantages; and anyway they don't *need* such helps in the way that general readers would; so the concern about the book's length carried the day. The

A xix Abbé Terrasson says that if a book's size is measured not only by (a) the number of pages but also by (b) the time needed to understand it, then it can be said of many a book that *it would have been much (b) shorter if it weren't so (a) short*. But on the other hand, if we are considering the intelligibility of a body of speculative knowledge that is wide-ranging yet theoretically unified in a principled manner, we might just as reasonably say of many a book that *it would be much (b) shorter if it weren't so (a) long*, i.e. that *it would have been much clearer if there hadn't been such an effort to*

make it clear. That's because the aids to clarity—examples, illustrations, etc.—are helpful in understanding the parts, but often interfere with the reader's grasp of the whole. They do this in two ways. They add to the sheer bulk of the thing, so that the reader can't quickly enough command an over-all view of the whole; and the bright colours of the examples and illustrations hide from the reader the articulation or structure of the system, by being plastered over them in his mind; and this is serious because when we want to judge such a system's unity and soundness, its articulations and structure are what matter most.

I should have thought it would be a considerable inducement for you to join your efforts to mine, when we have the prospect of carrying out—along the lines I have indicated—a large and important piece of work, doing it in a complete and lasting way. Metaphysics, according to the concept of it that I shall present, is the only one of all the sciences that can be made so complete that there's nothing left for our descendants to do but *teach* it for whatever purposes they have—not being able to add anything to its content. (Or at least the only one of the sciences for which this can be done in a quite short time and with not much effort—though the effort must be *concerted*.) For such a work of metaphysics is nothing but a systematically ordered inventory of everything we possess through pure reason. Nothing that ought to be included can escape us, because what reason comes up with entirely out of itself can't be hidden: reason itself brings it fully into our view as soon as we have discovered reason's common principle. The perfect unity of a body of knowledge of this sort, and the fact that it arises solely out of pure concepts (so that nothing coming from experience can broaden it or fill it in. . . .), make this absolute completeness not only achievable but also necessary. . . .

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A xxi I hope to present such a **system** of pure (speculative) reason, under the title *Metaphysics of Nature*. It won't be half as long as the present book, this **critique**, but it will be incomparably richer in content. The present work has as its first task to lay bare •what makes this sort of critique possible, and •what the conditions are under which it is possible; so it has had to take some weed-cluttered ground and make it clear and level. Here in the **critique** I look to you for the patience and impartiality of a •judge; but there •in the **system**• I'll look to you for the co-operation and support of an •assistant. •There will be plenty of work still to be done•. For however completely the present critique expounds the *principles* of the system—its *basic* truths, involving only its *basic* or *most* •elementary concepts—the system won't be properly comprehensive until *all* the •derivative concepts are dealt with in it; and we can't arrive at them *a priori*—we have to hunt them down one by one. And there is another, similar, difference between the two works: in this present one the whole *synthesis* of concepts will be carried out; in the later work we'll have to present their whole *analysis*; but that won't be hard—it will be fun rather than work. . . .

Preface (second edition)

vii We are faced with a theoretical treatment of knowledge that is reason's business, and we want to know: *Is this securely on track as a science?* We can soon get our answer by looking at how it develops. If any of these turns out to be the case:

- After many preliminaries and preparations are made, it gets stuck just before it reaches its goal, or
- To get towards its goal it keeps having to retrace its

steps and take a different turning somewhere, or

- It turns out that the different co-workers can't agree on *how* they should pursue their common aim,

then we can be sure that this work is floundering around,, and is nowhere near to getting onto the secure path of a science. In that case, we would be doing a service to reason if we could find that path for it, even if this involved giving up as futile much of what had rather thoughtlessly been included in the goal of the project.

From the earliest times, logic has traveled this secure path—we can see this from the fact that since the time of Aristotle it has never had to retrace its steps. (Well, it has abolished a few unneeded subtleties, and sharpened some of its presentations; but those changes affect the •elegance of the science rather than its •soundness.) What's also remarkable about logic is that right up to the present day it hasn't been able to take a single step *forward*—a fact that gives it every appearance of being finished, complete, closed off. Some moderns have *thought* they could enlarge logic by inserting into it

- psychological chapters about our various cognitive powers—imagination, ingenuity, etc., or
- metaphysical chapters about the source of knowledge, or about different kinds of certainty. . . ., or
- anthropological chapters about our prejudices (their causes and cures).

But this has come wholly from their ignorance of the special nature of logic. When you allow material to slop over from one science into others, you aren't *amplifying* the former—you are *bending it out of shape*. The boundaries of logic are fixed quite precisely by its being a science whose sole topic is the formal rules of all thinking, its task being only to reveal what they are and to prove them rigorously. It doesn't need to •distinguish empirical from *a priori* thinking, or •consider

the sources and subject-matters of the thinking whose rules it gives, or •attend to any obstacles—whether built-in or accidental—that our minds set up against thinking. That’s why the slop-over chapters to which I have referred are so wrong.

Logic owes its success to its limitedness, i.e. to how much it leaves out. Because of its limited scope, it is entitled—indeed it is *obliged*—to abstract from all the subject-matters of knowledge and from the differences among them. In logic, that is, the understanding’s topic is *itself and its own form*—nothing else. So of course it is much harder for reason to get started on the secure path of a science, because it has to attend not only to itself but also to subject-matters. [In this context, ‘subject-matters’ translates Kant’s *Objecte*, usually translated as ‘objects’.] Thus, logic relates to the other sciences only as a preliminary or preparatory study; it constitutes only the outer courtyard (so to speak) of the scientific building; and when we are concerned with contentful •knowledge, although we may need a logic for assessing and evaluating •it, the *getting* of •it is the business of the *sciences*, properly and objectively so-called.

To the extent that reason enters into these sciences, they must include some *a priori* knowledge. This knowledge can relate to its object in either of two ways. (1) It may merely
 x establish detailed facts about the object and its concept (with the concept being supplied from elsewhere); this is •theoretical knowledge by reason. (2) Or it may make the object actual; this is •practical knowledge by reason. In each of these, the pure part—the part in which reason reaches *a priori* results about its object—must be expounded all by itself, however much or little it may contain. It mustn’t get mixed up with the part that comes from other sources. . . .

Mathematics and physics are the two sciences in which reason yields theoretical knowledge, and they have to use a

priori methods to establish their results. Mathematics uses *only* those methods; physics uses them too, but in combination with methods appropriate to sources of knowledge other than reason.

For as far back as the history of human reason reaches, mathematics—directed by the admirable Greeks—travelled the secure •path of a science. But don’t think that this was as easy for mathematics as it was for logic. To find that royal •road (or rather: to *make* that royal road), rea- xi
 son had to attend only to itself; whereas mathematics, I believe, was left groping about for a long time (especially among the Egyptians). What transformed it was a *revolution*, brought about by the inspiration of one man—someone whose work put mathematics unmistakably on the secure road of a science. The history of this revolution in the way of thinking. . . .has not been preserved; nor has the name of its author. But. . . .we have evidence that the memory of the alteration brought about by the discovery of the first few yards of this new path seemed exceedingly important to mathematicians, and that made it unforgettable. The person who first demonstrated •the properties of• the isosceles triangle (perhaps Thales, but it doesn’t matter) had a *light* dawn in his mind. He found that what he had to do was not xii

(1) to note what he saw in this figure •as drawn on a tablet•,

or even

(2) to attend to its bare concept, and read off the triangle’s properties •directly• from that;

but rather

(3) to let his *a priori* concept of the isosceles triangle guide him in *constructing* such a triangle •in his mind•, and then to attribute to isosceles triangles only such properties as followed necessarily from what he had put into his construct.

[We'll hear more about this later, e.g. on page 136, but now is a good time to get hold of the basic idea. One might think that the proper method in geometry must either be

- based on geometrical figures that we can see or touch, or
- based on abstract concepts, and therefore not appealing to the senses.

The right method, according to Kant, takes one element from (1) and another from (2): the geometer doesn't look at or touch empirically given geometrical figures, but works *a priori*; so he starts with the concept of the figure he is interested in; but he doesn't get his results directly from that concept; rather, he lets the concept guide him in constructing a figure in his head; then he reads off the figure's properties from *that*. Kant hasn't yet said *why* he thinks this is right. That will come.]

Natural science was much slower in finding •the highway of science. It's only about a century and a half since Francis Bacon made an ingenious proposal that helped to show the way to •it and also energized those who were already on its tracks; so the discovery of this road, too, can be explained by a sudden revolution in the way of thinking. In this discussion I'll attend only to the empirical aspects of natural science.

Consider some of the great events in the history of science (they are in chronological order, but I'm not claiming to be historically precise about them—we don't know enough for that):

- Galileo rolled balls of a weight chosen by himself down an inclined plane;
- Torricelli made the air bear a weight that he had previously calculated to be equal to that of a known column of water;
- Stahl changed metals into calx by removing •something from them, and then changed them back into metal by putting •it back again.

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With each of these events, a light dawned on all those who study Nature. They came to understand that reason has

insight only into what it itself produces, according to its own design; rather than letting Nature guide its movements by keeping it on a leash, so to speak, reason must take the initiative and. . . .compel Nature to answer its questions. Accidental observations, not made according to any previously designed plan, can never come together into a *necessary* law—which is what reason looks for and has to have. Reason must approach Nature with, in one hand,

- its principles, which allow it (as nothing else does) to count patterns among appearances as laws,

and, in the other hand,

- experiments that it has devised in the light of these principles.

That's the only way reason can learn from Nature; but •don't be misled by the phrase 'learn from'. Reason is to be instructed by Nature not •like a pupil who soaks up everything his teacher chooses to say, but rather •like a judge who makes witnesses answer the questions he puts to them. Thus even physics owes the revolution in its way of thinking to the insight that

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- anything that *unaided* reason won't be able to know—i.e. anything that reason has to learn from Nature—it must *look for in* Nature under the guidance of what reason itself *puts into* Nature. (But it is genuinely looking into Nature for something, not merely dictating something to Nature.)

That's how natural science, after many centuries of groping about, was first brought onto the secure path of a science.

Metaphysics is a completely self-contained speculative [see note on page 4] knowledge through reason; it soars above the teachings of experience; its knowledge comes through mere concepts (and not, like mathematics, through bringing concepts to bear on •mentally constructed• intuitions). It is older than all the other sciences, and would survive even

if all the others were swallowed up by an all-consuming barbarism. And yet metaphysics still hasn't had the good fortune to be able to enter on the secure course of a science. In metaphysics reason is constantly getting *stuck*, even when the laws into which it claims to have *a priori* insight are not high-flown or esoteric or suspect, but confirmed by the commonest experience. In metaphysics we keep having to retrace our steps, because we keep finding that the path doesn't lead where we want to go; and metaphysicians are so far from reaching unanimity in their views that this area is a *battlefield*, and indeed one that seems to be just right for testing one's powers in mock combat. Why 'mock'? Because on this battlefield no warrior has ever won an inch of territory, and none has been able to win in such a way as to take permanent possession of any ground. So there's really no doubt that the procedure of metaphysics, so far, has been a mere groping, and (it gets worse!) a groping among mere concepts.

Why hasn't the secure path of science been found yet for metaphysics? 'Perhaps it is impossible.' But in that case, why has Nature *afflicted* our reason with the restless search for such a path, as though this were one of reason's most important tasks? Worse still: if reason, in one of the most important parts of our pursuit of knowledge, doesn't just desert us but lures us on with delusions and in the end betrays us, why should we trust it in any area of thought? If the path—the secure path along which metaphysics can be a real science—does exist but we haven't yet found it, a less despairing question arises: what indications are there to encourage us in our hope that by renewed efforts we will have better fortune than our predecessors did?

Well, mathematics became what it now is through a single all-at-once revolution, and the same is true of natural science. These *remarkable* examples prompt in me the

thought that we should focus on the essential element in the change in the ways of thinking that has done them so much good, and try, at least as an experiment, to reproduce that essential element in the context of metaphysics, so far as their analogy with it will permit. (The basis or framework for the analogy is that all three are domains of knowledge in which reason is involved.) What follows is my attempt at that experiment, i.e. my attempt to sketch a revolution in metaphysics that will mirror the revolutions in mathematics and natural science. Until now it has been assumed that all **our knowledge must conform to the objects** that it is knowledge of; but working on that basis we have never succeeded in learning anything—never *added* anything to our stock of knowledge—in an *a priori* way through concepts. So let us now change our tack and experiment with doing metaphysics on the basis of the assumption that **the objects must conform to our knowledge**. That would fit better with the upshot that we want, namely *a priori* knowledge of the objects that will tell us something definite about them before they are given to us. [Here, 'given to us' means 'presented to us in sense-experience'. If the knowledge in question were available to us only *after* the objects were given to us, it wouldn't be *a priori*, and so it wouldn't be metaphysics.] This would be like Copernicus's basic idea: having found that he wasn't getting far with explaining the movements of the heavenly bodies while assuming that the whole flock of them was revolving around the observer, he tried making the observer revolve and leaving the stars at rest. Well, in metaphysics we can try the same idea as applied to the *intuition* of objects. [See note on 'intuition' on page 4.] If our intuition has to conform to the constitution of the objects, I don't see how we can know anything about them *a priori*; but I can easily conceive of having *a priori* knowledge of objects if they (as objects of the senses) have to conform to the constitution of our faculty of intuition.

That's the first part of my proposed as-it-were-Copernican revolution; now for the second part. If the intuitions I have been talking about are to constitute knowledge of anything, there must be more here than just intuitions; I'll have to take them to be representations of something that is their object—i.e. what they are intuitions *of*—and my conclusions about what the object is like must come through those representations. Any beliefs I reach about what an object is like will involve me in using *concepts* of it—if I come to think that something is solid, say, I'll have to bring my concept of solidity to bear on it. [Kant speaks of my 'determination of the object. This word and its cognates occur about a thousand times in this book, and the present version will deal with them variously, depending on the context. In many contexts, including this one, 'belief about what x is like' is about right: a determination is centrally a *settling* or *making definite* or *fixing* or *pinning down*; so the underlying idea is that of settling on or accepting some proposition about the detailed nature of x.] Now there are two ways in which my concepts might fit the objects of my inquiries. One is this:

- My concepts, which I employ in my beliefs about what the object is like, conform to the objects.

If that is right, though, I am back in my old difficulty, namely that it seems impossible for me to know anything *a priori* about the object. The second alternative is this:

- The objects conform to my concepts, or—the same thing in different words—
- The experience in which the objects are known conforms to my concepts.

The focus on experience is legitimate, because it is *only* in experience that the objects can be known as things that are *given*. This second alternative offers a gleam of hope: experience is a kind of knowledge in which the understanding must be involved; the understanding has rules that I must presuppose in myself before any object is given to

me, meaning that I have the rules *a priori*; the rules are embodied in concepts which must also be *a priori*. Why? Well, I can't get the concepts from experience, i.e. learn from experience what the rules are, because these concepts (these rules) are essentially involved in my *having* experience in the first place. So I have these *a priori* concepts, and all objects of experience *must* conform to them—and *that* is how my concepts fit the objects of experience. As for objects considered as items that are thought through reason but... can't be given in experience at all, the attempt to *think* them... will provide a splendid test of what we are adopting as our new way of thinking, namely that all we can know of things *a priori* is what we have put into them.²

This experiment succeeds as well as we could wish, and it promises the secure course of a science to metaphysics in its

² This method, modelled on that of those who study Nature, thus consists in this: to seek the elements of pure reason in *what admits of being confirmed or refuted by an experiment*. Now, the propositions of pure reason, especially if they venture beyond the boundaries of all possible experience, can't be tested in the natural-science manner, namely by performing experiments *on their objects*. The experiment will have to be performed on *concepts and principles that we assume a priori*, and this is how it will have to be conducted: We organize our thoughts involving these concepts and principles in such a way that the same objects can be considered from two different standpoints—

- as objects of the senses and the understanding (this is the side of experience), and
- as objects that are not experienced but merely *thought* (this is the side of reason that is isolated from experience and trying to get beyond the bounds of it).

If we now find that when things are considered from this twofold standpoint all goes well with the principle of pure reason, and that if only one standpoint is adopted an unavoidable conflict breaks out between reason and itself, then the experiment decides for the correctness of this distinction between objects of the senses and objects of thought.

first part, where it is concerned only with *a priori* concepts to which corresponding objects can be given in experience. For after our thought-change, we can very well (1) explain how *a priori* knowledge is possible; and, what's more, we can (2) provide satisfactory proofs of the laws that are the *a priori* basis of Nature (with •Nature understood as •the sum total of all the objects of experience). Neither of these feats was possible in our earlier way of going about things.

But from this account of our capacity for *a priori* knowledge, in the first part of metaphysics, there emerges a very strange result which seems to threaten what we want to do in the **second** part of metaphysics. What the latter is essentially concerned with is *getting beyond the boundaries of possible experience*; but the revolutionary account of how *a priori* knowledge is possible seems to imply that that's precisely what we can't do! But now there's an other experiment we can perform. It will put to work, and in that way provide a cross-check on, the conclusion we reached in our first shot at explaining *a priori* knowledge, namely that such knowledge encompasses only *appearances*, leaving the *thing in itself* as something that is real in itself but unknown to us. [In what follows, Kant introduces topics that he hasn't in the least explained and, as he admits a little later, announcing results that he won't properly argue for until the Preface and Introduction are behind us and we get into the book proper. In the meantime, think of 'the unconditioned' as covering such things as **(1)** a cause that hasn't itself been caused, **(2)** an expanse of space that isn't nested in a larger space, **(3)** a portion of matter that doesn't have any parts, **(4)** a period of time that isn't part of a longer period. In this context, calling a thing 'conditioned' is saying that it is caused, or surrounded by space, or divisible into smaller parts, and so on. Kant makes all this hard to think about by discussing it all at once, using the very broad terms 'condition' and 'unconditioned'; more specific cases will be discussed in the Dialectic, hundreds of pages down the line. Still, you can get the hang of the general *shape* of what he is

saying here.] What forces us to go beyond the boundaries of experience and of all appearances is the fact that reason demands—necessarily and legitimately—that for every kind of *condition* there is (in things in themselves) something *unconditioned*. The demand for 'the unconditioned' is a demand for a completion of the series of conditions—e.g. reason is interested in a cause that wasn't caused, because it is interested in the idea of a complete list of **all the causes**. Now, suppose we find that these two things are the case:

- When we assume that our knowledge from experience conforms to the objects as things in themselves, the very thought of *the unconditioned* leads to contradiction;
- When we assume that our representation of things as they are given to us doesn't conform to these things as they are in themselves, but rather that these objects as appearances conform to our way of representing them, then the contradiction disappears.

[For Kant, 'representation' applies both to a sense-presentation or intuition and also to a concept. He uses the double-barreled word here because he is making a double-barreled point: about how objects as intuited have to conform to *our* way of intuiting, and how objects as given in experience and studied by us have to conform to *our* ways of conceptualizing.] Those two results, taken together, imply that the unconditioned can't be present in •things insofar as they are known to us, i.e. given to us through our senses, but is present in •things insofar as we don't know them in that way, i.e. things in themselves; and that definitely confirms the view that we were putting to the test here, namely that things as we experience them should be distinguished from things as they are in themselves.³

³ This experiment of pure reason has much in common with something that chemists do. . . . The metaphysician separates pure *a priori* knowledge into two very different elements—knowledge of things

Now, after **speculative** reason [see note on ‘speculative’ on page 4] has been denied all progress in this field of the supersensible, there is still a question we can try to answer:

In reason’s **practical** knowledge are there any data that will give us a fix on the transcendent reason-based concept of *the unconditioned*, in such a way as to reach beyond the boundaries of all possible experience?

If so, that gives metaphysics what it has wanted all along, *a priori* knowledge through reason, but only from a practical standpoint. If we are planning to work with that practical standpoint, speculative reason will still have done something for us, namely cleared a space for reason to stretch out into, even if it couldn’t put anything in it; and that leaves us free to listen to reason’s demand that we fill it, if we can, through practical data of reason. . . .

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The attempt to transform the accepted procedure of metaphysics, completely revolutionizing it following the example of the geometers and natural scientists—*that* is what this critique of pure speculative reason is all about. This is a treatise on method, not a system of the science itself; but it will sketch the entire ground-plan of the science of metaphysics, showing its boundaries and its whole internal structure. It can do this because pure speculative reason has this peculiarity: it can measure its own powers according to its different ways of choosing what to think about, and also can give a complete list of all the ways it has of confronting itself with problems, which enables it to give a complete

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as appearances and knowledge of things in themselves. The dialectic brings them together again, harmonised by reason’s indispensable idea of *the unconditioned*, and finds that the only way to reach that harmony is through that distinction—that separation of the two radically different kinds of knowledge—and *that* shows the distinction to be sound.

preliminary sketch of a whole system of metaphysics. It *can* do these things, and it *should*. Regarding ‘it can’: in *a priori* knowledge anything that can be ascribed to the objects must be something that the thinking subject derived from himself. Regarding ‘it should’: so far as sources of knowledge are concerned, pure speculative reason is like an organism; it is an entirely separate and self-contained unity, with each part existing for the sake of all the others and vice versa; so that we can’t have absolute confidence in one employment of one of its functions unless we have investigated this function in all its relationships through the entire use of pure reason. That makes the whole project look horribly difficult, but there is something else that makes it easier again, namely: if by this critique [or Kant may mean: ‘if by this *Critique*’, i.e. ‘this book’] metaphysics is brought onto the secure path of a science, then it can *fully* deal with the *entire* field of kinds of knowledge belonging to it, and thus can complete its work and leave it for posterity as a knowledge-source to which nothing can ever be added, because it has to do solely with principles, and with the limitations on their use that are set by the principles themselves. (This is a rare good fortune that metaphysics enjoys. It isn’t shared by any other reason-driven science that has to do with objects. I’m not talking about logic here, because *it* deals not with objects but only with the form of thinking in general.) Hence, as a basic science, metaphysics is *obliged* to achieve this completeness. . . .

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[The word ‘criticism’, which we’ll soon encounter, translates Kant’s word *Kritik*. When he uses *Kritik* as a count-noun, it is translated by ‘critique’—‘this critique’, ‘a critique’. But when he uses it as a mass-noun, as here, it can’t be translated by ‘critique’, because that has no a mass-noun use: it isn’t idiomatic English to say ‘Critique has purified metaphysics’. In these contexts *Kritik* is translated by ‘criticism’.]

·NEGATIVE V. POSITIVE IN RELATION TO SPECULATIVE V. PRACTICAL·

You may want to say: 'A metaphysics that criticism has purified—but only by bringing it to a dead halt! What sort of treasure is *that* to leave to posterity?' A quick overview of this book might indeed lead you think that the only good it does is negative, teaching us *not* to venture with speculative reason beyond the boundaries of experience. Well, that is indeed its primary value; but when we look further we see that this ·negative value· is also positive. If speculative reason takes its principles beyond their proper boundaries, it isn't actually *extending* our use of reason, but rather *narrowing* it, ·so that the instruction *not* to do this is an instruction to *enlarge* our use of reason, which is a positive doctrine·. Why is that misbehaviour by speculative reason a narrowing? Because it threatens to push the boundaries of sensibility (to which these principles really belong) out so far that *everything* lies inside them, and this puts our use of pure **(practical) reason out of business**. Thus, a critique that is negative in its work of limiting the speculative use of reason also has a very important positive function, namely removing an obstacle that limits, or even threatens to wipe out, the practical use of reason. (To see this, we have only to grasp that there is an absolutely necessary •practical use of pure reason—the moral use—in which it has to stretch out beyond the boundaries of sensibility. In doing this it doesn't need help from •speculative reason, but it has to be protected from being driven into self-contradiction by interferences from •speculative reason when •it misbehaves.) To deny that this service of criticism is *positively* useful would be like denying that the police are positively useful because their main job is to cause people *not* to behave in ways that disturb the peace and safety of the community. In the analytical part of the critique [or 'in the analytical part of the *Critique*'; but the part in

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question includes more than the part of the *Critique of Pure Reason* that has 'Analytic' in its title], these things are proved:

- Space and time are only forms of ·our· sensible intuition, so that the only things that exist in space and time are *things as appearances*.
- Our only concepts of the understanding. . . are ones for which there are corresponding intuitions; so that we can't have knowledge of any object as a thing in itself, but only as an. . . appearance.

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This latter thesis implies that all possible speculative knowledge through reason is confined to objects of experience. Still—and this is important—although we can't •know these objects as things in themselves, we must at least be able to •think them as things in themselves.⁴

For otherwise we would be landed with the absurd conclusion that there could be an *appearance* without *something that appears*. ·And something else important is at stake, as I shall now explain·. Our critique has made it necessary to distinguish •things as objects of experience from •things—the very same things!—in themselves. Now, if we didn't make this distinction (and we wouldn't be making it if we held that things in themselves can't even be *thought*), ·we would lose something very important, which I shall explain in a moment. First, though, I have to sketch a thesis that is going to be defended in this *Critique*·. [This version now alters

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⁴ To •know an object, I must be able to prove its possibility (either showing through experience that it is actual, or proving it *a priori* through reason). But I can •think anything I like, as long as I don't contradict myself, i.e. as long as my concept is a possible thought (this is *logical* possibility), even if I can't be sure that it is possible for an object corresponding to it to exist (that would be *real* possibility, making the concept objectively valid). For a concept to be objectively valid, therefore, more is needed than mere logical possibility; but this 'more' needn't be sought in theoretical sources of knowledge; it may lie in practical ones.

the order in which Kant presents things—a re-ordering that should make his thought easier to follow.] This *Critique* will teach that any object should be taken *in a twofold sense*, as •an appearance and as •a thing in itself. It will present a justified list of the pure concepts of the understanding, one of these being the concept of *causality* whose associated principle is the principle of causality, which amounts to a statement of strict determinism. The way the list is justified will imply that the concept (and hence the principle) of causality applies only to things considered as objects of experience, and that things in themselves aren't subject to the principle of causality. If that's all correct, then we can have both of these without contradiction:

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- A person's will is thought of, in terms of its appearance in visible actions, as necessarily subject to the law of Nature, i.e. the principle of causality, i.e. determinism, and thus as not being free.
- The very same will is thought of as belonging to a thing in itself (namely, that person's soul considered as a thing in itself), as not subject to the law of Nature, and thus as being free.

Speculative reason won't (and even more clearly empirical observation won't) allow me to •know my own soul as a thing in itself. So the thought of freedom as something it has can't work its way into anything that I know, which is why attributing freedom to it as a thing in itself doesn't clash with applying determinism to it as a thing that appears. . . . Still, I can •think freedom, i.e. the representation of it is at least not self-contradictory, as long as I hold on to the critical distinction between the two ways of representing (sensible and intellectual), along with the limit it sets to the pure concepts of the understanding and hence to the principles flowing from them. Now I can explain why the failure to distinguish things as they appear from things as

they are in themselves would bring us a great loss. If we didn't have that distinction, the principle of causality would hold for all things in general; *everything* would be part of the deterministic causal mechanism of Nature. [For Kant, 'Nature' is always tied to the notion of things as they *appear*.] In that case, it would obviously be self-contradictory to say of a single human soul that its will is •free and yet at the same time •subject to natural necessity, i.e. not free; because without the great distinction we would be taking *the soul* in the same sense in both propositions. Why would this be such a big loss? Well, morality necessarily presupposes that our will is free (in the strictest sense). The case for this comes from certain *a priori* practical principles contained in our reason, principles that would be absolutely impossible except on the presupposition of freedom. Now, if speculative reason had proved that freedom can't even be *thought*, then morality's presupposition of freedom would *have to* yield to the other one—i.e. the deterministic principle of causality, as applicable to *everything*—and so •morality would have to be given up in deference to •the mechanism of Nature, because freedom is of the essence of morality. You might think that the mere *thinkability* of freedom isn't enough to rescue morality, but it is. All I need for morality is that freedom doesn't contradict itself, i.e. it should at least be thinkable that the freedom of an action creates no obstacle to that same action's belonging within the mechanism of Nature; I don't have to have any insight into *how* this might come about.—Thus, the doctrine of morality stands on its own ground, as does the doctrine of Nature; and this wouldn't be so if criticism hadn't taught us of our unavoidable ignorance in respect of the things in themselves, thus limiting our theoretical knowledge to mere appearances.

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•END OF NEGATIVE/POSITIVE IN RELATION TO SPECULATIVE/PRACTICAL•

The critical principles of pure reason can be shown to be positively useful, on the same lines as that, in connection with the concept of •God (and of the •simple nature of our soul, but for brevity's sake I shan't go into that here, except to remark that the thought of the soul as simple—i.e. having no parts—goes with the thought of it as immortal-).
 xxx In the practical use of my reason I *have to* presuppose •God, •freedom and •immortality; and I *can't* presuppose them unless I deprive speculative reason of its pretension to extravagant insights. •Why can't I-? Because it can get to such 'insights' only by helping itself to principles that really apply only to objects of possible experience; when you apply such a principle to something that can't be an object of experience, you •turn it into something that *can* be an object of possible experience, which is to say that you *turn it into* an appearance; and the upshot of that is to •abolish things as they are in themselves, and thus to declare that pure reason can't have any practical extension. So I had to deny •knowledge in order to make room for faith [*Glaube*, religious faith]. The dogmatism of metaphysics, i.e. the preconception that there can be progress in metaphysics without reason's being subjected to criticism, is the true source of all •unbelief—always very dogmatic—that wars against morality. [For Kant, 'dogmatic' is a technical term, which he explains on page 19. A procedure is 'dogmatic' if it relies on an intellectual faculty—reason or understanding—without first considering whether that faculty is up to the job.] •Back now to the challenge about what we are leaving 'to posterity'. It can't be very hard to bequeath to posterity a systematic metaphysics, constructed according to the criticism of pure reason, but still this bequest is quite valuable. •To see its value, you have only (1) to compare •the culture of reason that is set on the course of a secure science with •the rootless groping
 xxxi and empty-headed wandering that reason engages in when

it hasn't been subjected to criticism. Or (2) to think about young people who are hungry for knowledge, and consider how much better they might spend their time than in the ordinary dogmatism that encourages them, so early and so strongly, •to engage in facile hair-splitting about things that they don't understand. . . .or even •to invent new thoughts and opinions while neglecting the better-grounded sciences. Or, above all, (3) to take account of the way criticism puts an end for ever to objections against morality and religion, doing this by the Socratic method of showing clearly the ignorance of the opponent. For there always has been, and always will be, *some* kind of metaphysics, so there will always be a *dialectic of pure reason*, because dialectic is natural to reason. [In this context 'dialectic' means, roughly, 'tendency to get into bad tangles']. So the first and most important task of philosophy is to deprive dialectic of its bad influence, once and for all, by blocking off the source of the errors.

Despite this important **change** in the field of the sciences, subjecting speculative reason to the •loss of the possessions it used to *think* it had, nothing has happened to diminish the good that the doctrines of pure reason have done for general
 xxxii human interests. The •loss touches only the monopoly of the schools [here = 'philosophy departments'], and doesn't touch the interests of humanity. Bring out your most inflexible dogmatist, so that I can question him about some proofs:

- the proof that our soul survives death, based on the simplicity of substance,
- the proof that our will is free despite universal determinism, based on the subtle though ineffective distinctions between subjective and objective practical necessity,
- the proof of the existence of God, based on the concept of a most real being (or on. . . .the necessity of a first mover).

My question to the dogmatist is this: After the schools have come up with those 'proofs', have any of them reached the public or had the slightest influence over its convictions? If •that has never happened, and can't be expected ever to happen because such subtle theorising is out of the intellectual reach of ordinary folk; if instead •the conviction that reaches the public had to be based on quite different reasons (or on none); then •these possessions—the conclusions of the above three arguments—not only remain undisturbed but will even gain in respect when the schools are instructed that when they are dealing with universal human concerns •they shouldn't aim at any insight that is too broad or too elevated to be grasped by the great multitude (who are always most worthy of our respect), and •should limit themselves to developing only grounds of proof that everyone can grasp and that are sufficient from a moral standpoint. (I spoke of the public's having 'quite different reasons' for the conclusions of the three proofs; I had better say what they are. •For survival after death: humanity's notable capacity for never being satisfied by what *this* world has to offer. . . . leading to the hope of a future life. •For freedom: merely the clear exhibition of our duties, in opposition to all claims of the inclinations, leading to the consciousness of freedom. •For the existence of God: the splendid order, beauty, and providence displayed everywhere in Nature, leading to the belief in a wise and great author of the world.) The **change** thus concerns only the arrogant claims of the schools, which would like to be taken for the sole experts and guardians of such truths (as they can rightly be taken in many other branches of knowledge), sharing with the public only the •use of such truths, keeping the •key to them for themselves. . . . But provision is made for the speculative philosopher to make a more moderate claim. He will still be the exclusive trustee of a science that is useful to the public even without

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their knowing it, namely the *critique of reason*. This can't ever be popular [see note on page 2], but it doesn't need to be: subtle objections to useful truths don't enter people's minds, any more than do fine-spun arguments *for* those truths. But the schools—like everyone who raises himself to speculation—inevitably encounter both •the arguments for and the arguments against; so the critique of reason is obliged to prevent the scandal that is bound to break out sooner or later even among •ordinary people—stopping it once and for all, by a fundamental inquiry into the rights of speculative reason. In the absence of criticism, metaphysicians are sure to get involved in the scandal (and eventually even the clergy among them will get involved), leading them to twist their own doctrines. Only through criticism can we *cut the roots* of •materialism, fatalism, atheism, agnosticism, fanaticism, and superstition, all of which can do harm to everyone; and finally also the roots of •idealism and scepticism, which are dangerous to the schools rather than to the public, to which they can't easily be transmitted. . . .

[In the remaining few pages of this Preface, Kant (1) that governments that care about academic matters should support criticism rather than its opponents; (2) explains that he is not opposing all 'dogmatic' procedures in the sciences, but only 'the way pure reason proceeds dogmatically without first criticizing its own abilities'; (3) praises the Leibnizian philosopher Wolff, 'the greatest among all dogmatic philosophers', who pioneered 'a spirit of thoroughness in Germany' and is not personally to blame for his failure to see that before reason is used it should be subjected to criticism; (4) compares and contrasts the first and second editions, and (5) offers a long footnote concerning his so-called 'Refutation of Idealism'. The main content of that footnote will be given in this version as part of the text on page 128, right after the Refutation of Idealism.]

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Introduction

1. The distinction between pure and empirical knowledge

1 All our knowledge begins with experience—there’s no doubt about *that*. How else would our faculty of knowledge be stirred into activity if not by objects that stimulate our senses? (Part of what the objects do is to *produce* our representations; another part is to set our understanding to work on inter-relating them—connecting them or separating them—and thereby working up the raw material of sensible impressions into the knowledge of objects that we call ‘experience’.) None of our knowledge comes earlier than experience; all knowledge begins at the same time as experience.

But although all our knowledge begins *with* experience, that doesn’t mean that it all comes *from* experience. The situation might well be this:

Even our experiential knowledge has two ingredients:

- what we get through ·sense·-impressions and •what our own faculty of knowledge provides out of itself, with sensible impressions merely prompting it to do this. ·We aren’t immediately aware of the second ingredient because· distinguishing it from the basic raw material requires skill, which requires attention, which requires long practice.

2 So there’s a question to be investigated here, and not immediately brushed aside, namely: Is there any such knowledge that is independent of all experience and even of all impressions of the senses? If there is, then it is what we call *a priori* knowledge, as distinct from ‘empirical’ knowledge, whose sources are *a posteriori*, namely in experience.

[Now Kant has a paragraph warning us against using ‘*a priori*’ in a certain weak sense that he says is current. He continues this theme in his next paragraph:]

In this book, therefore, I will understand by ‘*a priori*

knowledge’ not knowledge that comes independently of this 3
or that experience, but rather what occurs absolutely independently of all experience. Opposed to it there is empirical knowledge, i.e. knowledge that is possible only *a posteriori*, through experience. An item of *a priori* knowledge is called ‘pure’ if nothing empirical is mixed into it. The proposition ‘Every alteration has its cause’ is an *a priori* proposition, but it isn’t pure because the concept of *alteration* has to be taken from experience.

2. We have some items of *a priori* knowledge, and even the common understanding is never without them

What’s at issue here is a secure way of marking off pure items of knowledge from empirical ones. Experience of course teaches us that something is constituted thus and so, but not that it *couldn’t be* otherwise. First, then: if a proposition P in being thought is thought along with its necessity, it is an *a priori* judgment; and if every proposition from which P is derived is also valid as a necessary proposition, then P is absolutely *a priori*. Second: experience never gives its judgments true or strict universality, but only assumed and comparative universality through induction, enabling us to say of this or that rule ‘*We haven’t yet observed any* 4
exception to it’. Thus if a judgment is thought in strict universality, i.e. in such a way that no exception at all is allowed to be possible, then it is not derived from experience, but rather is valid absolutely *a priori*. You have an empirically universal proposition, therefore, when you choose to strengthen a proposition from ‘in most cases’ to ‘always’, as in the proposition ‘All bodies are heavy’. But if a proposition is strictly universal, it is *essentially* so. ·This isn’t something you just decide to give to the proposition·; knowing it requires a special source of knowledge, namely a capacity for *a priori* knowledge. Necessity and strict universality, therefore, are

secure indications that an item of knowledge is *a priori*, and they always go together. Sometimes one of them is easier to apply as a criterion, sometimes the other; so it's advisable to keep them in hand separately. We won't lose anything by relying on only one in a given case, because each of them is an infallible test of apriority.

It's easy to show that human knowledge actually does contain judgments that are necessary and in the strictest sense 'universal', i.e. pure *a priori* judgments. If you want an example from the sciences, look at all the propositions
5 of mathematics. If you want one from the most ordinary uses of the understanding, the proposition *Every alteration must have a cause* will serve the purpose. (Hume tried to get this proposition out of the experience of a frequent association of two kinds of event, first K_1 then K_2 , and a habit of connecting the two event-kinds—a habit that arises from the association. This habit creates a *subjective* necessity—'When I encounter a K_1 event I can't help expecting a K_2 event.'—but this approach can't capture the causal proposition, because the very concept of *cause* so obviously contains the concepts of *necessary connection with an effect* and *of strict universality* of the relevant rule; this is objective, not subjective, necessity.) But we could set examples aside, and instead prove *a priori* that our knowledge includes *a priori* principles. The proof would contend that such principles are needed if experience is to be possible. If we had no such principles, where would experience get its certainty from? It would have to resort to rules with an empirical basis; but they would all be contingent, so that *they* couldn't serve as first principles, i.e. as absolutely basic starting-points. Anyway, I'll settle for having set out the fact of the pure use of our faculty of knowledge, and the criterion for recognizing it. But it's not only in *judgments* that an *a priori* origin is revealed; it

also happens with some *concepts*. Take your experiential concept of *body* and remove, piecemeal, everything empirical that it contains—colour, hardness or softness, weight, even impenetrability—and you'll find that the body has vanished but the space that was occupied by it remains, and you can't get rid of it. Or again: take your empirical concept
6 of any kind of object you like (it doesn't have to be a body) and remove from it all the properties that experience tells you about; and you will be left with something you can't get rid of in that way, namely that through which you think of it as *substance* or as dependent on a substance, although this concept is more determinate—less abstract and undetailed—than the general concept of *object*. Thus, convinced by the necessity with which this concept forces itself on you, you must concede that it is lodged in your faculty of knowledge independently of all experience.

3. Philosophy needs a science to show that there can be a priori knowledge, and to establish its principles and its scope

But those points aren't as eloquent as the fact that some of our items of knowledge . . . seem to push back the boundaries of our judgments and knowledge—beyond all the limits of experience—doing this by means of concepts to which no corresponding object can ever be given in experience.

These items of knowledge go beyond the world of the senses and so can't be guided or corrected by experience, and it is precisely in *them* that we must conduct the inquiry into
7 our reason. I regard this inquiry as far more important, and more sublime in its goal, than anything the understanding can learn in the domain of appearances. I would rather run every risk of going wrong than be turned off from such important investigations because of worried second thoughts of my own or the contempt and indifference of

others. These unavoidable problems of pure reason are •God, •freedom and •immortality. And the science that tackles them is called metaphysics. It goes through all kinds of preparatory moves, but its final aim is just to solve those three problems.

At the outset, metaphysics proceeds in the dogmatic manner, i.e. it confidently tackles this task without first examining whether it is capable of carrying out such a great undertaking. Now, consider this scenario:

On leaving the territory of experience, we *don't* immediately build the bits of knowledge that we have into a big structure, without knowing where that knowledge comes from, and using principles whose origin one doesn't know—i.e. erecting the structure without care for its foundations. We are especially led into this caution about foundations by the fact that we raised long ago the question how the understanding could come to all this knowledge *a priori*, what its extent is, how valid it is, and what value it has.

8 It would be utterly *natural* for that to be what actually happens, if by 'natural' we mean what properly and reasonably ought to happen. But if in calling it 'natural' we mean that it's what *does* happen, then on the contrary nothing is more natural and comprehensible than that this investigation into foundations should long have been neglected. Why is it comprehensible? Well, one part of our *a priori* knowledge—namely, the mathematical—has been reliable for centuries, and that leads to optimistic expectations about others as well, although these may be of an entirely different kind. Also, once we are outside the circle of experience, we can be sure of not being *refuted* by experience; and the charm of expanding our knowledge is so great that we'll go on doing it unless we bump into a clear contradiction. And we can avoid those if we fabricate carefully—but this doesn't alter

the fact that that's what they are, *fabrications*. Mathematics gives us a fine example of how far we can go with *a priori* knowledge independently of experience. It attends to objects and items of knowledge only so far as these can be exhibited in intuition; but it is easy to overlook this, because the intuitions in question can themselves be given *a priori* [see note on page 8], which makes it hard to distinguish them from mere pure *concepts*. Captivated by this seeming proof of the power of reason, the drive for expansion sees no bounds. The light dove in free flight, cutting through the air and feeling its resistance, might get the idea that it could fly better in airless space! That's what happened to Plato: he abandoned the world of the senses because it sets such narrow limits for the understanding, and ventured out beyond it, on the wings of the platonic 'ideas', into the empty space of pure understanding. What he didn't see was that his efforts weren't getting him anywhere because he had no resistance, no support against which he could brace himself, getting traction so as to start his understanding moving. That's what human reason usually does when theorizing: it completes its edifice as soon as it can, and *then* looks into whether the ground has been adequately prepared for it! . . . What keeps us free from all worry and suspicion during the construction, and soothes us with an appearance of thoroughness, is this. Much—perhaps most—of the business of our reason consists in analyses of the concepts we already have of objects. This yields us a multitude of bits of knowledge that are treasured as if they were new insights. Really they are nothing of the kind: all they do is to bring to light and clarify things that are already thought in our concepts (though in a confused way); they don't add anything to the content of our concepts, but merely set the concepts apart from each other. [Kant said that the **form** of those items of *a priori* knowledge is what leads us to their being treasured etc., and that they don't extend the **matter** or content

etc. He presumably means to echo the form/matter distinction as it occurs in Aristotle and his followers. He very often speaks of the 'form' of inner sense and the 'form' of outer sense; he plays this off against 'matter' less often. Notable occurrences are on pages 28, 36, and 42 and 10 145.] Still, this procedure does yield real *a priori* knowledge, which grows in a secure and useful fashion; and that leads reason to advance, not knowing that it was doing so under false colours, to make assertions of a completely different sort—assertions in which reason *adds* to a given concept something that is entirely alien to it (and does this *a priori*!). It isn't known *how* it could do this; that question wasn't even raised. So I shall deal right away with the difference between these two sorts of knowledge.

4. The difference between analytic and synthetic judgments

In every judgment involving the thought of the relation of the subject to the predicate, this relation is possible in two different ways. (I'll state this for affirmative judgments; it will be easy to re-apply what I say to negative judgments.) Either

- the predicate B belongs to the subject A as something that's hidden *in* this concept A, or
- B lies entirely *outside* the concept A but is *connected* to it.

In the former case I call the judgment 'analytic', in the latter I call it 'synthetic'. In each case there is a connection, but in an analytic judgment the connection of the predicate to the subject is thought through identity—A is connected with B by being identical with a part of B—while in a synthetic judgment the connection is thought without identity. An analytic judgment could be called a judgment 11 of •clarification: its predicate doesn't add anything to the concept of the subject, but only dissects the subject so as to set out its component concepts, which were already

thought in it, though confusedly. A synthetic judgment could be called a judgment of •amplification: it *adds* to the concept of the subject a predicate that wasn't thought in it at all—even confusedly—and couldn't have been extracted from it through any analysis. If I say 'All bodies are extended', this is an analytic judgment. To find that extension is connected with the concept that I link with the word 'body', I don't need to go beyond that concept; all I need do is to analyse it, i.e. become conscious of the manifold that I always think when I have a thought of *body*—and then I'll find *in* it the concept of extension.

[The noun 'manifold' occurs hundreds of times in this work, and can't always be avoided. A manifold is an item that is complex, has many parts or elements. When I have a thought about *body*, it is a thought of something that is

a substance, extended, impenetrable, non-sentient, shaped,

and perhaps other elements as well; that complex of thoughts is a manifold. Another example: the phrase 'the manifold of sensibility' refers to the complex totality of raw sensory intake—what William James called the 'blooming buzzing confusion'. But we'll see in item (b) on page 33 that a straight line is also a manifold, because although it isn't qualitatively various it does have many parts.]

If on the other hand I say 'All bodies are heavy', this is a synthetic judgment: its predicate is not a *part* of what is involved in my general thought of *body*; it is being *added* to the subject, which is what makes this a synthetic judgment.

Judgments of experience are all synthetic. It would be absurd to base an analytic judgment on experience, because I don't need to go beyond my concept of the subject in order to formulate the judgment, and I don't need the testimony of experience for that. The proposition that *a body is extended* is established *a priori*, and isn't a judgment of experience. For before I appeal to experience I already have everything I 12 need for that judgment in my concept of *body*—I draw the predicate out from *that*. In extracting *extended* from *body*

I am guided by the principle of contradiction—I find that predicate in that subject by coming to realize that *x* is an *unextended body* is self-contradictory—and this method of extraction makes me aware that the judgment is necessary, which I could never have learned from experience. On the other hand, although I don't at all include the predicate *weight* in the general concept of *body*, the concept of *body* designates an object that I find in one part of experience, and I can add to it concepts of other parts of the same experience, treating them as belonging with the concept *body*; and of course what I have in mind in the present context is the 'other part of experience' that is designated by the concept *weight*. I can first know the concept of *body* analytically, through the characters of extension, impenetrability, shape etc., which are all thought in this concept. But when I look back on the experience from which I derived this concept of *body*, I find that *weight* is also always connected in experience with the characteristics of which the concept of body is made up, so I add *weight*, synthetically, as a predicate to that concept; and this, unlike analysis, enlarges my knowledge. So it is experience that makes possible a synthesis [= 'a putting-together'] that brings together the predicate-concept *weight* with the concept of *body*. Neither concept contains the other, but they belong to one another because they are, though only contingently, parts of a single whole, namely experience, which is itself a synthetic combination of intuitions.

13 But in a synthetic *a priori* judgment I don't have this means of help. If I am to go beyond the concept A and learn that another concept B is combined with it, what am I to rely on, given that I don't have the advantage of looking around for a basis in the domain of experience? What makes my synthesis of A with B possible? [In what follows, and in many other places, Kant will use a German expression meaning 'thing

that happens'. But things that happen are *events*, and this version will use 'event' throughout.] Take the proposition 'Every event has its cause'. My concept of *event* contains such ingredients as *existence that was preceded by a time when. . .* etc., and analytic judgments can be drawn from that. But the concept of *cause* lies entirely outside the concept of *event*; it signifies something different from the general concept of *event*, and isn't in any way contained in it. So how do I come to say of *events* in general something quite different from that concept, and to learn that the concept *cause* belongs to the concept *event*—indeed belongs to it necessarily, although not by being contained in that concept? What is the unknown something-or-other that the understanding is relying on when it thinks it has found, outside the concept of A, a predicate B that it believes to be connected with it? The unknown something can't be experience, for two reasons: (1) *Every event has its cause* connects *cause* with *event* with greater generality than experience can support; (2) *Every event has a cause* connects the two concepts necessarily, and therefore *a priori*, on the basis of mere concepts (though not by the analysis of mere concepts!). It is terrifically important that we solve this problem, identify the something-or-other that makes synthetic *a priori* judgments possible. Why? Because the entire final aim of our speculative *a priori* knowledge depends on such synthetic principles, ones that amplify. Of course analytic judgments are also important and necessary, but only for giving our concepts the clarity 14 that is needed for strong and secure synthetic judgments that will constitute real additions to our knowledge.

5. All theoretical sciences of reason contain synthetic *a priori* judgments as principles

In this section I shall illustrate that thesis in connection with each of the theoretical sciences of reason: mathematics,

natural science, and metaphysics.

(1) Mathematical judgments are all synthetic. This proposition seems to have escaped the notice of those who have worked on analysing human reason, and indeed to be directly opposed to all their conjectures; yet it is unquestionably true, and has very important consequences. It was found that the •inferences of the mathematicians all proceed in accordance with the principle of contradiction. . . .; and this led people to think that the fundamental •principles of mathematics could also be known through the principle of contradiction. But they were wrong about this. The principle of contradiction can of course lead one to grasp a synthetic proposition, but only by enabling that proposition to be deduced from another synthetic proposition; it can't ever do the job unaided.

15 First point: genuinely mathematical propositions are all *a priori* judgments, never empirical ones, because they carry necessity with them and you can't get necessity from experience. If you don't accept this, I'll •accommodate you; I'll •restrict my proposition to *pure* mathematics, •saying only that all the propositions of pure mathematics are *a priori*; and this is not just true but analytic, because •the concept of *pure* mathematics already implies that it doesn't contain anything empirical.

To be sure, you might initially think that the proposition $7 + 5 = 12$ is a merely analytic proposition that follows, via the principle of contradiction, from the concept of *sum of 7 and 5*. But if you look at it more closely you'll find that the concept of *sum of 7 and 5* contains nothing more than *number in which 7 and 5 are united*—that is all. When I have the thought of the sum of 5 and 7, I do *not* thereby have the thought of 12; no matter how long I spend analysing my concept of such a possible sum, I won't find 12 in it. •To arrive at 12 •we have to •go beyond these concepts; we have to •get help from an intuition that corresponds to one of the

concepts (an intuition of one's five fingers, for instance. . . .) and •add the units of the intuited five, one by one, to the concept of 7. . . . So the arithmetical proposition is always synthetic; and you'll see this even more clearly if you take •a pair of •larger numbers, for with them it will be shiningly clear that without getting help from intuition you will never find the sum by means of the mere analysis of your concepts, twist and turn them as you will. 16

Just as little is any principle of pure geometry analytic. *The straight line between two points is the shortest* is a synthetic proposition. For my concept of *straight* has no quantitative content; it is purely qualitative. So the concept of *shortest* is entirely additional to it, and can't be extracted by any analysis from the concept of *straight line*. We have to get help here from intuition; that's the only way we can carry out the synthesis—i.e. can bring *straight* and *shortest* together in a judgment. •What commonly makes us think that the predicate of such necessary judgments is already contained in our concept, making the judgment analytic, is merely ambiguity in the terms that are used. We have the thought that we *should* add the predicate *shortest* to our concept of *straight*, and this necessity—this 'should'—is inherent in those two concepts. •That may seem to come very close to saying that the judgment *A straight line is the shortest between two points* is analytic after all; but you'll see that it really isn't, if you attend carefully to what *exactly* is being said. •The question wasn't

•What **should** we think **in addition to** the concept *straight*?

but rather

•What **do** we think, even if only obscurely, **in** the concept *straight*?

There's no doubt that this predicate is necessarily attached to that subject, but not through being actually thought when

we think the subject—only through an intuition that has to be added to the subject-concept.

Geometers do indeed presuppose a few fundamental propositions that *are* analytic and based on the principle of contradiction. But as identical propositions they have a role that is methodical rather than doctrinal; they are at work in chains of deductions, not as basic principles. Examples: $a = a$ (the whole is equal to itself), and $(a + b) > a$ (the whole is greater than its part). Yet even these, although concepts make them valid, are allowed into mathematics only because they can be *exhibited* in intuition. . . .

(2) Natural science contains within itself synthetic *a priori* judgments as principles. I'll offer only a couple of examples:

- *In all alterations of the corporeal world, the quantity of matter remains unaltered.*
- *When bodies make other bodies move, action and reaction must always be equal.*

It's clear that each of these is necessary (and thus *a priori* in its origin), and that they are synthetic propositions. For (to take just the first of the two-) when I think the concept *matter* I don't think *persistence*, but only *presence in space through the filling of space*. Thus I actually go beyond the concept of matter in order to *add* to it *a priori* something that I didn't think *in* it. So that proposition isn't analytic. It's synthetic, and yet we think it *a priori*. Similarly with all the other propositions of the pure part of natural science, i.e. the part that doesn't depend upon experience.

(3) Metaphysics ought to contain synthetic *a priori* knowledge; and I say this even for metaphysics viewed solely as a science which, though indispensable because of the nature of human reason, has until now merely been *sought* and not *found*. Its business is not merely to analyse and thus *clarify* concepts that we make of things *a priori*, but to *enlarge* our knowledge *a priori*; and for that we have to employ

principles that take concepts and *add* to them something that they don't contain. This is done in synthetic *a priori* judgments that stretch too far for experience to follow—such as *The world must have a first beginning* and its like. What metaphysics aims to be, therefore, is something that consists of purely synthetic *a priori* propositions.

6. The general problem of pure reason

We make a considerable advance when we formulate a single project in such a way that many of our inquiries are seen to be special cases of it. This lightens our task by defining it precisely, and also makes it easier for others to judge whether we have succeeded in our aim. So I am not apologetic about this nutshell formulation: The real problem of pure reason is now contained in the question '**How are synthetic *a priori* judgments possible?**'

Why has metaphysics remained until now in such a state of wobbling uncertainty and contradictions? Purely because until now no-one has previously thought of this problem. . . . Now that the problem *has* been thought of and highlighted, metaphysics stands or falls with its solution—either an answer to the question or an effective proof that after all there aren't any synthetic *a priori* judgments. Hume came closer to this problem than any other philosopher, but he was still a long way from getting a precise fix upon it. And far from seeing it in its full generality, he attended only to the *part* of the problem that concerns the synthetic proposition connecting effects with causes, and what he thought he had shown concerning *that* was that it can't possibly be known *a priori*. His conclusions imply that everything that we call 'metaphysics' comes down to

the mere *illusion* of an insight of reason into something that has actually been borrowed from experience, and appears to be necessary only because of

·the intellectual compulsions that *we* undergo as a result of· habits that we have formed.

He wouldn't have stumbled into this position if he had confronted our problem in its general form, because then he would have seen that according to his line of argument there couldn't be any pure mathematics either, since this certainly does contain synthetic *a priori* propositions, and Hume's good sense would surely have protected him from thinking otherwise.

Solving the general problem 'How are synthetic *a priori* judgments possible?' will also involve answering questions about whether pure reason can be used in founding and developing all the sciences that contain *a priori* knowledge of objects. That is, it will carry with it answers to the questions:

•How is pure mathematics possible?

•How is pure natural science possible?

We *have* these sciences, so it is all right to ask *how* they are possible; that they *are* possible is proved from their being actual.⁵ As for metaphysics: everyone is entitled to wonder whether it *is* possible. That's because metaphysics has so far made such poor progress; given what the essential aim of metaphysics is, *nothing* that has been expounded up to now really counts as metaphysics.

But. . . metaphysics *is* actual, if not as a science then as a natural predisposition of ours. Human reason carries on unstoppably, driven not by the idle desire to 'know it all', but by its own need to push through to certain questions that

⁵ Many people still have doubts about pure—i.e. non-empirical—natural science. But we have only to consider the various propositions that occur at the *start* of empirical physics. . . . such as the propositions about there always being the same amount of matter, about inertia, about the equality of action and reaction, and so on, to be quickly convinced that they constitute a *pure physics*, which well deserves to be treated separately as an independent science, whether it's a small science or a large one.

can't be answered by—or on the basis of—any experiential use of reason. . . . In this way •a certain sort of metaphysics has and always will be present in all human beings as soon as their reason has become capable of speculation. So now the question arises about •this:

•How is metaphysics as a natural disposition possible? 22
That is to ask, concerning the questions that pure reason raises and is driven by its own need to answer as well as it can, how do those questions arise from the nature of universal human reason?

But all previous attempts to answer these natural questions—e.g. 'Did the world have a beginning or has it existed from eternity?'—have always run into unavoidable contradictions. So we can't settle for the mere natural disposition for metaphysics, i.e. the pure faculty of reason itself. ·Left to itself· it *will* always produce some sort of metaphysics—*some* sort!—but ·more than that is needed·. It must be possible to •bring reason to certainty regarding the knowledge or ignorance of objects. That is, it needs to reach a *decision* either concerning (1) the objects it is asking about, or concerning (2) whether it is capable of reaching judgments about those objects. That will enable us either (1) reliably to extend our pure reason or else (2) to set definite and secure limits for it. The (2) second question, which flows from the previous general problem, can properly be stated thus:

•How is metaphysics, as a science, possible? 23
Eventually, then, the critique of reason has to lead to •science; whereas the dogmatic use of it, without criticism, leads to groundless assertions to which other assertions, equally plausible ones, can be opposed; and so it leads to •scepticism. [For 'science' see note on page 1. For 'dogmatic' see note on page 15. Regarding 'objects': Kant has two words that are standardly translated as 'object'. In most contexts, including the above paragraph, 'object' means something like 'subject-matter'—what a science or a judgment is *about*,

what a concept or an intuition is of.]

There can't be dauntingly *much* of this science: it doesn't deal with •objects of reason, of which there's an endless variety, but merely with •reason itself—with problems that spring entirely from its own nature rather than from the nature of other things. Once it has become completely familiar with its own powers when dealing with objects that are presented to it in experience, it should easily become able to determine, completely and securely, just how far it can go beyond all bounds of experience.

So we can—we *should*—regard all previous attempts to bring about a metaphysics dogmatically as something that never happened. In any such system, the part that merely analyses concepts that reside *a priori* in our reason isn't achieving what genuine metaphysics aims at; it's merely preparing the way for it. The *aim* is to extend *a priori* synthetic knowledge; and analysis is useless for this, because all it does is to show what is contained in the analysed concepts. It doesn't show us how we get those concepts *a priori* (which would enable us to know precisely what uses of them in regard to the objects of all knowledge are valid). We don't need much self-denial to give up all these claims—
24 ·the inflated claims of dogmatic metaphysics·—because the dogmatic procedure inevitably runs reason into undeniable contradictions that destroyed the authority of every previous metaphysics long ago. We'll need a sterner resolve if we aren't to be put off, by internal difficulties and external resistance, from taking another approach, entirely opposed to the previous ·dogmatic· one, in order to promote the productive and fruitful growth of a science that is indispensable for human reason. One might lop off every branch of this science, but nothing can pull it up by the roots.

7. The idea and division of a special science called 'critique of pure reason'

What emerges from all this is the idea of a special science, which can be called a 'critique of pure reason', because reason is the faculty that provides the principles of *a priori* knowledge. . . . An organon of pure reason would be a sum-
total of all the principles in accordance with which all pure *a priori* knowledge is acquired and made real. 25

[On the next page Kant will contrast an

•'organon' of pure reason

with a

•'canon' of pure reason.

By 'organon' he means a complete account of how reason does its pure = non-empirical work: its scope, the principles it applies, the concepts it uses—the works. A 'canon' of pure reason is a part of such an organon, the part that enables us to judge—evaluate, perhaps disqualify—attempted pure uses of reason. An organon would tell you all you need to be able to employ reason in a non-empirical way, while a canon would merely tell you whether you had succeeded in an attempt to do this.]

By thoroughly applying such an organon, we would create a system of pure reason. But that would take a lot of doing; and

'Where—if *anywhere*—is such an enlargement of our knowledge possible?'

is still an open question. So we should regard the complete system of pure reason as something to be approached through a preparatory science, in which we merely examine reason, its sources and its limits. It wouldn't be a •doctrine of pure reason, merely a •critique of pure reason, and its usefulness in speculation would really be only negative: it wouldn't enlarge our reason's scope, but would purify it, keeping it free from errors—which itself is a considerable achievement. I apply the label 'transcendental' to any knowledge that isn't

about •objects but about •what makes it possible for us to know objects *a priori*. A system of the *a priori* concepts that are involved in such *a priori knowledge* would be called ‘transcendental philosophy’. But that, although it excludes all *a posteriori* knowledge, is still more than we want; a full transcendental philosophy would have to deal comprehensively with the analytic as well as the synthetic parts of our *a priori* knowledge, and that’s more than we are aiming at: our whole aim is to get a comprehensive view of the principles of *a priori* •synthesis; some •analysis may be indispensably necessary for this to be achieved, but that’s as far as our concern with analysis goes.

Our present investigation. . . aims to supply the touchstone of the worth or worthlessness of all *a priori* knowledge. Such a critique is accordingly a preparation for an •organon, failing which a preparation for a •canon, in accordance with which the complete system of the philosophy of pure reason. . . can some day be exhibited both analytically and synthetically. [Kant ends this paragraph with two points: (1) He says again that the task shouldn’t be too big for us to complete, because its topic is not the ‘inexhaustible nature of things’ but only our own performance in pursuing *a priori* knowledge. (2) He says that he won’t be offering a ‘critique of books and systems of pure reason’; he will approach his subject-matter directly, not through what others have said about it.]

[There follow two paragraphs in which Kant explains why the critique of pure reason contains less than transcendental philosophy would. He has already given this reason: transcendental philosophy would be a total theory of all *a priori* knowledge, including all that is known through analysis; whereas the critique of pure reason needs only a very little of the analytic material, and sets aside many questions about the proper analysis of this or that concept, where the concept

doesn’t enter into the pure use of reason. Then:] ..28

The main thing to be watched in such a science—i.e. in transcendental philosophy—is that no concept must be allowed into it that contains anything empirical. . . . Although morality’s highest principles and basic concepts are known *a priori*, they don’t belong in transcendental philosophy because they have to bring in such empirical concepts as those of pleasure and unpleasure, of desire and inclination, and so on. A system of pure morality won’t of course use these concepts in the basis for any moral laws, but it has to contain them all the same, in order to say things about obstacles in the way of doing one’s duty, or incentives that we shouldn’t allow to move us to action. Thus: transcendental philosophy is a philosophy of pure, •speculative reason. For everything •practical, in its dealing with incentives to action, relates to *feelings*, and of those we have only empirical knowledge.

If we are to present transcendental philosophy as a structured system, then the first division in it will be into these two:

- doctrine of Elements of pure reason,
- doctrine of Method of pure reason.

[The Elements will start in a moment, and run through to the end of the Dialectic. The Method part of the work will occupy about its last 25 pages.] Each of these will be subdivided, but the bases for that will have to wait. Looking ahead to them, all I need at this stage is to make one introductory remark: There are two stems of human knowledge (which may arise from a common root that we don’t know anything about)—namely •sensibility and •understanding. Through sensibility, objects are **given to us**, while through understanding they are **thought**. You might think that because sensibility is what’s at work when we have sense-experience, it couldn’t be involved in anything *a priori*. But if sensibility contained representations that constitute the condition under which objects are given to

us, those will be *a priori* representations, and sensibility will be treated in transcendental philosophy. [Kant's point: perhaps some representations that come from sensibility are *necessary conditions* for anything to be 'given' to us. They would be *a priori* because you wouldn't have to *consult your experience* to know that whatever experience is like it is bound to involve those representations. All this will be developed in more detail very soon.] In the science of the Elements, the transcendental doctrine of the senses will have to come first, because *necessary* conditions for objects of human knowledge to be *given* come before the necessary conditions for those objects to be *thought*. And so we start with the transcendental aesthetic, and will come to the *transcendental logic* on page 41.

Transcendental aesthetic

33 **1.** In whatever way and by whatever means an item of knowledge may relate to objects, what relates it to them *immediately*. . . .is *intuition*. This happens only if the object is given to us, and that happens—in man at least—only when the object affects the mind in a certain way. ‘Sensibility’ is the name of the capacity for acquiring representations that reflect how we are affected by objects. So objects are •given to us by means of sensibility, and that’s our only way of getting •intuitions; but objects are •thought through the understanding, which gives us •concepts. But all thought must ultimately be related to intuitions, whether straight away (directly) or through a detour (indirectly); so it must be related (in our case) to sensibility, since it is only through sensibility that objects can be given to us.

[In case Kant hasn’t made it clear: *intuition* is by definition our ability to be knowingly confronted by individual things; and to call our intuition ‘sensible’ is to say that we are *passive* with respect to it—so when we have an intuition of an object, the object ‘affects’ us. The contrast is with **active intuition** (which Kant sometimes speaks of as ‘intellectual intuition’). Suppose there are creatures who have a non-sensible (= active) faculty of intuition; that means that they actively *do* things that bring them immediately into contact with particular things. We haven’t the faintest idea of what that would be like, he holds; but it is possible,

34 at least in the sense that it isn’t self-contradictory.]

When an object affects us, its effect on our capacity for representation is •sensation. An intuition that is related to its object through sensation is called ‘empirical’. Anything that an empirical intuition is an intuition *of*—whatever the details—is called an ‘appearance’.

The element in an appearance that corresponds to sensation is what I call the ‘matter’ of the appearance; and that which allows the manifold of appearance to have a certain

ordered and inter-related pattern is what I call ‘form’ of appearance. [See note on ‘form’/‘matter’ on page 19.] This form of appearance •isn’t a product of the matter•; the •form, which is required for the sensations to be ordered and patterned, can’t itself be another sensation! So it must lie in the mind *a priori*, ready and waiting for sensations •to come and be shaped up by it•; so it can be considered separately from all sensation. All the •matter of appearance is of course given to us only *a posteriori*.

I call any representation ‘pure’. . . .if nothing in it belongs to sensation. Using the word in that way: the pure form of sensible intuitions. . . .is to be found in the mind *a priori*. This pure form of sensibility itself is also called ‘pure intuition’. 35 So if I remove from the representation of a body

•everything the understanding thinks about it, such as substance, force, divisibility, etc.,

as well as

•everything that belongs to sensation, such as impenetrability, hardness, colour, etc.,

there is still something left over from this empirical intuition, namely

•extension and shape.

These belong to the pure intuition, which occurs in the mind *a priori*, as a mere form of sensibility, even when there is no actual object of the senses or of sensation. [For Kant ‘sensation’ refers to the *detailed content* of what the senses dish up, whereas ‘the senses’ refers to every aspect of our capacity for passively receiving data. In his German, the two are not verbally alike: ‘sensation’ translates *Empfindung*, ‘the senses’ translates *die Sinne*.]

The science of all principles of *a priori* sensibility is what I call ‘transcendental •aesthetic’.⁶ There must *be* such a

⁶ [In a footnote Kant says that ‘aesthetic’ has come to be used for matters of taste. He deplores this. There can’t be a proper science of taste, he says, because its basis is empirical and subjective.]

36 science, constituting the first part of the transcendental doctrine of elements. The second part contains the principles of pure thinking, and is named 'transcendental •logic'.

In the transcendental aesthetic we will therefore first isolate sensibility by separating off everything that the understanding thinks through its concepts. That will leave nothing but empirical intuition. Next, from that we will then detach everything that belongs to sensation, so that nothing remains except *pure* intuition and the mere *form* of appearances, which is all that sensibility can make available *a priori*. In this investigation it will be found that there are two pure forms of sensible intuition, serving as principles of *a priori* knowledge, namely •space and •time. Let us now consider these.

Space

2. Metaphysical exposition of this concept.

37 By means of **outer** sense...we represent to ourselves objects as •outside us, and all as •in space. In space they have shapes, sizes, and inter-relations that we know or can come to know. **Inner** sense, through which the mind intuits itself or its inner state, doesn't operate in a manner exactly parallel to outer sense, because it doesn't yield an intuition of the soul itself as an object; but still it is parallel to outer sense in this: it has a determinate form, and its intuitions of the person's inner state are possible only in this form. This form is *time*; so every aspect of the person's inner state is represented as temporal. Time can't be intuited externally, any more than space can be intuited as something in us, i.e. intuited internally. Well now, what are space and time? There are three candidate answers, namely:

•Space and time are actual *beings*.

•They are properties of things or relations amongst things, which things have whether or not they are intuited.

•They are relations that attach only to the form of intuition, and thus to the subjective constitution of our mind. If our mind were left out of the story, these predicates couldn't be ascribed to anything at all. 38

In order to learn which of these is right, I will start by expounding the concept of space. In my usage, an 'exposition' [the noun from 'expound'] of a concept is a clear representation of what belongs to it, though not necessarily of *everything* that belongs to it. An exposition is 'metaphysical' if it brings out the concept's status as something given *a priori*.

(i) Space is not an empirical concept that has been derived from outer experiences. Here is why. When I relate some of my sensations to something outside me (i.e. to something in a spatial position different from mine), and also when I relate them to things that are outside one another—not merely as different but as in different places—I must be *already* representing *space* as the ground of the other representations—i.e. as the framework or background or setting within which these spatial relations can exist. So the representation of space can't be obtained through experience from the relations amongst outer appearances; on the contrary, outer experience can't be had except *through* this representation.

(ii) Space is a necessary *a priori* representation, which underlies all outer intuitions. We can't construct a representation of a state of affairs in which there isn't any space, though we can very well have the thought of space with no objects in it. So we have to regard space as a pre-condition for the possibility of appearances, not as a conceptual construct out of them. Space is an *a priori* representation that necessarily underlies outer appearances. 39

(iii) The representation of space isn't a discursive or general *concept*, but rather a pure *intuition*. As a start on seeing why, note this: •We can only represent a single space; any talk of 'many spaces' is always understood to refer to *parts* of the one unique space. •And space isn't an upshot of the assembling of these parts, with the parts coming first and the whole arising out of them. On the contrary, our only thought of the parts is of them as *in* the one space. •Space is *essentially* single; it is only by marking out boundaries within it that we get complexity in it, and that's also how we get the general concept of *spaces* or of *a space*. Thus, all our spatial •concepts have underlying them an *a priori* •intuition of space. Similarly, all geometrical propositions (e.g. that two sides of any triangle are together greater than the third) never come from general concepts (e.g. of *line* and *triangle*), but rather are derived from intuition, and indeed derived *a priori* with absolute certainty.

40 (iv) Space is represented as an infinite given magnitude. There's no way of thinking a *concept* as containing an infinite set of representations within itself. . . .; but that's how space is thought (for all the parts of space, even to infinity, are simultaneous). So the basic representation of space is an *a priori* •intuition, not a •concept.

3. Transcendental exposition of the concept of space.

A 'transcendental' exposition of a concept is an explanation of its role in enabling us to understand the possibility of other synthetic *a priori* knowledge. [A metaphysical exposition lays bare (some of) the content of the concept; and a transcendental exposition explains the concept's role in the acquisition of *a priori* knowledge.] For such an explanation to succeed, it must be the case •that such knowledge really does flow from the concept in question, and •that this knowledge wouldn't be possible if it weren't for this concept explained in this way.

Geometry is a science that discovers what the properties of space are, doing this *a priori* although its results are synthetic. How can that be? What kind of representation of space could make it possible to have such knowledge about it? •Because the knowledge is **synthetic**•, the representation must be basically an •intuition; because the only propositions you can get from a •concept are ones 41 that bring out what the concept *contains*, and geometrical propositions do more than that. •And because the knowledge is *a priori*• this intuition must be encountered in us prior to any perception of an object, which means that it must be pure rather than empirical intuition. For geometrical propositions are all. . . bound up with the consciousness of their necessity (e.g. space has only three dimensions, •and we are aware that it *can't* have more•); but propositions of that sort can't be judgments of experience and can't be derived from such judgments.

Now, how can there exist in the mind an outer intuition that precedes the objects themselves and puts *a priori* constraints on the concept of an outer object? Obviously, it has to be through the intuition's being a fact about the person's mind—a fact about its *form*, a fact by virtue of which the mind *can*, •and without which it *couldn't*•, be affected by objects. That's equivalent to saying that the intuition in question is the form of outer sense as such.

So the only way to make comprehensible the possibility of geometry as synthetic *a priori* knowledge is through the explanation I have given. Accept no substitutes.

Conclusions from the above concepts

(a) Space isn't a •property of, or set of •relations amongst, 42 things in themselves. Spatiality isn't something that objects themselves have, something they would still have even if we filtered out all the subjective conditions of intuition. [In that

sentence, 'filtered out' translates something that more literally means 'abstracted from'. In this text, 'filter' will often be used in this way (and in no other), just to give us a rest from 'abstract'.] For neither •properties nor •relations can be intuited prior to the existence of the things that have them, so they can't be intuited *a priori*.

(b) Space is nothing but the *form* of all appearances of outer sense. That is, it's the condition that our sensibility must satisfy if outer intuition is to be possible for us. Now, it's perfectly obvious that •a mind's ability to be affected by objects has to come before •all intuitions of these objects (just as the •softness of a piece of wax has to come before the •imprint on it of a signet-ring). That, therefore, explains how the •form of all appearances can be given in the mind prior to all •actual perceptions, i.e. given *a priori*, and how, as a pure intuition in which all objects must be determined, this form can contain prior to all experience •geometrical-principles of the relations among these objects.

43 So it's only from the human standpoint that we can speak of 'space', 'extended things', and so on. If we set aside our ability to be affected by objects—this being the subjective necessary condition of our having outer intuition—the representation of space signifies nothing. We can attribute spatial properties to things only to the extent that they appear to us, i.e. are objects of our sensibility. . . . (If we abstract from these •appearing• objects, what remains is a pure intuition, which we call 'space'.) The special conditions of sensibility can't be treated as conditions of the possibility of •things, but only of •the appearances of things; so we can say that space involves

•all things that can appear to us externally,
but not

•all things in themselves, whether or not they are intuited,
(and possibly not

•all things, by whatever mind they are intuited;

I add that last point because we have no idea of whether the intuitions of other thinking beings must satisfy the same conditions that our intuition must satisfy and that are universally valid *for us*). [Kant goes on to make the elementary logical point that if a proposition of the form

•All Ss are P

holds good whenever condition C is satisfied, then the corresponding proposition

•All Ss-satisfying-C are P

holds good without qualification, holds good universally. He applies this to our present topic, saying that whereas

•All things are spatially related to one another

holds good only of things considered as outer-intuited by us, the proposition

•All things of which we have outer intuitions are spatially related to one another

is absolutely, unqualifiedly true, because it has built the restriction into the subject-term. He continues:] My exposition 44 accordingly teaches that

•space is *real*, i.e. objectively valid, in respect of everything that can come before us externally as an object,

but at the same time that

•space is *ideal* in respect of things considered in themselves through reason, i.e. without taking account of the constitution of our sensibility.

This pair of results can be expressed by saying that space is **empirically real** but is **transcendentally ideal**.

[Kant now devotes two hard paragraphs to developing the point that the 'real'/'ideal' contrast as applied to space is different from every other contrast that we find in our experience. He instances *colours*. There's something subjective about colours, he allows, but it's not to be compared with 45

the subjectivity of space, for two main reasons. (i) A single thing might be coloured in one way for you and in another for me, i.e. there could be inter-personal differences of colours; whereas spatiality is the same for all human beings. (ii) We think of the colour of a rose (say) as subjective, thereby contrasting it with the rose itself, which we think of as objective. This is a thought about two levels—the subjective colour and the objective rose—but we have plenty of information about both levels; there isn't anything notably hidden or unknown about a rose, even if we set aside its colour; which is to say that both sides of that contrast lie within the realm of appearances. The two-level story regarding subjective space and objective *things in themselves* is quite different from that, because one side concerns appearances and the other doesn't; we have *no* information about things as they are in themselves; and, Kant adds, 'in experience no question is ever asked about them'.]

Time

4. Metaphysical exposition of the concept of time

46 (1) Time is not an empirical concept that has been somehow drawn from experience. For we couldn't experience events as simultaneous or as one-after-another unless we had an underlying *a priori* representation of time. To represent several things as existing at the same time or at different times we must have a *presupposed* representation of time.

(2) Time is a necessary representation that underlies all intuitions. We can have the thought of time without any appearances—i.e. time during which nothing exists and nothing happens—but we can't have the thought of appearances that are not in time. So time is given *a priori*. The actuality of appearances is possible only *in* time. Appearances could all disappear, but time itself, the universal

condition of the possibility of appearances, can't be removed.

(3) This *a priori* necessity is what makes it possible to have 47 apodictic [= 'absolutely necessary'] principles concerning temporal relations, i.e. axioms concerning time as such—for example, 'Time has only one dimension: different times are not simultaneous, but successive' (just as different spaces are not successive but simultaneous). These principles couldn't be drawn from experience, because experience wouldn't give us strict universality or apodictic certainty. It lets us say 'This is what common perception teaches', but not 'This is how matters *must* stand'. These principles are valid as rules that have to be satisfied for experiences to be possible at all; the rules instruct us *before* experience, not *through* it.

(4) The fundamental representation of time isn't a discursive or general *concept*, but rather a pure form of sensible *intuition*. Here are two reasons for saying this. •Different times are only parts of one single time; which is to say that necessarily time is one single item; and the kind of representation that points to a single object is not a concept but an intuition. •The proposition that different times can't be simultaneous can't be derived from a general concept. It's a synthetic proposition, whereas if it arose from concepts alone it would be analytic. So it has to be something that is immediately contained in the intuition. . . .of time.

(5) Time's being infinite means merely that every specific 48 length of time is possible only through cuts in a single time underlying it; from which it follows that our *basic* representation of time can't be of any limited length of time; and therefore the basic representation of time must represent it as unlimited. . . . And to do this it must be an intuition, not a concept.

5. Transcendental exposition of the concept of time

I refer you here to item (3) above, where for brevity's sake I have included under the 'metaphysical exposition' heading something that is really transcendental. Here I add one further item of transcendental exposition, namely: The concept of alteration is possible only *through* and *in* the representation of time; if the representation of time were not an *a priori* (inner) intuition, then no concept could make comprehensible the possibility of anything's *altering*. In an alteration, two contradictory predicates apply to a single thing. . . ., which is possible if they are applicable at different times, so that the self-contradictory 'Fx and not-Fx' is turned into the alteration-report 'Fx at t_1 and not-Fx at t_2 '. One sort of alteration is motion—alteration of place. So our concept of time explains the possibility of the synthetic *a priori* knowledge exhibited in the general theory of motion, knowledge from which good results flow.

6. Conclusions from these concepts

(a) Time isn't something that exists in its own right; for if it were, it would be something actual, but wouldn't be an actual object. Nor is time a property that things objectively have ('objectively' meaning that things have their temporality quite apart from any subjective conditions of our intuition of them). If it were, time couldn't precede things as their condition, and be known and intuited *a priori* through synthetic propositions. But it *can* do that if it is nothing but the subjective necessary condition for intuitions to occur in us, because in that case this necessary condition—this *form* of inner intuition—can be represented prior to the objects, therefore *a priori*.

(b) Time is nothing but the form of inner sense, i.e. of the intuition of our self and our inner state. It can't be part of the story about outer appearances; it has nothing

to do with shape or position or the like, but pertains to the relation of representations in our inner state. Because this inner intuition yields no *shape*, we try to make up for this lack through analogies: we represent the temporal sequence through a *line* progressing to infinity, in which the manifold constitutes a series with only one dimension [see note on 'manifold' on page 20]. We reason from the properties of this line to all the properties of time, with just one difference: the line's parts are simultaneous, whereas the parts of time always exist successively. From this it is also apparent that the representation of time is itself an intuition, since all its relations can be expressed in an outer intuition. [Kant's point seems to be: it's already established that the representation of space is an intuition; we now see that the main formal features of time are also features of a part or aspect of space; and the only item that can in any way resemble an intuition is another intuition.]

(c) Time is the *a priori* formal condition of absolutely all appearances. Space, as the pure form of all outer intuitions, is an *a priori* condition only for them. But all representations, even ones that represent outer things, are states of the mind and therefore part of the person's inner state; so they have to satisfy the formal condition of inner intuition, which means that they must be temporal; so time is an *a priori* condition of all appearances whatsoever. It is the immediate or direct condition of inner appearances (of our souls), and through that it is the mediate or indirect condition of outer appearances. Just as I can say *a priori* that all outer appearances are in space, and their detailed natures are spatial, so from the principle of inner sense I can say that all appearances whatsoever—i.e. all objects of the senses—are in time, and necessarily stand in temporal relations. . . .

Time is objectively valid only in respect of appearances, these being already things that we take as objects of our

senses. If we abstract from the sensibility of our intuition—i.e. from the kind of representation that we humans have—and speak of things as such (·things, *period*·), time is no longer objective—indeed it is *nothing*. Nonetheless it is necessarily objective in regard to all appearances, thus also in regard to anything that we can encounter in experience. We can't say:

•all things are in time,

52 because the concept of 'all things' abstracts •from every kind of intuition of them, and thus •from the only thing that brings time into play. But if we build that condition into the subject-concept and say

•all things as appearances (objects of sensible intuition) are in time,

then we have something that is objectively true and *a priori* universal. [Compare the similar move with space at the top of page 30.]

[The next paragraph is a longish account of why time is 'empirically real' and 'transcendentally ideal'. It is *exactly* analogous to what Kant is reported on page 31 as saying about space's being empirically real and transcendentally ideal, with one addition: On page 29 Kant has spoken of two versions of the view that space and time are absolutely or transcendentally real:

(i) that they are actual beings [German *Wesen*],

(ii) that they are properties or relations of things in themselves.

This contrast comes up, though in different words, in our present paragraph, where Kant says that if space and time were absolutely real that might be

(i*) by way of subsistence or

(ii*) by way of inherence.

The (ii)–(ii*) equivalence is clearly right, because it's properties and relations that 'inhere' in things. And the (i)–(i*)

equivalence is also right: Kant thinks of an item's 'subsisting' as its existing in a self-sufficient way, as a being or *Wesen* in its own right, not as inhering in something else. One might say 'its existing as a *thing*', to contrast it with a *property* or *relation*; but that won't quite do because, as we'll see shortly, Kant says that if space and time did 'subsist' they would be 'non-entities', which roughly = 'not things'. It is tempting to replace 'subsisting' by 'existing in its own right', but this version will play safe and retain 'subsist'. Remember what it means. Kant discusses 'inherence' and 'subsistence' on page 110]

7. Elucidation

Against this theory, which admits the empirical reality of time but denies its absolute and transcendental reality, I have heard able men so unanimously voice one objection that I have to think it will naturally occur to every reader to whom this line of thought is new. It goes like this: ..53

Even if we deny that there are any outer appearances, and thus deny that there are any alterations out there, our own representations undergo changes; so •alterations are real. But alterations are possible only in time. Therefore time is something real.

This is easy to answer: I grant the whole argument. Certainly time is something real, namely the real form of inner intuition. So it has subjective reality in regard to inner experience, i.e. I really have the representation of time and of various temporal facts. It is therefore to be regarded really not as object but as my way of representing myself as object. If I could intuit myself without this condition of sensibility, then the very same states of myself that I now represent to myself as alterations would give me an item of knowledge that didn't include any representation of time or, therefore, of alteration. (This holds not just for me but for any being.) 54

So my theory doesn't touch the empirical reality of time, as a condition of all our experiences; all it denies is time's absolute or transcendental reality. . . .

55 *Everyone* comes up with this objection—even those who can't find any convincing objection to the doctrine of the transcendental ideality of *space*. Here is why. They didn't expect to be able to demonstrate conclusively the absolute reality of space, because they were confronted by idealism, which teaches that there can't be any strict proof of the reality of outer objects; whereas the reality of the object of our inner sense—i.e. the reality of oneself and the states one is in—is immediately clear through consciousness. Outer things could have been a mere illusion, they hold, but one's own inner states are undeniably something real. What they didn't see was that space and time *both*, though indisputably real as representations, belong only to appearance. There are always two sides to appearance: •one where the object is considered in itself (without regard to how it is to be intuited, and therefore having a nature that must always remain problematic), •the other where the form of the intuition of this object taken into account. This form must be looked for not in the object in itself but in the subject—the mind—to which it appears, yet it really and necessarily belongs to the representation of this object.

56 So time and space are two well-springs of knowledge from which different items of synthetic knowledge can be drawn *a priori*. (Pure mathematics provides a splendid example of the spatial half of this.) Time and space are the pure forms of all sensible intuition, which is why they make synthetic *a priori* propositions possible. But the very fact that they are merely conditions of sensibility means that these *a priori* sources of knowledge fix their own limits—i.e. settle that they apply to objects only considered as appearances, and don't present things in themselves. Appearance is the sole field of their

validity; outside it there is no further objective use for them. This •empirical• reality of space and time leaves the certainty of empirical knowledge unaffected; for we are certain of *that*, whether these forms belong to the things in themselves or only to our intuitions of them. But those who assert the •absolute reality of space and time—whether as (i) subsisting or only as (ii) inhering—must come into conflict with the principles of experience. [For help with 'subsist' and 'inhere', see page 110.] For if they decide in favour of (i) subsistence (which mathematical physicists generally do), then they must think of space and time as two eternal and infinite self-subsisting *non-entities*, which have nothing real about them and exist only in order to *contain* everything that is real. If they think of space and time as (ii) inhering (as do some metaphysicians of Nature •such as Leibniz•), holding that space and time are spatial or temporal relations amongst appearances, confused representations abstracted from experience, then they must 57 dispute the validity or at least the absolute certainty of *a priori* mathematical doctrines about real things (e.g. things in space), because such certainty can't be achieved *a posteriori*. [The remainder of this paragraph is excessively difficult. It contends that the (i) approach has a certain advantage, while the (ii) approach has a different one; that each approach has its own special disadvantage or difficulty; and that both difficulties are solved when one rejects both (i) and (ii) in favour of Kant's view that space and time are basic forms of sensibility.] ..58

Finally, the transcendental aesthetic can't contain more than these two elements, space and time. None of the other concepts belonging to sensibility can come into a •transcendental study, because they all presuppose something •empirical. Take for instance the concept of *motion*, which involves both time and space. This presupposes the perception of something movable; but in space considered

on its own there is nothing movable; hence the ‘something movable’ must be found in space only through experience, which makes it an empirical datum. Similarly, the transcendental aesthetic can’t count the concept of *alteration* among its *a priori* data; for time itself does not alter; all that can alter are things *within* time. So the concept of alteration presupposes the perception of •some thing and of •that thing’s series of •different• states; which means that it presupposes experience.

8. General remarks on the transcendental aesthetic

59 (1) I must first explain as clearly as I can my view about the basic constitution of sensible knowledge in general, so as to head off any misinterpretation of it.

What I have wanted to say is this:

- All our intuition is nothing but the representation of appearance.
- The things we intuit are not in themselves what we intuit them as being, nor are they related, in themselves, in the way they appear to us to be related.
- If we strip off from the story •our own mind, or even just •the subjective character of our senses, then all the structure—all the inter-relations—of objects in space and time would disappear; indeed space and time themselves would disappear; because as appearances they can’t exist in themselves, but only in us.

We know absolutely nothing about what objects are like in themselves, considered apart from all this receptiveness of our sensibility. All we know is our way of perceiving them, which is special to *us* and may not be the same for every being, though it is certainly the same for every human being. We aren’t concerned with anything except this. Space and
60 time are its pure forms, and sensation is its matter. [Kant

goes on to say again that the ‘forms’ can be known *a priori* and the ‘matter’ only *a posteriori*. He adds that however sharp and thorough our intuitions become, and however alertly we attend to them, they won’t move us an inch closer to knowing what things are like in themselves.]

Here is one theory—a theory that we should reject—about how our sensibility relates to things in themselves:

Our entire sensibility is nothing but a confused representation of things; whatever it presents is something that *does* apply to things in themselves, but it presents them only through a great bundle of marks and partial representations that we don’t consciously sort out from one another.

This theory falsifies the concept of sensibility and of appearance, and renders the entire theory of them useless and empty. The difference between an •indistinct representation and a •distinct one is merely logical; it doesn’t concern the content. •To see that •**confused uptake of x need not be •knowledge of x as it appears**•, consider the concept of *moral rightness*. No doubt this concept—the one that ordinary sane people use—contains everything that the most subtle speculation can tease out of it; but in everyday practical use of the concept—e.g. in thinking ‘His treatment of the workers is not right!’—one isn’t conscious of the complex of representations that are •covertly involved• in these thoughts, •presumably because in one’s conscious mind they are presented in too confused a fashion•. But we can’t infer from this that the common concept is sensible, and contains a mere appearance. •We can’t infer it, and indeed it isn’t true•, for *right* can’t **appear** at all: its concept lies in the understanding, and represents a moral property that actions have **in themselves**. •And to see, conversely, that •**clear uptake of x need not be •knowledge of x in itself**•, consider the representation of a *body* in intuition.

This contains nothing that could belong to an object in itself, but merely the appearance of something, and the way in which we are affected by it; and this receptiveness of our faculty of knowledge is called ‘sensibility’. Even if that appearance were so clear that we could see into it and right through to the bottom—what we had would still be worlds apart from any knowledge of the object in itself.

62 So the Leibniz-Wolff philosophy, in taking the distinction between sensibility and the intelligible to be merely logical, has led all investigations of the nature and origin of our knowledge to adopt a completely wrong point of view. The sensible/intellectual line is obviously transcendental: it doesn’t concern the •form of a representation (is it clear or cloudy?) but rather its •origin and •content. It’s quite wrong to say that what sensibility tells us about the nature of things in themselves is unclear; what it tells us about things in themselves is *nothing at all*. . . .

[Kant now devotes a paragraph to discussing a certain appearance/reality line that we draw *within* the realm of appearance. We may say ‘It looked round but it was really square’, or ‘There seemed to be an arch of coloured silk across the sky, but it was really a rainbow—light diffracted by raindrops’. In contrasts of this kind, however, both sides belong to the realm of what Kant calls ‘appearance’. We may think of facts about raindrops as somehow more objective than facts about rainbows, but the former are still facts
..63 about how reality appears to us.]

The second important concern regarding my transcendental aesthetic is that it shouldn’t merely earn some favour as a plausible hypothesis, but should be as certain and as free from doubt as can ever be demanded of a theory that is to serve as an organon [see note on ‘organon’ on page 25]. In order to make you fully convinced of this certainty, I’ll present a case that will make the validity of the transcendental aesthetic

obvious. It will also clarify what I said in section 3.

64

•Suppose, for purposes of argument, that the transcendental aesthetic is *not* valid. That is, let us adopt

the supposition that space and time are objective *in themselves*, and are conditions of the possibility of things *in themselves*;

•and let us see how this squares with some things that we know. Well, it’s clear that there are many synthetic propositions about space and time that we know absolutely for sure, *a priori*; especially about space, which I’ll take as my prime example. Since we know the synthetic propositions of geometry *a priori* and with absolute certainty, I ask: Where do you get such propositions from, and what is our understanding relying on when it attains such absolutely necessary and universally valid truths? There are four *prima facie* possible answers: the source of the truths might be

- (1) empirical concepts,
- (2) empirical intuitions,
- (3) *a priori* concepts,
- (4) *a priori* intuitions.

Neither (1) empirical concepts nor (2) empirical intuitions (which is what (1) are based on) can deliver any synthetic proposition that isn’t itself merely empirical, i.e. a proposition of experience; so neither (1) nor (2) can yield the necessity and absolute universality that all propositions of geometry have. That leaves us with (3) and (4); but (3) *a priori* concepts can’t give us •synthetic knowledge; anything that comes purely from concepts is •analytic. Take the proposition:

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•With two straight lines no space can be enclosed, and thus no figure is possible,

and try to derive it from the concepts *straight line* and *number two*; or take the proposition:

•A figure is possible with three straight lines,

and in the same way try to derive it from the relevant concepts. You will fail both times, and will find that you're forced to avail yourself of intuition, as geometry always does. And the intuition you give yourself can't be an empirical one, because an empirical intuition couldn't deliver knowledge that is universally valid, let alone apodictically certain; for experience can never provide anything like that. So you must consult (4) an *a priori* intuition, and base your synthetic proposition on this. If any of the following were true:

- You have **no** power of intuiting *a priori*,
- The formal necessary condition for you to have intuitions is **not** also a universal *a priori* condition which any object of this (outer) intuition must satisfy,
- The object (the triangle) is a thing in itself, with **no** relation to your mind,

then. . . you would have no grounds for saying that three straight lines can enclose a figure (a triangle). But you *do* know *a priori* that this three-lines proposition is true; so the above three propositions are all false; and so the **supposition** with which this paragraph opened must be false. . . . So it is unquestionably certain—not merely possible or even merely probable—that space and time. . . are merely subjective conditions of all our intuition, and are valid for all objects only because these objects are mere appearances and not given to us as things in themselves. It follows from all this that although much may be said *a priori* concerning the form of appearances, nothing whatsoever can be said about the thing in itself that may underlie them.

(2) Here is a powerful confirmation of the theory of the ideality of. . . all the objects of both inner and outer sense. Everything we know that comes from intuition contains
67 nothing but mere relations—•where things are, •how they move, and the •laws in accordance with which they move. (This is about our *knowledge*, so it doesn't concern such

non-cognitive items as feelings of pleasure and displeasure, and the will.) But knowing these relations doesn't tell us anything about what ·thing-in-itself· is present in this or that place, or what is at work in the things themselves when movements occur. Now, you can't get knowledge of a thing in itself purely through relations; so we have to conclude that since •outer sense represents to us nothing but relations, it can't tell us anything about the inner nature of any object in itself—only about how the object relates to our mind. It is exactly the same in the case of •inner sense. [Then follows an extremely difficult passage in which Kant explains why and how his present thesis holds for time as well as space. It seems not to add *much* to what he has already said about time as the form of inner sense. But a new theme is introduced when he discusses the idea of my inner sense as informing me about *myself*:] Everything that is represented
.68 through a sense is appearance; so if I am to hold there is such a thing as inner sense, I must allow that the object of this sense ·namely, *myself*·—can be represented by it only as •appearance, not as •a thing in itself, i.e. not as· I would judge myself to be if my intuition were a self-activity, i.e. were purely intellectual.

[One backward-looking point: •See the note on page 28 for the equation of

- 'intuit x as it is in itself with
- 'have an active intuition of x' and of that with
- 'have an intellectual intuition of x'.

And one forward-looking point: •The term 'self-awareness', which we shall encounter in a moment, translates Kant's *Apperzeption*. Leibniz had invented that to mean *awareness*. (The common practice of retaining 'apperception' as an English word has nothing to be said for it.) Kant's uses of *Apperzeption* in the present work restrict it to awareness of *oneself*. It will be left untranslated just once, to highlight Kant's equation of 'consciousness of oneself' with *Apperzeption*. In this version, 'consciousness' always translates *Bewußtsein*.]

The only difficulty about this lies in the question of how anything can internally intuit itself, but this is a difficulty for *every* theory. Consciousness of oneself (*Apperzeption*) is the simple representation of the *I*; and if all one's complex nature were given *by the activity of the self*, then the inner intuition would be intellectual and so it would be an intuition of the self or subject as it is in itself. In human beings, this consciousness of oneself requires inner perception of the complex item that is antecedently given in the subject; that is, when you or I look inward we passively *find* that we are in this or that state—our looking-inwards doesn't actively *put* us into such states. And this kind of procedure should be called 'sensibility', to mark its non-active nature. If my faculty for becoming conscious of myself is to seek out and grasp what lies in my mind, my mind must *affect* it; there's no other way for the mind to produce an intuition of itself. But it must affect it *somehow*, and the *how* must come from the underlying form or structure that the mind has, a form that settles how the manifold is organized in the mind in the representation of time. If the mind had an active representation of itself—a kind of intuition that would take it to things in themselves—then it would intuit itself as it is in itself; but it *doesn't* have that sort of intuition; its intuition of itself is passive, sensible, has a *how* to it; so it intuits itself not as it is in itself but as it appears, *how* it appears.

(3) [Kant opens this paragraph with a reminder that in treating objects in space and time as appearances, he is not writing them off as mere illusions. He continues:] It would be my own fault if I made a mere illusion out of something that I should reckon as appearance.⁷ But that's not what is done by my principle of the ideality of all of our sensible intuitions. Rather than turning space and time into illusions, it *saves*

⁷ [Here Kant has an obscure footnote about the application of predicates to illusions.]

them from counting as illusions! If we ascribe objective reality to those forms of representation, that will remove all chance of rescuing anything from being a mere illusion. Suppose you regard space and time as properties which, if they are possible at all, must be encountered in things in themselves; and then think about the absurdities in which you have then become entangled. You are now committed to there being two infinite things that

- are not substances, and
- don't really inhere in substances [see page 110], but
- must nevertheless exist, and
- must be the necessary condition of the existence of all things, and
- would exist even if all existing things were removed.

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Given that view of the state of affairs, one can hardly blame the good Berkeley for downgrading bodies to mere illusion! Indeed even *our own existence*, which would in this way be made dependent on the self-subsisting reality of a non-entity such as time, would also be transformed into a mere illusion—an absurdity of which no-one has yet allowed himself to be guilty.

(4) In natural theology one conceives of an object—God—who not only isn't an object of intuition for us but can't even be an object of sensible intuition for himself, because sensibility = passivity, and God is wholly active. And in this study we are careful to remove the conditions of time and space from all God's intuition (and thus from all his knowledge, for all of God's knowledge must be intuition—it can't be *thinking*, which always involves limitations). But how can we be entitled to do this if we are regarding time and space as forms of things in themselves, and indeed as *a priori* conditions of the existence of things, and thus as remaining even if all the things were removed? As conditions of all existence in general, they would also have to be conditions

72 of the existence of God. If, wanting to avoid this difficulty, you back off from making space and time objective forms of all things, then your only alternative is to make them into subjective forms of our kind of intuition, outer as well as inner. Our kind of intuition is called 'sensible' because it isn't *originating*, i.e. isn't an intuition that brings its object into existence; rather it depends on the existence of the object, so it is possible only to the extent that the representational capacity of the subject is affected by that object. So far as I can judge, only the primordial being, 'God', can have intuition of the creative, active type.

[Kant now has a paragraph musing on the thought that our sensible=passive kind of intuition may be the only kind that any finite thinking being (human or otherwise) has; and he repeats that God's intuition is different, hinting at a reason for this:] Intellectual intuition. . . . seems to pertain only to the primordial being, 'God', and never to a being that is dependent as regards its •existence and its •intuition. . . .

Conclusion of the transcendental aesthetic

73 So now we have one of the required pieces for the solution of the general problem of transcendental philosophy—how are synthetic *a priori* propositions possible?—namely pure *a priori* intuitions, space and time

Logic Introduction: The Idea of a Transcendental Logic

1. Logic in general

[The Elements part of the work divides into Aesthetic, which started on page 28, and Logic, which starts now.]

74 Our knowledge comes from two basic sources in the mind—
 •the getting of representations (the *receptiveness* of impressions), and
 •the power to achieve, through these representations, knowledge of objects (*activeness* of concepts). Through the former an object is •*given* to us, through the latter it is •*thought* on the basis of that representation (which is a mere state of the mind). So all our knowledge is made up out of intuition and concepts, so that we can't have an item of knowledge involving •concepts without any intuition that somehow corresponds to them, or •intuition without any concepts. Intuitions and concepts each divide into •pure and •empirical. If a representation contains sensation (which presupposes the actual presence of the object), it counts as empirical; if no sensation is mixed into it, the representation is pure. [Recall that 'representation' = 'intuition or concept'.] We can call sensation the 'matter' of sensible knowledge; and what is left when that is removed is the 'form'. Thus pure
 75 intuition contains merely the form under which something is intuited, and pure concept contains only the form of the general *object*-thought. [What Kant wrote there is strictly translated by 'pure concept', with no article, and no plural. This is the first such occurrence in the work, but there will be a few more later on.] Pure intuitions or concepts are possible only *a priori*, empirical ones only *a posteriori*. [See note on 'form'/'matter' on page 19.]

If we use the label 'sensibility' for our mind's •receptiveness to getting representations when it is affected somehow, then 'understanding' is the right label for the mind's power to produce representations from itself—its •activeness in knowl-

edge. It's just a fact about our nature that our intuition can never be other than sensible, i.e. that all there is to it is our being •affected by objects in a certain way. Our ability to •think the objects of sensible intuition, on the other hand, is the understanding. Neither of these is to be preferred to the other. Without sensibility no object would be given to us, and without understanding none would be thought. Thoughts without content are empty, intuitions without concepts are blind. We have just as much need to

- make the mind's concepts sensible (i.e. add an object to them in intuition)

as we have to

- make the mind's intuitions understandable (i.e. bring them under concepts).

And these two powers or capacities can't exchange their functions: the understanding can't intuit anything, and the senses can't think anything; only through bringing them together can knowledge arise. But this need for them 76 to collaborate shouldn't lead us to mix up their roles; it is in fact a strong reason to separate them carefully and distinguish them from one another. So we distinguish

- aesthetic—the science of the rules of sensibility in general—

from

- logic—the science of the rules of understanding in general.

Another dichotomy, this time *within* logic, which can be undertaken with either of two different aims: (1) As the logic of the **general** use of the understanding, logic contains the absolutely necessary rules of thinking—*any* thinking, whatever it is that's being thought about. Without these rules, the understanding can't be employed. (2) As the logic of the **special** use of the understanding, logic contains the rules for correctly thinking about this or that specific kind of

object. We can call the former ‘the logic of elements’; what the latter is, on the other hand, is the organon of this or that particular science. [See the page 25 note on ‘organon’, and on ‘canon’ which is coming shortly.] In academic teaching, the latter is often presented as the *way into* the science in question; though in actual intellectual practice the *logic* of a particular science is the *last* thing to be completed—it is done long after the science has been completed, when all it needs are a few finishing touches to make it perfect. For you must already

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know the objects pretty well if you want to present the rules for how a science of them is to be obtained.

Yet *another* dichotomy! General logic is either •pure or •applied. In pure general logic we filter out all the empirical conditions under which our understanding is exercised, e.g.

- the influence of the senses,
- the play of imagination,
- the laws of memory,
- the power of habits and inclinations, etc.,
- the sources of prejudice

—indeed in general all causes from which this or that item of knowledge arises—because these merely concern how the understanding behaves in certain circumstances, and we can’t know about these circumstances without bringing in experience. So **pure general logic** has to do with strictly *a priori* principles; it is a *canon of the understanding* and reason, but only with regard to what is formal in their use, whatever the content is (empirical or transcendental). An **applied general logic** is directed to the rules for the use of the understanding under the subjective empirical conditions that we learn about from •empirical• psychology. So it has empirical principles; but it certainly counts as general because it concerns the use of the understanding on

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any subject-matter. . . .

In general logic, therefore, the part that is to constitute

the •pure doctrine of reason must be sharply separated from the part that constitutes •applied general logic. It’s only the former of these that is properly a science—not a rich luxurious science, but a short dry one! That is inevitable in a methodically correct presentation of a doctrine of the elements of the understanding. In this science, therefore, logicians must always have two rules in view.

(1) As *general* logic, it abstracts from—i.e. filters out—all content of the knowledge through the understanding, and from variety in what the knowledge is about. It has to do with nothing but the mere form of thinking.

(2) As *pure* logic, it has no empirical principles; so it takes nothing from psychology (as it has sometimes been thought to do). Thus, psychology has no influence at all on the canon of the understanding. The latter is a proven doctrine, and everything in it must be known for certain completely *a priori*.

In the usual sense of the phrase, ‘applied logic’ is something that provides exercises in which the rules of pure logic are applied to concrete examples. In my usage, ‘applied logic’ is a representation of the understanding, and of the rules it must obey when it is used *in concreto*—i.e. under the conditions that the thinker happens to be in or under and that may hinder or help him in his thinking; these being conditions that can be known about only empirically. This kind of logic deals with

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- attention—what it achieves, and what gets in its way,
 - the source of error, and
 - the states of doubt, of hesitation, of conviction, etc.
- Pure general logic relates to •applied general logic in the same way that •pure ethics relates to •the theory of virtue. The •former contains only the necessary moral laws of a free will in general, while the •latter considers these laws under the hindrances of the feelings, inclinations, and passions to which human beings are more or less subject—it can’t ever

yield a true and proven science, because it requires empirical and psychological principles, just as applied logic does.

2. Transcendental logic

As I have shown, general logic abstracts from all •content of knowledge, i.e. from how any item of knowledge relates to the object that it is *about*, and considers only the logical form of such items, as exhibited in how they relate to one another. That is, it considers only the form of thinking in general. •My next topic concerns thought and knowledge *about objects*, and straight away we need a two-part distinction•. Just as there are •pure **intuitions** as well as •empirical ones (as we saw in the transcendental aesthetic), we may be able to distinguish **thoughts of objects** into •pure and •empirical; 80 •and the pure ones, just because they are pure, fall within the scope of a *logic* properly so-called•. This would be a logic in which we *don't* abstract from all content of knowledge; it would contain the rules of the pure thinking *about an object*, •and that would distinguish it from general logic•. Like general logic it would, •because it was 'pure'•, exclude all items of knowledge that have empirical content. It would be concerned with the *origin* of items of knowledge, but of course only when the origin is something other than empirically given objects. Its concern with *origins* marks it off again from general logic, because general logic has no interest in the origins of knowledge—it concerns only the laws according to which the understanding relates representations to one another, whether they come from within ourselves *a priori* or are given empirically.

•In the foregoing paragraph I have been working towards introducing *transcendental logic*, which is the title of this section. But that label risks being misunderstood•. The following important point will be relevant all through the present work, and you shouldn't lose sight of it:

The term 'transcendental' does not apply to *all* items of *a priori* knowledge, but only to ones through which we know that certain representations (intuitions or concepts) *can* be used in an entirely *a priori* way and know *how* this is so. Something is 'transcendental' only if it is *about the possibility* of a certain kind of *a priori* knowledge. So there is nothing transcendental about space or the *a priori* geometry of space; what 81 is transcendental is the knowledge that these representations don't have an empirical origin yet can be related *a priori* to objects of experience. . . .

•This explanation reserves the term 'transcendental' for something that I haven't shown to exist! Well, take it that I am expecting there to be concepts that can be related to objects *a priori*. . . .as acts of pure thinking; and that I am providing for such concepts by formulating the idea of a science of knowledge by pure understanding and pure reason, knowledge in which we think objects completely *a priori*. This science would settle the origin, the scope, and the objective validity of such items of knowledge. Such a science would have to be called 'transcendental logic', because it deals merely with the laws of understanding and of reason, attending only to their *a priori* dealings with objects—unlike 82 general logic, which attends to empirical as well as pure rational knowledge, without marking any distinction between them.

3. The division of general logic into analytic and dialectic

'What is truth?' This is the old and famous question that was supposed to drive logicians into a corner, forcing them to reveal the emptiness of their entire art by either resorting to a miserable circle or else admitting their ignorance. Those who asked the question •didn't mean by it what its words

mean: they were taking for granted the nominal definition of truth, namely that it is the agreement of knowledge with its object—and that's an answer to the question 'What is truth?' What they really wanted to ask was this: What is the general and certain *criterion* of the truth of any item of knowledge?

83 One great proof of intelligence or insight is knowing what questions it is reasonable to ask. For if a question is intrinsically absurd and calls for an answer where none is needed, then it brings shame on the questioner and misleads the incautious listener into absurd answers, so that the whole scene is (as the ancients said) of one person milking a ram while the other holds a sieve underneath. That's the situation with the stupid question at the end of the preceding paragraph, as I now proceed to show.

If truth consists in the agreement of an item of knowledge with its object, the object in question has to be distinguished from other objects. If it weren't thus distinguished, an item of knowledge concerning an object *x* could count as true without fitting *x*, just because it happened to fit some other object *y*. [See note on 'knowledge' on page 2.] Now a *general criterion* of truth would be one that had the form 'Any item of knowledge is true if and only if it is *F*', so it would have to be valid of all items of knowledge without any distinction among their objects. This means that a general criterion of truth would abstract from all the content of items of knowledge—i.e. from their relation to their objects—but relation-to-object is precisely what truth is about. . . . So there can't possibly be a sufficient and yet general mark of truth: its generality keeps objects out, its concern with truth brings them in, so that the whole notion is self-contradictory.

84 But the universal and necessary rules of understanding give us a necessary though not a sufficient condition for the truth of an item of knowledge, simply because anything

that contradicts these rules is false (because in any such item the understanding contradicts its own general rules of thinking and thus contradicts itself). But this is only a *necessary* condition of truth, because it concerns only the *form* of the item in question. An item of knowledge could completely satisfy this criterion i.e. be in complete accord with logical form, i.e. not contradict itself, yet still be false because it contradicts the object that it's about. Notice that the impossible necessary and sufficient criterion of truth concerned the *content* of items of knowledge, while this legitimate merely necessary condition concerns their *form*.

General logic separates the formal business of the understanding and of reason into its constituents, presenting them as principles of all logical evaluation of our knowledge. This part of logic can therefore be called an 'analytic' (because of its process of separating-out = analysing), and it is at least the negative touchstone of truth. Before we investigate the content of an item of knowledge in order to learn whether it contains positive truth about its object, we must first 85 examine and evaluate its *form* by means of these rules. But something's passing this test—agreeing perfectly with logical laws—doesn't guarantee that it is materially (objectively) true. So nobody can venture to think or say anything about objects on the basis of logic alone, without first getting solidly based information about them from outside logic. . . . Still, there's something seductive about this glittering art for giving all of our items of knowledge the form of understanding (even if we remain dead ignorant about their content!). Indeed it's so seductive that this general logic, which is merely a *canon* for judging, has been used, *misused*, as if it were an *organon* for the actual production of objective assertions or something like them. [See note on 'canon' and 'organon' on page 25.] When general logic is misused in this way

as an organon, it is called 'dialectic'.

86 The ancient philosophers gave the term 'dialectic' various different meanings when using it as the name of a science or art, but their actual *use* of the term shows that they meant it as a name for *the logic of illusion*—that and nothing else. Dialectic in this sense is a tricky set of techniques for giving an air of truth to ignorance and even to intentional tricks, which it does by aping the methodical thoroughness that logic always prescribes, and using its technical paraphernalia to prettify every empty pretension. [Kant writes of the ignorance and tricks with a possessive pronoun which in this context means *its*, so that he is referring to the ignorance and tricks of dialectic itself. This is peculiar; but in some contexts the pronoun means *his*, and Kant may have meant to speak of the ignorance and tricks of the person who engages in Dialectic.] Now, here is something certain and worth bearing in mind: when general logic is viewed as an organon, it is always a logic of illusion, i.e. is dialectical. For ·when it is used properly· general logic has nothing at all to say about the content of knowledge, and deals only with the formal conditions for items of knowledge to be in harmony with the understanding—conditions that have nothing to do with the objects ·or content· of knowledge. So the presumptuousness of using general logic as a tool or organon purporting to extend our knowledge yields nothing but *talk*, in which the talker somewhat plausibly supports or attacks anything that he happens to choose for such treatment.

Such a procedure is quite unworthy of the dignity of philosophy, ·and we don't need 'dialectic' or any other word to name something so bad·. So I prefer to use the noun 'dialectic' to stand for *a critique of dialectical illusion*; such a critique *does* count as part of logic, and that's how 'dialectic' is to be understood in the present work.

4. The division of transcendental logic into analytic and dialectic

In a transcendental logic we isolate the understanding (as 87 I isolated sensibility in the transcendental aesthetic), and separate out from our knowledge the part that originates solely in the understanding. But we can't *do* anything with this pure knowledge unless it can be applied to objects that are given to us in intuition. Without intuition, all our knowledge would be object-less and thus completely empty. So the part of transcendental logic that expounds •the elements of pure knowledge yielded by the understanding, and •the principles without which no object can be thought at all, is the transcendental analytic. . . . But there is a great temptation to *misuse* these •pure items of knowledge of the understanding and these •principles, by using them on their own ·without connecting them with objects·, and even using 88 them beyond all bounds of experience, which means using them without even the possibility of objects for them, because the objects would have to come from experience. When the understanding succumbs to this temptation, it runs the risk of using empty tricks to make a •material use of the merely •formal principles of pure understanding, flailing away with judgments about objects that aren't and perhaps couldn't be given to us. Since the transcendental analytic should properly be only

- a canon for evaluating the empirical use ·of the understanding·,

it's a misuse to let it count as

- the organon of a general and unrestricted use ·of the understanding·,

and to judge synthetically, to assert, and to decide about objects in general, on the basis of nothing but the pure understanding. Using pure understanding in this way as an organon would thus be dialectical. So the second part of the

transcendental logic has to be a critique of this dialectical illusion; it is called ‘transcendental dialectic’, meaning not that it dogmatically *creates* such illusions but rather that it is a *critique* of the supranatural use of the understanding and of reason, aimed at exposing the false illusion of their groundless pretensions. It aims to replace •their claims to discover and extend our knowledge purely through transcendental principles by something more modest, namely •evaluating the pure understanding and guarding it against sophisticated tricks. [Kant wrote *transzendental Grundsätze* = ‘transcendental principles’; that seems not to fit his use of ‘transcendental’ on page 26, or his account of its meaning in the indented passage on page 43; but we have to face the fact that he does sometimes use *transzendental* to mean merely ‘going beyond all experience’. In an indented question on page 12 we have seen him use the different word *transzendent* with that meaning; but when he distinguishes *transzendent* from *transzendental* early in the Dialectic, he gives the words meanings that don’t seem to fit very well with either page 12 or page 43.]

•END OF INTRODUCTION TO TRANSCENDENTAL LOGIC, WHICH BEGAN ON PAGE 41•

89 [The Transcendental logic divides into the Transcendental analytic, which starts here, and the Transcendental dialectic—the second half of the *Critique*—which would start right after page 154.]

Transcendental analytic consists in the dissection of all our *a priori* knowledge into its elements, which have been yielded by the pure understanding. The most important points are these:

- The concepts must be pure and not empirical.
- They must belong not to intuition and sensibility but rather to thinking and understanding.
- They must be elementary concepts, and clearly distinguished from •more complex• ones that are built up out of them.
- The list of them must be complete, covering the entire

field of pure understanding.

When a science is just an aggregate •of doctrines• assembled by empirical means, there can’t be any reliable basis for estimating that it is complete. To know that a science—specifically, the science that I call ‘the transcendental analytic’—is complete, we need •three things•:

- an idea of the totality of the *a priori* knowledge provided by the understanding,
- the classification of concepts that such an idea generates, and
- the inter-connections among those concepts, making them constitute a system.

Pure understanding distinguishes itself completely not only from everything empirical but even from all sensibility—i.e. from our intuitions of space and time, which are sensible but not empirical. So it is an independent and self-sufficient unity, not to be supplemented by additions from 90 other sources. Therefore the totality of its knowledge will constitute a system that is to be shaped by and understood through one idea. The correctness and genuineness of all the items of knowledge belonging to this system are assured by the system’s completeness and the way its parts are hooked together. But this part of the transcendental logic, •despite being such a unity•, is to be expounded in two ‘books’, one on the *concepts* of pure understanding, the other on its *principles*. [The Analytic of concepts starts now; the Analytic of principles starts on page 89.]

Analytic of concepts: Chapter 1: Metaphysical Deduction

What I mean by an ‘analytic of concepts’ is *not* the analysis of concepts—the usual procedure in philosophical investigations, of taking the content of whatever concepts present themselves and making them clearer by analysing them. I use the phrase to stand for something that until now has seldom been tried, namely the dissection of the faculty of understanding itself, in order to research the possibility of *a priori* concepts by seeking them only in the understanding as their birthplace and by analysing what is common to all pure uses of the understanding. This is the proper
91 business of a transcendental philosophy; anything beyond this is the logical treatment of concepts in philosophy. Let us, then, track the pure concepts back to their first seeds and dispositions in the human understanding, where they lie ready until at last, triggered by experience, they are developed and exhibited in all their clarity, liberated by that same understanding from the empirical conditions attaching to them.

When we put a faculty of knowledge into play, various concepts become prominent in various circumstances, and the faculty can be known through these; and an account of it can be built up, its degree of completeness depending on how long and accurately we have studied it. This rather mechanical procedure has two drawbacks. (1) There’s no way of knowing for sure when the investigation will be completed. (2) The concepts that are discovered in this
92 piecemeal way won’t exhibit any order or systematic unity. At best they’ll be arranged in pairs according to similarities among them, and placed in series according to how much content they have, the series running from simple concepts to more composite ones. There is some method in the

creation of such a series, but it’s far from being *systematic*.

When transcendental philosophy seeks for its concepts, it has the advantage but also the duty of proceeding according to a single principle. That is because those concepts spring pure and unmixed from the understanding, which is an absolute unity, so they must be connected with one another in accordance with one concept or idea. That kind of interconnection provides a *rule* through which •each pure concept of the understanding can be assigned its proper place, and •the completeness of the list of them can be determined, all this being done *a priori*. Without the rule, the placings of the concepts, and the judgment as to whether we had all of them, would depend upon chance or on what we *decided* to accept.

1. The logical use of the understanding in general

So far, I have given only a negative account of what the understanding is, calling it a non-sensible faculty of knowledge [see page 41]. Now we can’t have any intuition that
93 isn’t sensible, so there can’t be any intellectual intuition, so the understanding isn’t a faculty of intuition. But the only kind of knowledge there is, apart from intuition, is knowledge through *concepts*. Thus the knowledge of every understanding—or every human understanding, at least—is a knowledge through concepts; it isn’t intuitive but discursive. [The difference between (1) intuitive and (2) discursive is that between (1) knowing about something by being confronted by *it* and (2) knowing about something by having a description of it or thought about it or concept that applies to it.] Because all intuitions are sensible, they rest on •passive states, while concepts rest on •actions, specifically the action of unifying a number of representations by bringing them under one common representation (I call such actions ‘functions’). So concepts are based on the •activeness of thinking, while sensible intuitions are based

on the receptiveness or passiveness of impressions. [Kant now presents three theses in a well-stirred mixture, making the remainder of this paragraph especially hard to follow. What follows is an attempt to present the three separately; it steps over the bounds that have usually been respected in doing these texts, but there seems to be no other way of bringing this material within reach. **(1)** Kant has just said that a concept *unifies* many items; and our present passage goes from that to the thesis that judgments are also unifiers, because a judgment is a certain structure of concepts. **(2)** Kant has also said that the items that a concept brings together are 'representations', and he now explains this. My concept of *body* (for example) is something I can apply to things in the world only through how the world *appears* to me through my senses. The sights and feels of bodies are 'representations' of them; so my concept of *body* brings together all the intuitions that I do or might have of bodies, and *through* doing that it brings together bodies. Remember that 'representation' is a catch-all term that covers both concepts and intuitions. So Kant is saying that a (1) concept is a representation of many (2) representations of (3) things that aren't representations; if you like, you can say that (1) the concept represents (3) the things, but don't forget that it represents them 'mediately' or indirectly; whereas it represents the (2) intuitions of them directly, just as (2) those intuitions represent (3) the things directly. **(3)** Having earlier described the understanding as a faculty for *thinking*, Kant now calls it a faculty for *judging*; and he sets out here to show that the two descriptions are both right. The crucial idea is that obviously

•thinking is operating with concepts,
to which Kant adds the important thesis (this being taken straight from his text) that

•the only use understanding can make of concepts is

to judge by means of them.

This thesis will be crucial in what follows. In expounding it, Kant weaves it together with **(1)** his thesis about concepts (and thus judgments) as unifiers and **(2)** his thesis about how concepts (and thus judgments) connect with things only mediately = indirectly, *through* the appearances of things, i.e. through our sensory representations of things. This interweaving is what makes the passage so hard to follow. It also has the effect that nothing much is said in *defence* of **(3)** the thesis about concepts as usable only in judging. The paragraph ends thus:] Therefore the concept of *body* signifies something—*metal*, for example—that can be known or thought about through that concept. That's what makes it a *concept*—the fact that it applies to other representations *through* which it applies to bodies. So it is the predicate for a possible judgment, e.g. 'Every metal is a body'. This tight tie-up of concepts and judgments has the result that if we can present *all* the functions of unity in judgments—i.e. all the basic ways in which concepts can be brought together in judgments—we'll be able to list *all* the functions of the understanding. The following section will show that this can quite easily be done. ..94

[On page 36 Kant started section 8 of the Aesthetic. He now returns to that numbering system, assigning 9 through 27 to chunks of the Analytic of Concepts. Some of these chunks are *subsections*; others are whole sections to which Kant *also* gives numbers of their own (i.e. ones that don't carry on from the Aesthetic numbering). The one we are about to meet, for example, is numbered '2' and '9'. In the present version, each start of such a subsection will be marked by a label of the form **3/1**, and so on. For example, at page 60 we reach a subsection that gets the heading '14' in Kant's system; in this version it is labelled **1/2**, because this is the second subsection in section 1 of that chapter.]

2. The logical function of the understanding in judgments

- 95 If we set aside all the content of judgments and attend only to their form, we find that there are twelve kinds of judgment, specifically four groups of three. Here they are in a table:

Table of judgment-kinds

Quantity

Singular
Particular ('Some . . .')
Universal ('All . . .')

Quality

Affirmative (. . . is mortal')
Negative (. . . is not mortal')
infinite (. . . is non-mortal')

Relation

Categorical
Hypothetical
Disjunctive

Modality

Problematic
Assertoric
Apodictic

- 96 This classification seems to differ in some inessential respects from the one the logicians normally use, so I had better explain it.

Quantity: Logicians rightly say that in syllogisms singular judgments can be treated like universal ones. In the judgment that *Plato is a philosopher* (for example) the predicate-term 'philosopher' is applied to *everything* that is contained under the subject-term, just like the predicate-term in the universal judgment that *All Greeks are philosophers*. But if we compare a singular judgment with a universal one

considered as expressing some knowledge, then they are utterly different, just as *one* differs from *infinity*. (To know that Plato is a philosopher, you have only to know about that one man; whereas to know (for some F and G) that All Fs are G, you have to know about all the Fs, which may be an open-ended and practically infinite class.) So singular judgments are entitled to have a place in a list of forms of judgment (though obviously not in a logic that is concerned only with how different judgments relate to one another).

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Quality: In general logic, infinite judgments are rightly lumped in with affirmative ones, and aren't given a place of their own in the classification; but in a transcendental logic infinite judgments must be listed separately from affirmative ones. General logic is interested in the notion of a predicate's either applying or not applying to a given subject, but it isn't interested in *what* predicate is in question—e.g. it isn't interested in whether it's a negative predicate or a positive one. But transcendental logic is interested in this; it wants to know what the value or content is of a judgment in which a merely *negative* predicate is positively affirmed of something—what sort of addition it makes to our knowledge. If I say of the soul 'it is not mortal', this is a negative judgment that does achieve something, for it at least rules out an error, the error of saying that the soul is mortal. Now consider the 'infinite' proposition 'The soul is non-mortal'. [With astonishing carelessness, Kant wrote *ist nicht sterblich* ('is not mortal') in a passage whose entire point is to distinguish infinite judgments—affirmative ones with negative predicates—from negative judgments. Most editors rightly correct the text at this point, to *ist nichtsterblich*, putting the negativity into the predicate.] In this I have certainly made an actual affirmation, so far as logical form is concerned, for I have placed the soul *within* a certain domain, the domain of undying things. [The next bit is harder than it needs to be. Kant's main point in it is that although

- affirmative judgments put the things referred to by the predicate-term *within* a certain domain,

whereas

- negative judgments put the things in question *outside* a certain domain,

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when we have an infinite judgment—i.e. an affirmative judgment with a negative predicate—the domain of the things referred to by the predicate-term is so vast that the contribution to our knowledge that such a judgment makes is like the contribution made by an outright negative judgment. Kant's rather complicated exposition of this point doesn't give any clear reason for not saying something like this:

Negative judgments differ from affirmative ones in the following manner [etc., etc.]; and to know whether the judgment expressed by a sentence is negative you have to know not just whether it contains a 'not' or a *nicht*; you also have to know whether its predicate is essentially negative.

That approach would abolish 'infinite judgments' as a class on its own. This obviously wouldn't suit Kant, who wants his four-by-three structure for formal kinds of judgment; but he doesn't theoretically justify this part of the structure.]

Relation: [Kant is going to connect disjunctive judgments with *Gemeinschaft*, standardly translated as 'community'. When he says that in 'P or Q or R' the propositions P and Q and R have *Gemeinschaft*, he means that they are contributing in the same way—all on the same level—to the meaning of the disjunction, unlike P and Q in the hypothetical 'If P, then Q'. 'Community' doesn't at all express this, but it seems that no other one English word does either. So 'community' will be used here; remember what it means.] There are three thought-relations that can be involved in a judgment: (1) In a judgment of the categorical form *S is P* the predicate is related to the subject. (2) In a judgment of the hypothetical form *If Q then R* one

proposition (the ground) is related to another proposition (the consequence). The hypothetical proposition *If there is perfect justice, then obstinate evil will be punished* relates the two propositions *There is perfect justice* and *Obstinate evil is punished*. It doesn't settle whether either or both of these are true; the only thought that's involved here is the thought that one proposition implies the other. (3) In a disjunctive judgment of the form *Q or R or S or . . .* [which Kant understands in the exclusive sense, i.e. taking the proposition to say that one *and only one* of those items is true] several judgments or propositions are related to one another. The relation in question is not the relation of *following*, but rather

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- the relation of logical opposition,

because there is no overlap between the spheres of possibility in which they are true ('. . . only one'), and also

- the relation of community,

because the judgments jointly exhaust the whole sphere of knowledge ('. . . at least one'). Take for example the proposition *The world exists through blind chance, or the world exists through inner necessity, or the world exists through an external cause*. Each of these propositions occupies one part of the sphere of possible knowledge about the existence of worlds, and together they occupy the entire sphere. To learn that the truth doesn't lie in one of these spheres is to learn that it does lie in one of the other two. And to learn that it *does* lie in one of the spheres is to remove it from the others. So a disjunctive judgment involves a certain *community* of items of knowledge, consisting in the fact that they mutually exclude each other but taken together they cover the whole extent of possible knowledge in the sense that whatever we come to know, it will be compatible with at least one of those three. For present purposes that's all I need to say about disjunctive judgments.

100 **Modality:** A judgment's modality is a quite special function of it. It's unlike the other three because it has nothing to do with the judgment's content. (The content of a judgment involves the properties of quantity, quality, and relation, and nothing else.) The modality of a judgment P has to do not with its content, then, but with what kind of thought is expressed by its copula.

[Kant is thinking here of the three types of modality as exemplified by

The speed of light **may be** finite (problematic)

The speed of light **is** finite (assertoric)

The speed of light **must be** finite (apodictic)

and thinking of the bold-type item in each as its copula. In a problematic judgment the assertion or denial is regarded as merely possible; in an assertoric judgment it is considered to be actual or true; in an apodictic judgment it is seen as necessary. Kant develops all this by combining it with the trio of judgment-kinds under the heading of Relation. In thinking a categorical judgment one thinks it as asserted; in thinking a hypothetical or disjunctive judgment one thinks each of its constituents merely as possible or problematic. What follows is the remainder of the paragraph with that unhelpful detour through 'Relation' filtered out.]

..101 In the problematic thought *It may be the case that P* I am allowing the proposition P a place in my understanding, as not ruled out. In the assertoric thought *P* I think of logical actuality or truth, thinking of *P* not as something I choose to grant a perhaps-temporary place in my understanding, but as already firmly lodged in my understanding (in accordance, of course, with its laws). And in my thought of the apodictic proposition *It must be the case that P* I am thinking of *P* as determined or settled *by* the laws of the understanding; so I am asserting *P a priori*, in this way expressing its logical necessity. So we have here a three-step procedure: I first judge *P* problematically, then maintain its truth assertorically, and finally assert *P* to be inseparably connected with the understanding, i.e. I assert *P* as necessary and apodictic. So

it is legitimate to see these three modal features of judgments or propositions as corresponding to three ways of thinking.

3. The pure concepts of the understanding, i.e. categories

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3/1

As I have already said several times, general logic abstracts from all content of items of knowledge, and looks to some other source—whatever it may be—to provide it with the representations that it is to turn into concepts by means of analysis. Transcendental logic, on the other hand, does take account of some content, and knows very well what its source is. Specifically, it confronts a manifold [see note on page 20] of sensibility that is presented to it *a priori* by the transcendental aesthetic. It's this manifold of space and time that provides *matter = content* for the pure concepts of the understanding; without it, they would be completely empty. Any objects that we are to know or think about must satisfy the basic pre-conditions for being received by our mind, and those conditions are space and time. So we can't have any representations that don't involve space and/or time, and that is how space and time affect—or are taken account of by—our concepts. We are passive or receptive in respect of our intuitions of space and time, but our thought is *active*—it creates knowledge only by *doing* things. For it to have any knowledge of the *a priori* manifold of space and time, therefore, it must go through it, take it up, and pull it together in a certain way. I call this activity 'synthesis'.

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By 'synthesis' in its most general sense I mean the action of assembling different representations and grasping their manifoldness—their variety—in *one* item of knowledge. Such a synthesis is 'pure' if the manifold is given not empirically but *a priori* (like that of space and time). Before we can analyse any representations we must *have* them; so we

can't get any new concepts—ones with new content—through •analysis. What gives us our first hand-hold on knowledge is the •synthesis of a manifold (given either empirically or *a priori*); the knowledge may at first be rough and ready, and confused, and thus in need of •analysis; but it's the •synthesis and nothing else that gathers together the elements for knowledge and unites them to form a certain content. If we want to know about the first origin of our knowledge, what we must attend to is *synthesis*.

We'll see later that synthesis in general is a mere effect of the imagination—something that the soul does blindly, usually without our being conscious of it—though it is indispensable because without it we wouldn't know anything. But it's the role of the understanding to bring this synthesis to *concepts*, and in this way to provide our first knowledge properly so-called. . . .

Different representations are brought **under** one concept analytically—general logic takes care of that. But transcendental logic teaches us how to bring **to** concepts not •representations but •the *pure synthesis of* representations. [The emphases on 'under' and 'to' are Kant's own. He regularly uses 'x comes **under** concept C' as a way of saying that C applies to x. Bringing a synthesis of representations **to** (or **onto**) a concept seems to be making the synthesis—or the gathered-together assemblage that the synthesis produces—available to the concept, so that the concept can confer on it some special kind of 'unity'.] For us to have knowledge about anything, we need three things to be given to us *a priori*: (1) the manifold of pure intuition; (2) the imagination's synthesis of this manifold; and (3) the concepts that give unity to this pure synthesis. (The imagination's synthesis isn't enough for knowledge. For any kind of cognitive state we have to go from (2) to (3).) What a concept *is*—everything that it is—consists in the representation of this necessary synthetic unity. And concepts depend on the understanding.

[The brief paragraph *seems* to be saying: the intellectual activities through which we make •judgments are the very ones in which the mind pulls together the elements of an intuition so as to make it a single unified •intuition. This is support for the thesis—mentioned but not defended earlier—that concepts are best thought of as capacities for making certain kinds of judgments. Kant continues:]

..105

That's how it comes about that there are exactly as many •pure concepts of the understanding that apply *a priori* to objects of intuition as there were •logical functions of all possible judgments [= 'basic kinds of judgment'] in the table on page 49. For these functions specify the understanding completely, and provide an exhaustive inventory of its powers. I shall follow Aristotle in calling these concepts *categories*, for my aim here is basically the same as his, though our ways of going after it are very different.

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·**Table of categories**·

Quantity

Unity
Plurality
Totality

Quality

Reality
Negation
Limitation

Relation

Inherence and subsistence
Causality and dependence
Community [see note on page 50]

Modality

Possibility—impossibility
Existence—nonexistence
Necessity—contingency

That's the list of all the basic pure concepts of synthesis that

the understanding contains in itself *a priori*. . . . This classification is systematically derived from a common source, namely the structure of the faculty for judging (which is the same as the faculty for thinking). That's how we know that it is complete. A list that was assembled in a piecemeal fashion on the basis of a haphazard search for pure concepts could never be known for sure to be complete. And it would have another drawback that my list doesn't, namely that a piecemeal list would never show us *why* these concepts inhabit the pure understanding and others don't. Aristotle's search for these basic concepts was an effort worthy of such an acute man. But he had no systematic basis for identifying the pure concepts; he simply picked them up as they came his way. On his first pass he rounded up ten of them, which he called 'categories'; then later he thought he had found five more. . . . But his list omitted some concepts that ought to have been on it. And it included concepts that should *not* have been there: several items belonging to pure sensibility and one empirical concept, none of which belong in a list of concepts that stem from the understanding; and also some derivative concepts were included among the basic ones. . . .

[Kant's next two paragraphs concern derivative pure concepts of the understanding. A complete transcendental philosophy would have to identify all of them, but in this 'merely critical essay' there is no need to do that, because all it needs are the basic pure concepts of the understanding, i.e. the categories. Kant makes a suggestion about how to go about locating all the derivative pure concepts, and remarks that this would be useful and quite enjoyable. Then:]

In this work I deliberately omit the definitions of the twelve categories,

what Kant wrote: *ob ich gleich im Besitz derselben sein möchte.*

which could mean: although I may have them.

or it could mean: although I would like to have them.

Later on in the work, I'll analyse these concepts only as far as is needed for the doctrine of method that I am working up [occupying about the last 25 pages of the work, after the Dialectic]. If I were offering a *system* of pure reason—as distinct from a *critique* of it—it would be right to demand these definitions; but here they would only be a distraction, arousing doubts and objections that can be kept till later without doing harm to the essential aims of the present work. In any case, the little that I have here said already makes it clear that a complete glossary with all the needed definitions would be easy to produce. . . .

3/2

This table of categories suggests some nice points that could be made, ones that might have an important bearing on the scientific form of all items of knowledge through reason. If you think that that's too grand a claim, consider the following. This table contains *all* the elementary concepts of the understanding, and even provides the form though not the content of a system of them in the human understanding. So it directs us to all the *moments* [perhaps = 'crucial turning points' or = 'important elements'] of a planned speculative science, and even to their order. . . . This makes it obvious that in the theoretical part of philosophy the table of categories is notably useful, indeed indispensable, for offering the *complete over-all plan* for a science based on *a priori* concepts, and dividing it systematically on the basis of definite principles. I now present three of these points.

(a) This table, which contains four classes of concepts of the understanding, can be split into two parts, one concerned with objects of intuition (pure as well as empirical), the other with the existence of these objects (in relation either to each other or to the understanding).

I'll call the first class the 'mathematical' categories, the second the 'dynamical' ones. You can see that the categories in the first class have no correlates, whereas those in the second class do have them. This difference must be based somehow on the nature of the understanding. [Kant means just that none of the first and second trios of categories can be expressed, as each of the third and fourth trios can, as some kind of polarity or contrast or opposition. That presumably explains his labelling the first Relational category not as 'substance' but as 'subsistence and inherence' (substances *subsist* while their properties *inhere* in them), and the second not as plain 'causation' but as 'causation and dependence'. 'Community' doesn't fit this pattern, but Kant doesn't mention that.]

(b) When we use concepts to make an *a priori* division, the division has to be a •dichotomy. Yet each of the four classes of categories has precisely •three members. There is something to be thought about here. The solution is that in each of these trios the third member arises from the combination of the first two members. Thus:

- ³allness (totality) is just ²plurality considered as a ¹unity,
- ³limitation is just ²reality combined with ¹negation,
- ³community is the ²causal situation of ¹substances that mutually interact, and
- ³necessity is nothing but the ²existence that is given by ¹possibility itself.

But don't think that the third category is a mere derivative from the other two, and thus not a *basic* concept of pure understanding. That would be a mistake, because: as well as the acts of the understanding involved in using the first and second members of each trio, a further *and different* act is required for the combination of those two to produce the third. . . . For example, to understand what it is for there to be •community, i.e. one substance to be the cause of some state of another substance, you don't merely put together

your concept of •cause with your concept of •substance. This shows that a special act of the understanding is required here, and similarly in the other cases.

(c) Of the twelve correspondences I have found between the categories and basic forms of judgment, one is less obviously correct than the other eleven. The one concerns the category of community [see note on 'community' on page 50]. 112

[Kant devotes two paragraphs to explaining why he thinks that the claimed correspondence between •disjunction and •community is legitimate. The core of it is that

•in a disjunctive judgment 'P or Q or R or . . .' one is thinking of the disjuncts P, Q, R etc. as on a level, with no one or more of them having any precedence or seniority over the others in one's thought (in the way that P takes precedence over Q in the judgment 'If P, then Q');

and, similarly,

•when several objects are in community with one another, each of them acts on *and is acted on* by the others, so that again there is no primacy or seniority (in the way that there is a kind of seniority when one thing acts on another which doesn't act back).

Along with expounding this, Kant throws in a reason why the category of community is 'quite different' from that of one-way causation; he needs it to be different so that it won't count as a mere 'derivative' of the other. The difference he presents is that when several things are causally inter-related in the 'community' manner, that makes them *parts of a single whole*; whereas one thing's acting causally on another isn't enough to make them parts of whole; if it were, there might be a single thing of which God was one part and the world another.]

..113 **3/3**

The transcendental philosophy of the ancients includes yet another chapter containing pure concepts of the understanding. The ancient philosophers didn't call these concepts 'categories', but they regarded them as pure *a priori* concepts of objects—i.e. categories! That would raise the number of categories to more than twelve, so it can't be right. The concepts in question are displayed in the proposition, so famous among the scholastics:

quodlibet ens est unum, verum, bonum

·Whatever is a thing is *one, true, and good*·.

They got very little (only tautologies, indeed) from the use of this principle, which is why it came later to be given a place in metaphysics almost solely as a courtesy. Still, when a thought has sustained itself for so long, even if it seems empty, its origin is worth investigating. One suspects that it must have been based on some rule of the understanding that has—as so often happens—merely been wrongly interpreted. These supposedly transcendental predicates of *things*—'one', 'true', 'good'—are really just logical requirements and criteria for all *knowledge of things as such*, having the effect that all such knowledge is based on the categories of quantity—unity, plurality, totality. . . .

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These categories have been taken ·by many philosophers· as material, i.e. as belonging to the possibility of things itself, whereas they really should have been used in a merely formal sense, as belonging to the logical requirements for every cognition. That is, these criteria of thinking were carelessly made into properties of things in themselves. ·That explains what went wrong in the deployment of those three concepts, but it doesn't explain their origin. If they came, as I have suggested, from a misunderstanding of ·something sound, what was ·it? Implausible as this may seem·, the concepts
one, true, good

are based on the categories of quantity, i.e. the concepts of unity, plurality, totality.

[Kant's explanation of this surprising claim is excessively hard to follow. (i) The connection between ·one and ·unity doesn't need to be explained, and Kant doesn't explain it. He does liken the 'unity' that is involved in pulling the manifold of knowledge into a single conceptual whole to 'the unity of the plot of a play, or the unity of a speech'. (ii) He connects ·true with ·plurality through the claim that any 'true consequences that follow from a given concept' are signs that it is objectively real (= true), so that the more true consequences there are the more signs of reality. Although he doesn't say so, Kant is here connecting plurality with truth by connecting one plurality with *another plurality* which is said to have something to do with truth. (iii) Kant's linking of ·good with ·totality is startlingly obscure, but the core of it is intelligible. It consists in replacing 'good' by a word meaning 'perfect', and then giving this one of its old meanings, namely that of 'complete'. (The German word (*vollkommen*) has a part (*voll*) that can mean 'fully' or 'completely'. Similarly, the English 'perfect' comes from Latin words meaning 'made' and 'throughout'; a perfect thing is one that is made throughout, thoroughly made, i.e. one whose construction is complete.) Once that change is made, it isn't hard to bring ·totality into the picture, which Kant does in some obscure remarks about the 'completeness' of a concept.—After presenting these three connections, Kant repeats that he has been giving 'one', 'true' and 'good' a role in an account of ·concepts and of items of knowledge considered in themselves, not of ·how concepts and knowledge relate to objects. Thus:] Consider the question of whether a given concept is possible (not whether its object is possible). The criterion for this is the concept's definition; and what a proper definition does is to embody (i) the unity of the concept, (ii) the truth of

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everything that can be immediately inferred from it, and (iii) the completeness of everything that is drawn from it; and those three items are everything that is needed for the whole concept to be produced. [Kant follows this with a supposedly analogous three-part criterion for whether a hypothesis is acceptable—(i) whether it does its explanatory job without help, i.e. alone; (ii) whether it is true; (iii)...something utterly obscure about completeness. Then:] So the concepts of unity, truth, and perfection are not to be added to the transcendental table of the categories, as though it had gaps that they fill. Rather, the relation of these ·three· concepts to objects doesn't arise; our use for the concepts is in thinking and talking about general logical rules for the agreement of knowledge with itself. [Also, Kant says in passing that

- the application of unity, plurality and totality to objects

involves applying them to items that are 'completely homogeneous', whereas

- the application of 'one', 'true' and 'perfect' to concepts and knowledge

has to do with pulling 'heterogeneous elements of knowledge into one consciousness'.]

Chapter 2: Transcendental deduction

1. The principles of any transcendental deduction

1/1

117 When legal theorists speak of entitlements and claims, they distinguish questions of law from questions of fact, and demand proof of both ·if a given legal action is to succeed·. They use the term ‘deduction’ to label the procedure of establishing the legal point of the person’s right or entitlement. Now, we use many empirical concepts without anyone’s objecting; we don’t need a ‘deduction’ to convince us that we are justified in taking them to have meanings. . . ., because experience is always available to prove their objective reality. But some impostor concepts—such as *fortune* and *fate*—are pretty generally allowed to get by; and when there *is* an occasional demand to know what right they have to acceptance, there’s a problem about giving them a ‘deduction’, because neither experience nor reason provides a clear basis for an entitlement to use them.

Among the many concepts that form the highly complex web of human knowledge, some are marked out for pure *a priori* use, completely independently of all experience; and these always require a deduction of their entitlement—their *right* to be used. No proofs from experience could show that it’s lawful to use a concept in an *a priori* manner; ·so their ‘deduction’ must come from somewhere else. To provide it, we have to know *how* these concepts can apply to objects that they don’t derive from any experience. So I use the label ‘transcendental deduction’ for the explanation of how concepts can apply to objects *a priori*. ·It is ‘transcendental’ because it has to do with the possibility of *a priori* knowledge [he explained this meaning of ‘transcendental’ on page 43], and it’s a ‘deduction’ in the legal sense because it secures the *right* of such *a priori* concepts to be used, the *legitimacy* of their use·.

I distinguish this from the *empirical* deduction of a concept, which shows how a concept is acquired through experience, and reflection on experience, and therefore isn’t concerned with the legitimacy of the concept but only with the facts about how we come to have it. [At the start of this chapter Kant has tied ‘deduction’ to questions of law or rights or legitimacy, and not of facts; now he says that the ‘empirical deduction’ of a (presumably empirical) concept is a matter of fact and not law. Perhaps he slid into this via the thought that the question of the •legitimacy of an empirical concept is obviously and immediately settled by the •facts about the concept’s empirical success—so obviously and immediately that one is tempted to think that we have here only a question of fact.].

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Now we already have concepts of two entirely different kinds, which are alike in that concepts of both kinds relate to objects completely *a priori*. The two are:

- the concepts of space and time, as forms of sensibility, and
- the categories, as concepts of the understanding.

It would be a waste of time to look for an *empirical* deduction of either of these, because what is special about them is precisely that they apply to •their objects without having borrowed anything from experience for the representation of •them. So if there has to be a deduction of them, it will have to be a *transcendental* one.

Still, although with these concepts we can’t look to experience for what makes them possible, we can—as we can with *any* knowledge—look to experience for the occasional causes of their production. [This means, approximately, ‘look to experience for the events that trigger the concepts, release them for action’. Throughout early modern philosophy, ‘occasion’ and ‘occasional cause’ and their equivalents in other languages were used to express the idea of one event’s having some part in the occurrence of some other event without outright *causing* it to occur.] ·Such an account, in which the crucial events are arranged in the order in which

they occur, would run as follows:

The impressions of the senses provide the first trigger for the opening of the entire power of knowledge to them and for the coming into existence of *experience*. Experience contains two very unlike elements—

- the *matter* for knowledge, obtained from the senses, and
- a certain *form* for ordering this knowledge, obtained from the inner source of pure intuiting and thinking.

The occurrence of the sensory matter is what first triggers the intellectual form and brings concepts into play.

That is an account of our knowledge faculty's first attempts to ascend from individual perceptions to general concepts. It's a useful kind of account to give, and we are indebted to the famous Locke for having first opened the way for it. But a *deduction* of the pure *a priori* concepts—i.e. an explanation of why they are *legitimate*—can't be achieved in this way; it doesn't lie on this path of a first-this-then-that kind of account. Given that these concepts are to be used in a way that is entirely independent of experience, they need a birth-certificate that doesn't imply that experience is their parent! [Kant is about to mention a 'physiological derivation' of the pure concepts. He is referring to the first-this-then-that account in the indented passage above. For the term 'physiological' (which won't occur again until the *Dialectic*) see the note on page 1.] The attempted physiological derivation of the pure concepts can't properly be called a 'deduction' at all, because it concerns a question of fact rather than of legitimacy. . . . It is clear, then, that any properly so-called *deduction* of them must be not empirical but transcendental. Any empirical so-called-deduction of them is an idle waste of time, and wouldn't be attempted by anyone who properly grasped the entirely special nature of

these items of knowledge.

Granted that the only possible deduction of pure *a priori* knowledge is a transcendental one, it's not obvious that there absolutely has to be any deduction of it. I have provided one: I traced the concepts of space and time to their sources by means of a transcendental deduction, and explained and pinned down their *a priori* objective validity. But is it clear that this was needed? Geometry follows its secure course through strictly *a priori* items of knowledge, without having to ask philosophy to certify the pure and lawful pedigree of its basic concept of space! 120

Well, yes, but what has enabled geometry to 'go it alone' and yet be secure and successful is a special fact about the concept of space, one that doesn't carry over to the categories. Here are the two sides of the contrast I am drawing:

The use of the concept of space in geometry concerns only the external world of the senses; space is the pure form of our intuitions of that external world; so all geometrical knowledge, based as it is on a *a priori* intuition, is immediately evident. This *a priori* intuition that gives us our geometrical knowledge gives us the objects of that knowledge, so far as their form is concerned; there's no need for a deduction to show that our geometrical concepts are legitimate, because our geometrical knowledge itself presents us with the relevant objects, so there is no question of legitimacy still to be answered.

In contrast with that:

1. The pure concepts of the understanding (the categories) . . . speak of objects not through predicates of intuition and sensibility but through predicates of pure *a priori* thinking; so they relate to objects *as such*, not merely to objects *as given in sensibility* but to objects *period*. **2.** Since the categories are

not based on experience, they can't exhibit in *a priori* intuition any objects such as might make them legitimate prior to any experience.

121 For these two reasons, suspicions arise concerning the objective validity and limits of use of the categories. And the categories make the concept of *space* suspect too, because of their tendency to use it beyond the conditions of sensible intuition (which is why a transcendental deduction of that concept *was* needed, after all!). So you'll have to be convinced of the unavoidable necessity of a transcendental deduction of the categories before taking a single step in the field of pure reason. Otherwise you'll stumble around blindly, eventually getting back to the very state of ignorance that you started off with. There is the choice: either we surrender completely all claims to insights of pure reason in its much-prized field, namely beyond the boundaries of all possible experience, or we carry out this critical investigation—including the transcendental deduction of the categories—completely. Because there is so much at stake, you need to understand clearly in advance how hard this is going to be. Don't complain of obscurity in what I write when the trouble lies in the deeply veiled nature of the subject-matter, and don't get annoyed by the presence of an obstacle at a time when it's still too early to clear it away.

122 It hasn't been hard to explain how the concepts of space and time must necessarily apply to objects despite their *a priori* status, and must make it possible to have synthetic knowledge of those objects independently of all experience. It's only through those pure forms of sensibility (space and time) that an object can appear to us, they are pure intuitions that contain *a priori* the conditions of the possibility of objects as appearances. . . .

The categories of the understanding, on the other hand, don't represent the conditions under which objects are given

in intuition at all; so objects can appear to us without necessarily having to be related to the functions of the understanding, and therefore without the understanding containing their *a priori* conditions. [Kant doesn't mean that this *can* happen—merely that nothing has been said so far that shows that it can't.] So a difficulty turns up here that we didn't meet in the domain of sensibility, namely the difficulty of showing how subjective conditions of thinking can have objective validity, i.e. how they can set conditions for the possibility of all knowledge of objects. The question arises because appearances can certainly be given in intuition without functions of the understanding, i.e. without being brought under concepts. Take the concept of *cause*, for example. This signifies a particular kind of judgment in which

•If you have A, then there's a rule saying that you also get B.

It's not clear *a priori* why appearances should contain anything of this sort (and it can't be shown on the basis of experience, for the objective validity of this concept must be secured *a priori*); so there is a question as to whether the concept mightn't be empty, with nothing answering to it among the appearances. This much is clearly right:

•Objects of sensible intuition must fit the formal conditions of sensibility that lie in the mind *a priori*, 123

because if they didn't they would not be objects *for us*. But it's not so easy to see the argument for this:

•Objects of sensible intuition must also fit the conditions that the understanding requires for the synthetic unity of thinking.

Appearances might be so constituted that the understanding didn't find them to be in accordance with the conditions of its unity. In that case, everything would lie in such confusion that the series of appearances didn't offer anything that would furnish a rule of synthesis and thus fit the concept

of cause and effect, so that this concept would be entirely empty, null, and meaningless. Yet even then appearances would offer objects to our intuition, for intuition doesn't need the activity of thinking.

You might hope to escape these laborious investigations on the ground that:

'Experience constantly presents *regularities* in appearances; these provide plenty of opportunity to abstract the concept of cause from them, and at the same time confirm the objective validity of the concept of cause.'

You'll say this only if you haven't taken in that the concept of cause *can't* arise in this way. If it's not to be entirely surrendered as a mere fantasy of the brain, the concept of cause
124 must be grounded completely *a priori* in the understanding. For it absolutely requires that something A is of such a kind that something else B follows from it *necessarily and in accordance with an absolutely universal rule*. Appearances do present cases from which we can extract a rule about what *usually happens*, but never a rule according to which the succession is necessary; we can get from appearances a rule of the form 'In most cases when an A-type event occurs, a B-type event follows', but not one of the form 'Always when an A-type event occurs, a B-type event must follow'. To judgments of cause and effect there belongs a dignity that can't ever be expressed empirically, namely that the effect doesn't merely follow *after* the cause but is posited *through* it and follows *from* it. And strict universality of the rule isn't a property of any empirical rule either. The most a rule can get from induction—i.e. from regularities in our experience—is comparative universality, i.e. extensive applicability. If we treated our pure concepts of the understanding as merely empirical products, that would be a complete change in our way of using them.

1/2 Final step towards the transcendental deduction of the categories

How can a synthetic representation and its object •come together, •necessarily relate to each other, as it were •come to terms with each other? There are only two possible ways.

Either (1) the object alone makes the representation possible, or (2) the representation alone makes the object possible. If (1) is the case, then this relation is only empirical, and the representation is never possible *a priori*. . . . [The passage from * here to the next asterisk expands the original in ways that the apparatus of •small dots• can't easily convey.] What I envisage in (2) is not the representation's making the object possible by causing it to *exist*. A representation *can* cause an object to exist—e.g. when a man gets the thought of a sandwich, which leads him to want a sandwich, which leads him to make one. But that's irrelevant to (2) as I intend it: I spoke of what a representation does **alone**, thus excluding anything it does *by means of the will* (which is how the thought of a sandwich produces the sandwich). Well, how else can a representation make an object possible? Like this: If it is only through this representation that anything can be known as an object, any object that the representation has will have to measure up to whatever standards the representation sets, whatever conditions it imposes; and in that way the representation can settle some aspects of what the object will be like. * Now let us apply this to each of the two conditions—the *only two*—under which an object can be known, namely •the conditions laid down by•

- an intuition, through which the object is *given*, though only as appearance; and
- a concept, through which the object corresponding to the intuition is *thought*.

What I have said earlier in this work makes it clear that the

126 first condition—the one that has to be satisfied if objects are to be intuited—does in fact lie in the mind *a priori* as the basis for the form of objects. So all appearances must agree with this formal condition of sensibility, because that's the only way they can *appear*, i.e. be empirically intuited and given. The question now is whether the analogous thing holds for *a priori* concepts. Do they set conditions that have to be satisfied by anything that is to be (not intuited, but) *thought*. . . ? If they do, then all empirical knowledge of objects has to conform to our *a priori* concepts, because if it doesn't then nothing is possible as an object of experience. And that is how matters stand. All experience contains, in addition to the intuition of the senses through which something is given, a concept of an object that is given in intuition (i.e. that appears). Thus, concepts of *objects as such* underlie all experiential knowledge, as *a priori* conditions that it has to satisfy; so the objective validity of the categories as *a priori* concepts rests on the fact that it's only through them that experience is possible. . . . Since it is only by means of them that any object of experience can be thought at all, it follows that they apply necessarily and *a priori* to objects of experience.

127 The transcendental deduction of all *a priori* concepts therefore has a principle toward which the entire investigation must be directed, namely this: *a priori* concepts must be recognised as *a priori* conditions of the possibility of experience (whether of the intuition that is encountered in experience or of the thinking that it involves). And concepts that provide the objective ground for the possibility of experience are, just because they do that, **necessary**. The unrolling of the experience in which objects of these concepts are encountered *illustrates* the concepts but isn't a *deduction* of them; if it were, that would mean that they were merely **contingent**. Without this absolutely basic relation to

the possibility of experience in which objects of knowledge may be found, we couldn't understand how they could be related to any object.

·FROM HERE TO PAGE 73 THE TEXT COMPLETES THE 'TRANSCENDENTAL DEDUCTION OF THE CATEGORIES' IN (A) THE FIRST EDITION OF THE WORK. TO STAY WITH THE (B) SECOND-EDITION VERSION, JUMP TO PAGE 73.·

There are three sources (capacities or faculties of the soul) that contain the conditions of the possibility of all experience; I mean three *basic* sources—ones that can't be derived from any other faculty of the mind. They are *sense*, *imagination*, and *self-awareness*. [The last term translates Kant's *Apperzeption*. See note on page 38.] They are the bases for (1) the *a priori synopsis* of the manifold through sense, (2) the *synthesis* of this manifold through imagination, and (3) the *unity* of this synthesis through basic self-awareness. All these *faculties* have, as well as their empirical use, a transcendental use which concerns the form alone, and is possible *a priori*. I have discussed the *sense* part of this topic in Part 1; let us now try to get an understanding of the other two. A 95

2. The *a priori* bases for the possibility of experience

It is altogether contradictory and impossible that a concept should be produced completely *a priori* and should refer to an object unless either

- it is contained in the concept of *possible experience*
- or
- it consists of elements of a possible experience.

If neither of those was the case, the concept would have no content because there would be no intuition corresponding to it; and intuitions are what give us objects; they are the only things that experience can be *of*. An *a priori* concept that didn't apply to experience would be only the logical form of a concept, not a real concept through which something

was thought.

Any pure *a priori* concepts that there are can't of course contain anything empirical; their objective reality will have to come from their being *a priori* conditions of possible experience.

So if we want to know how it's possible for there to be pure concepts of understanding, we must face up to this question:

A 96 •What are the *a priori* conditions that •make experience possible, and that •remain as its substructure even when everything empirical has been filtered out from appearances?

A concept that universally and adequately expressed such a formal and objective condition of experience would be called a 'pure concept of understanding'. Once I have such concepts I can assemble them into conceptual structures through which I have thoughts about impossible objects, or about objects that aren't inherently impossible but can't be given in any experience. That can happen through my assembling them in a way that leaves out something that's essential for possible experience (as happens when people form the concept of *spirit*); or through my assembling them to make something that extends further than experience can follow (as happens when people form the concept of *God*). But the *elements* of all items of *a priori* knowledge—the conceptual building-bricks for the structures I have mentioned—even thoughts of capricious and incongruous fictions, . . . all have to contain the pure *a priori* conditions of possible experience that has an empirical object. . . .

We do have concepts that contain *a priori* the pure thought involved in every experience—they are *the categories*. If we can prove that the only way an object can be thought is through the categories, that will be a sufficient deduction of them [= 'proof of their legitimacy'], and will justify their objective

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validity. But the task is more complicated than that suggests, for two reasons. (1) When we have a thought about an object, this involves more than merely our faculty of thought, the understanding; and we'll have to investigate what else is involved. (2) Even considering just the understanding itself, we run into a question: Given that the understanding is a faculty of *knowledge*, whose job it is to refer to objects, what makes such a reference possible? So en route to our transcendental deduction of the categories we must first consider them—the subjective sources that form the *a priori* basis for the possibility of experience—in terms not of their empirical character but of their transcendental character.

If each representation were completely foreign to every other, as it were standing apart in isolation, there would be no such thing as knowledge; because knowledge is essentially a whole in which representations stand compared and connected.

what Kant wrote next, conservatively translated: When I ascribe to sense a synopsis [from Greek meaning 'view together'], because sense contains a manifold in its intuition, then there is always, corresponding to this synopsis, a synthesis [from Greek meaning 'put together']. Thus, receptivity can make knowledge possible only when combined with spontaneity.

what he meant, more plainly put: Every sensory state contains a variety of different elements, which leads me to say that each such state involves a seeing-together. And corresponding to every seeing-together there is a putting-together. Thus, •passive intake can make knowledge possible only when it is combined with something •active. This activeness is exercised in three acts of synthesis that must occur in all knowledge:

- *apprehending* representations as states of the mind in intuition,
- *reproducing* them in imagination, and
- *recognizing* them in a concept.

A 98 These three syntheses point to three subjective sources of knowledge which make possible the understanding itself—and consequently all experience as its empirical product.

Preliminary Remark

The deduction of the categories is so difficult, forcing us to dig so deeply into the ultimate basis for the possibility of our having any knowledge, that I'll have to take steps to get it across to you. I don't want to plunge into the complexities of a complete theory, but I also don't want to leave out anything indispensable; so I have thought it best to offer the four following sub-sections [ending on page 68], to *prepare* you rather than to *instruct* you. I'll present all this systematically in Section 3 [starting on that same page]. Don't get discouraged by obscurities in these earlier sub-sections. When one is doing something that has never before been attempted, there is bound to be some obscurity. I trust that all will come clear in Section 3.

2/1 The synthesis of apprehension in intuition

A 99 Whatever the origin of our representations—whether they come from the influence of outer things or from inner causes, whether they arise *a priori* or empirically as appearances—they are all states of the mind and so all belong to inner sense. So all our knowledge is ultimately subject to *time*, because that is the formal condition of inner sense. They must all be ordered, connected, and inter-related *in time*. Consider this general remark as something that is being assumed, as quite fundamental, in what follows.

Every intuition contains in itself a manifold—a variety of different elements—that can be represented as a manifold only if the mind distinguishes from one another the times at which the various elements occur. Why? Because a representation considered at a single moment can't be anything but an absolute unity—i.e. can't be in any sense a *manifold*. For this time-taking manifold to give rise to a unified intuition (in the representation of space, for example), it must first be run through and held together. I call this act of running through and holding together the 'synthesis of apprehension', because it is aimed directly at the intuition. An intuition does indeed offer a manifold; but this synthesis has to occur if the manifold of intuition is to be represented as a manifold and as contained in a single representation.

This synthesis of apprehension can be performed empirically, but it must also be performed *a priori*, i.e. in respect of non-empirical representations. That's because without it we couldn't have *a priori* the representations of space or of time. Those representations can be produced only through the synthesis of the manifold that sensibility offers in its basic passive intake. So we have a *pure* synthesis of apprehension. A 100

2/2 The synthesis of reproduction in imagination

There is a merely empirical law according to which this happens:

Representations that have often followed or accompanied one another finally become 'associated', in such a way that one of these representations will in a regular fashion bring about a transition of the mind to the other, even if no object of the representations is present.

This 'law of reproduction' (as I call it) makes a certain demand of the appearances that come before us. It isn't demanded for the law to be *true*, but for it to *have any*

application. Specifically, the law requires that appearances do fit under it, i.e. that in the manifold of these representations it does happen that one representation is ‘followed or accompanied by’ another in a regular fashion. If that weren’t so, our empirical imagination would never have an opportunity to exercise its power of associating ideas, so that this power would remain concealed within the mind as a dead faculty that even we didn’t know about. If cinnabar was sometimes red and sometimes black, sometimes light and sometimes heavy; if a human changed sometimes into a fox and sometimes into a bear; if on the longest day of the year the countryside was covered with fruit in some years and with ice and snow in others; then my empirical imagination would never find an opportunity when representing a red colour to bring to mind heavy cinnabar. And there can’t be an *empirical* synthesis of reproduction unless appearances are linguistically labelled by us in ways that correspond to the likenesses and dissimilarities among the appearances themselves.

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So there has to be something that makes the reproduction of appearances possible, by serving as the *a priori* basis for the necessary synthetic unity of appearances. We don’t have to look far for this ‘something’ when we bear in mind that •appearances are not things in themselves, but are the mere play of our •representations, which ultimately boil down to •states of our inner sense. For if we can show that

- even our purest *a priori* intuitions provide us with knowledge only to the extent that the manifold in them hangs together in a way that makes a thoroughgoing synthesis of reproduction possible,

then we can infer that

- this synthesis of reproduction in imagination is also—like the synthesis of apprehension—based on *a priori* principles in advance of all experience;

and we must assume a pure transcendental synthesis of imagination that underlies the very possibility of all experience. For experience as such necessarily presupposes the reproducibility of appearances. The reason for this lies even deeper than the ‘associations’ through which I first introduced this topic. Suppose I want to

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- draw a line in thought, or
- think about a 24-hour period of time, or
- have the thought of some particular number,

each of these intellectual activities obviously involves me in apprehending, one after another, the various elements of a time-taking manifold. And as I work through the later stages of such a manifold, I have to keep in mind the earlier stages of it. If I didn’t—if I let go of the representation of the first parts of the line, the earlier parts of the 24 hours, the units of the number—and didn’t *reproduce* them while moving on to the later parts, a complete representation would never be obtained; I couldn’t have any of those thoughts—not even the purest and most elementary representations of space and time.

So there’s an intimate tie between the two syntheses I have been discussing. The •synthesis of apprehension is the transcendental basis for the possibility of *any* items of knowledge—the pure *a priori* ones just as much as the empirical ones. And the •reproductive synthesis of the imagination is presupposed by any act of empirical thinking, and therefore is also to be counted among the transcendental acts of the mind. So I shall call this faculty the ‘transcendental faculty of imagination’.

2/3 The synthesis of recognition in a concept

If I weren’t conscious that what I am thinking now is the same as what I thought a moment ago, none of the reproduction in the series of representations would do me

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any good. For in that case •the present state of affairs would be a new representation, one that had no connection with the step-by-step act—the synthesis of reproduction—by which it was to have been generated; and •the manifold of the representation would never form a whole, since it would lack the unity that only consciousness can impart to it. Suppose that when I am counting I forget that the units that now hover before me have been added up one at a time, I would never know that by this successive addition of unit to unit a total is being produced, and so would remain ignorant of the number. For the concept of the number is nothing but the consciousness of this unity of synthesis.

The word 'concept' might of itself suggest this remark. [The German for 'concept' is *Begriff*, from the verb *begreifen*, which can mean 'comprise' or 'include' or 'bring together'.] For this unitary consciousness is what makes a single representation out of the manifold that is •intuited stepwise through a period of time and then also •reproduced. This consciousness may often be only faint, so that we notice it only in the representation that results from the synthesis, and not at all in the act of synthesis through which the representation is produced. But that's a mere matter of detail; the fact is that this consciousness, however indistinct it may be, must always be present. Without it there could be no concepts and hence no knowledge of objects.

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At this point I pause to explain what I mean by the expression 'an object of representations'. I have said that appearances are merely sensible representations, which means that they aren't objects that could exist outside our power of representation. So what do I mean when I speak of an object that corresponds to •an item of knowledge and is therefore distinct from •it? It's easy to see that this 'object' has to be thought of merely as •a perfectly abstract •*something* = x ; because outside our knowledge we have nothing that we

could set over against this knowledge as corresponding to it.

•But although we can't possibly put detailed flesh on the abstract bones of the concept of *something* = x , that doesn't mean that our thought of an object of our knowledge is vacuous and useless. It turns out that any •thought we have of knowledge as having an object carries with it •a thought about *necessity*: the object is viewed as *whatever it is* that prevents our items of knowledge from being haphazard or arbitrary, and *a priori* settles them in some orderly fashion. That's because their being related to an object requires them to agree with one another, i.e. to have the unity that constitutes the concept of an object. A 105

Since we're dealing only with the manifold of our representations, the x (the object) that corresponds to them is nothing to us, because it has to be something distinct from all our representations. So it's clear that the unity that the object makes necessary has to be the formal unity of consciousness in the synthesis of the manifold of representations. It is only when we have produced synthetic unity in the manifold of intuition that we are in a position to say that our knowledge-state is *of* or *about* something, i.e. that it has an object. But for this unity to be possible, the intuition has to be generated by a rule-governed synthesis which

- makes the reproduction of the manifold *a priori* necessary, and
- makes possible a concept that can hold this manifold together.

Consider for example thinking of a *triangle* as an object: we do this by being conscious of the combination of three straight lines according to a rule by which such an intuition can always be exhibited. This *unity of the rule* fixes what is in the manifold, and stops it from having any properties that would defeat the unity of self-awareness. . . .

A 106 All knowledge requires a concept, though it may be a quite imperfect or obscure one. And a concept is always universal in its form, and can serve as a rule. For example, the unity of the manifold that is thought through our concept of *body* enables that concept to serve as a rule in our thoughts and knowledge concerning outer appearances. . . . When we perceive something outside us, the concept of body necessitates the representation of extension and, along with that, representations of impenetrability, shape, and so on.

All necessity—*all* necessity—is based on a transcendental condition. So there must be a transcendental basis

- for the unity of consciousness in the synthesis of the manifold of all our intuitions,

and consequently also

- for the concepts of objects in general,

and so also

- for all objects of experience

—a basis without which we couldn't possibly have any thought of any object for our intuitions, i.e. any thought concerning what our intuitions are intuitions *of*. That, as I have already explained, is because all there is to this 'object' is that it is the *something* the concept of which expresses that kind of necessity of synthesis.

A 107 What is usually called 'inner sense' or 'empirical self-awareness' delivers a consciousness of oneself that comes through inner perception of the details of one's inner state; but *that* self-consciousness is merely empirical, and is always changing. This flow of inner appearances can't present one with a fixed and abiding self. If something has *necessarily* to be represented as numerically identical, the thought of its identity can't be based on empirical data. It must—as I remarked a moment ago—be based on a transcendental presupposition, and *that* can't be valid unless it rests on a condition that precedes all experience and makes experience

itself possible. This basic transcendental condition is no other than *transcendental self-awareness*.

If we didn't have the unity of consciousness that precedes all data of intuitions and makes it possible for us to have representations of objects, we couldn't have any knowledge at all. . . . I use the label 'transcendental self-awareness' for this pure basic unchangeable consciousness—the one expressed by the always-true 'I think'. It merits the label 'transcendental' because. . . it is the *a priori* basis for all concepts, just as the manifoldness of space and time is the *a priori* basis for the intuitions of sensibility.

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This transcendental unity of self-awareness links appearances together according to laws. (*Any* appearances can be thus linked, provided they are capable of occurring together in a single experience.) For a manifold to be taken in by a unified single mind, that mind must be conscious of the single act of synthesis through which it combines the elements of the manifold in one item of knowledge. Thus, the mind's basic and necessary consciousness of its own identity is at the same time a consciousness of an equally necessary unity of the synthesis of all appearances according to concepts, i.e. according to rules. Such a rule does at least two things: it pulls current appearances together with selected past ones, as all being instances of this one concept; and it provides the thought of an object in which the various aspects of appearance are united. . . .

Now I am in a position to give a more adequate account of our concept of *object*—not this or that object, just *object* as such. Every representation has, just because it is a representation, an object; and a representation can itself in turn become the object of another representation. The only objects that can be given to us directly are appearances; and the aspect of an appearance that relates immediately to the object is called 'intuition'. But these appearances are not

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things in themselves; they are only representations, which in turn have their object—an object that can't itself be intuited by us, and can therefore be called 'the non-empirical, i.e. transcendental, object = x '.

The pure concept of this transcendental object—the very same object = x throughout all our knowledge—is what gives objective reality to all our empirical concepts, i.e. makes them all *refer to an object*. This concept can't have any content that would connect it with this or that specific intuition. All it does is to express the unity that must be found in any manifold of knowledge that is knowledge of something. And this *of*-relation is nothing but the necessary unity of •consciousness, and therefore also of •the synthesis through which the mind combines •the elements of• the manifold. . . .in one representation. Since this unity must be regarded as necessary *a priori*. . . .the relation to a transcendental object (i.e. the objective reality of our empirical knowledge) rests on this transcendental law:

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If objects are to be given to us through appearances, the appearances must fall under the *a priori* rules of synthetic unity that make it possible for them to be inter-related in empirical intuition.

In other words, just as appearances in mere intuition must square with the formal conditions of space and of time, appearances in experience must conform to the conditions of the necessary unity of self-awareness—only thus can knowledge be possible in the first place.

2/4 Preliminary explanation of the possibility of the categories as items of *a priori* knowledge

•For any one person• there is only one experience, in which all •his• perceptions are represented as thoroughly and regularly connected, just as there is only one space and one time that contain every kind of appearance and every relation

to existence or nonexistence. We do sometimes speak of 'different experiences', but we must be referring to different *perceptions* that all belong to the very same general *experience*. This thoroughgoing synthetic unity of perceptions is indeed the form of experience; it is simply the synthetic unity of appearances in accordance with concepts.

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Unity of synthesis according to empirical concepts would be entirely contingent. If the empirical concepts weren't held together by a transcendental basis, it would be possible for appearances to crowd in on the soul without adding up to *experience*. In the absence of any connection in accordance with universal and necessary laws, there would be no relation of knowledge to objects; the appearances might constitute intuition without thought, but not knowledge; so for us they would be no better than nothing.

•Any experience involves intuitions to which thought is applied•. Now I maintain that the •twelve• categories that I have presented are required for the •thought component of experience, just as space and time are required for the •intuition component. So the categories are *a priori* conditions of possible •experience, which makes them at the same time conditions of the possibility of •objects of experience. So there can't be appearances of objects that don't conform to the categories, which means that the categories have *a priori* objective validity—which is what we wanted to know.

But what makes these categories possible—indeed what makes them *necessary*—is the way our entire sensibility (and thus every possible appearance) relates to basic self-awareness. In basic self-awareness—the always-true 'I think'—everything *must* conform to the conditions of the thoroughgoing unity of self-consciousness. . . . Thus, •for example•, the concept of a cause is just a synthesis •or joining-together• of later appearances with earlier ones *according to concepts*; and without the unity that this produces. . . .no

A 112

thoroughgoing, universal, and therefore necessary unity of consciousness would be met with in the manifold of perceptions. In that case, these perceptions wouldn't belong to any experience; they wouldn't be perceptions *of* anything, merely a blind play of representations, less even than a dream.

A 113 So it's futile and useless to try to derive these pure concepts of understanding from experience, thus ascribing to them a merely empirical origin. It goes without saying that, for instance, the concept of *cause* involves *necessity*, and that this can't come from experience. Experience does indeed show that appearances of kind B usually follow appearances of kind A; but it can't show that any A appearance *must* be followed by a B one, or that from the premise 'An A appearance exists' we can argue *a priori* and with complete universality to the conclusion 'A B appearance will exist'. As for the *empirical* rule of association that we commit ourselves to when we assert that everything in the series of events is completely rule-governed, so that every event follows—in accordance with a universal rule—from some preceding event: what does *that* law of Nature rest on? How is this 'association' itself possible? Well, the basis for the possibility of the association of the manifold, so far as it lies in the object, is called the *affinity* of the manifold. So my question comes down to this: How can we make comprehensible to ourselves the thoroughgoing affinity of appearances, whereby they do and *must* conform to unchanging laws?

On my principles it is easy to explain affinity. [Kant's explanation is very hard to follow. The core of it is this: Anything we can know or think has to come to us through basic self-awareness—the always-available and always-true 'I think'. So the very same *I* has to run through it all—this is something we know *a priori*—and this means that every appearance must satisfy whatever conditions are required

for there to be this numerically identical *I*. A description of a regularity or uniformity that comes from this requirement is called a 'rule'; and when the regularity is necessary the rule is called a 'law'.] Thus, all appearances are thoroughly inter-connected according to necessary laws, which means that they stand in a transcendental *affinity*, of which the empirical affinity is a mere consequence. A 114

It sounds very strange and absurd to say that Nature •directs itself according to something subjective, namely the basis for our self-awareness, and that it •depends on this for its lawfulness. But remember what this Nature intrinsically *is*: not a thing in itself, but merely a whole lot of appearances, a crowd of mental representations. Then you won't find it surprising that what enables Nature to have its special unity is something that lies at the base of all our knowledge, namely transcendental self-awareness. (I'm talking about the unity that entitles Nature to the status of 'object of all possible experience' and thus to the name 'Nature'!) Nor will you be surprised that, just for this very reason, this unity can be known *a priori* and therefore known to be necessary. . . .

3. The understanding's relation to objects as such, and the possibility of knowing them *a priori*

I want now to take the themes that I presented separately in the preceding section and tie them together in a systematic whole. What enables us to have •experience—*any* experience—and •knowledge of its objects is a trio of subjective sources of knowledge—*sense, imagination, and self-awareness*. Each of these can be viewed as empirical, because of its application to given appearances. But all of them are likewise *a priori* elements or foundations, which even make this empirical employment possible. •When they are being used empirically, 115

- sense* represents appearances empirically in (1) *perception*,
- imagination* represents them in (2) *association* (and reproduction), and
- self-awareness* represents them in (3) *recognition*.

•The third of these ties the other two together. •*Recognizing* is being conscious that an •imaginatively reproduced representation that you have is the same as one that you had in a previous •perception.

A 116 •Each of these empirical processes is based, *a priori*, on something that isn't empirical at all. All (1) perceptions involve inner intuition, the form of which is time, and the perceptions are based upon that. All (2) association is based on the pure synthesis that imagination performs. And empirical consciousness—which largely consists in (3) the recognition of one's various states as being of this or that general kind—is based on pure self-awareness, i.e. on the utter identity of the self through in all possible representations.

Well, now, all my representations must converge so as to have the unity of knowledge needed for experience. If we want to track them so as to see how this happens, we have to begin with pure self-awareness. Intuitions are nothing to us—don't concern us in the least—if they can't be taken up into consciousness, whether directly or indirectly. That's the only way knowledge can be possible. We are *a priori* conscious of the complete identity of *ourselves* in respect of all representations that can ever belong to our knowledge—conscious of this as a necessary condition for any representations to be possible •for us• (because the only way a representation can represent something for me is for it to belong with all the others to my single consciousness; so they must be at least capable of being so connected). This principle holds *a priori*, and can be called the transcendental

principle of the unity of all that is manifold in our representations, and consequently also of all that is manifold in intuition. This unity of the manifold in one subject—i.e. in one mind—is synthetic; so pure self-awareness supplies a principle of the *synthetic* unity of the manifold in all possible intuition.⁸ A 117

A 118 A •state of• synthetic unity can exist only if •an act of• synthesis has been performed, and if it's to be *a priori* necessary that the state exists then the act must be an *a priori* one. So the transcendental unity of self-awareness relates to—indeed, more specifically, it *derives from*—the pure synthesis of imagination, this being something that has to happen *a priori* if there is to be a single item of knowledge in which various elements are brought together into a manifold. (It's only the *productive* synthesis of the imagination that takes place *a priori*; the *reproductive* synthesis rests upon empirical conditions.) So the basic thing that makes it possible for there to be knowledge—and especially for there to be experience—is the necessary unifying work of pure (productive) synthesis of imagination, prior to self-awareness.

The imagination's act of synthesising counts as *transcendental* when it is concerned exclusively with the *a priori* combination of the manifold, . . . and the state of synthesis that the act produces counts as *transcendental* when it is represented as an *a priori* condition that has to be satisfied if the basic unity of self-awareness is to exist. So

- the transcendental unity of the synthesis of imagination underlies •the unity of self-awareness; and
- the unity of self-awareness underlies •the possibility of all knowledge; *therefore*
- the transcendental unity of the synthesis of imagination is needed for •any knowledge to be possible,

⁸ Kant has here a long, difficult, and possibly dispensable footnote.

and for any objects of possible experience to be represented *a priori*.

A 119 It is the pure form of all possible knowledge

I will now try to make clear how the categories enable the understanding to come to grips with appearances; and I'll start from below, i.e. with the empirical, and work my way

A 120 upwards. What is first given to us is appearance, and when this is combined with consciousness it is called 'perception'. (Something that *couldn't* be combined with consciousness would be, so far as we are concerned, non-existent.) Now,

(1) Every appearance contains a manifold, and (2) Different perceptions occur in the mind separately and singly; therefore (3) Perceptions have to be combined in some way that **passive** sense doesn't provide.

[Kant writes as though (2) followed from (1); that was presumably a slip.] So we must have an **active** faculty for synthesising this manifold, i.e. assembling the perceptions to make an image.

I call this faculty 'imagination'. What it does when it comes to bear directly on perceptions is what I call 'apprehending'.⁹

Since imagination has to bring the manifold of intuition into the form of an image, it must first take the impressions up

A 121 into its activity, i.e. must first apprehend them.

But it's clear that even this apprehension of the manifold wouldn't be enough on its own to •produce an image, and to •make the impressions hang together, if there weren't something in the mind leads it to reinstate previous perceptions alongside current ones so as to form a whole series of

⁹ Psychologists haven't realised that imagination is a necessary ingredient in perception. That's partly because (1) everyone limited 'imagination' to reproduction, and partly because (2) they thought that the senses don't just supply us with impressions but also assemble them to make images of objects. •Because of (2) they didn't realize that there was this work for imagination to do, and because of (1) they wouldn't have given the work to imagination even if they had seen the need for it to be done. . . .

perceptions. The power to do that is the *reproductive* faculty of imagination, which is merely empirical.

Merely laying past perceptions alongside current ones isn't enough to generate knowledge, because it might create a mere jumble of past and present perceptions, in which two perceptions were put together because of •some fact about how they happened to figure in the person's perceptual history rather than because of •some real connection between them. To avoid such jumbles, therefore, the reproduction of past perceptions must conform to a *rule* that governs which past perceptions are combined with which current ones. This subjective and *empirical* basis for *reproduction according to rules* is what is called the *association* of representations.

[Kant's next paragraph is stunningly obscure. Its gist seems to be this: The rule-governed reproduction of perceptions that he has been speaking of has to have something to bite on; the perceptions on which it operates must have intrinsic features in virtue of which some combinations of them are—while others are not—suitable contributors to a unified self-awareness and unified knowledge; and the rules of the reproductive imagination have to pick out the former. Kant reverts to the term 'affinity' [see page 68]. If two perceptions are suitable for being combined into something contributing to unified knowledge and self-awareness, the relation between them, he says, is *affinity*. He speaks of the existence of affinities amongst perceptions as an 'objective basis' for the kind of unity that's needed for knowledge and self-awareness; but he doesn't make clear why he calls it 'objective'. He does say: 'There must therefore be an objective basis. i.e. one that can be grasped *a priori*, prior to all empirical laws of the imagination'; but this is hard to connect with any of the meanings he has been giving to the term 'objective'. There is also a problem in the fact that in the next paragraph he says that affinity is a 'consequence'

of something that in *this* paragraph he seems to say it is a
 ..A 122 'basis for'.]

A 123 The objective unity of all empirical consciousness in the single consciousness of basic self-awareness is thus a necessary condition for any possible perception; and therefore the affinity of all appearances, near or remote, is a necessary consequence of a synthesis in imagination which is grounded *a priori* on rules.

So the imagination is also a faculty of *a priori* synthesis, which is why I call it 'productive imagination'. And its synthesising activities, insofar as they aim only at producing unity in the synthesis of the manifold in appearance, can be called the imagination's 'transcendental function'. It does indeed seem strange that:

- the affinity of appearances, and with it
- their association, and through this
- their reproduction according to laws, and therefore
- experience itself

should all be possible only because of this transcendental function of imagination. But that's what my argument clearly establishes; for in the absence of this transcendental function no concepts of objects would meld to make up a unitary experience.

The always-present never-changing *I* of pure self-awareness constitutes the correlate of all representations that we can possibly become conscious of. This thesis:

- All consciousness belongs to an all-comprehensive pure self-awareness

is just as true as this one:

A 124 •All sensible intuition belongs to a pure inner intuition, i.e. to time.

This self-awareness is what has to be added to pure imagination in order to make its doings •intellectual. For the synthesis of imagination, even when exercised *a priori*, is

always in itself •sensible. . . .

So we have as one of the basic faculties of the human soul a *pure imagination* that underlies all *a priori* knowledge. Through it we can connect •the manifold of intuition on one hand with •the necessary unity of pure self-awareness on the other. The two extremes, sensibility and understanding, have to stand in necessary connection with each other through the mediation of this transcendental function of imagination; because otherwise sensibility, though it might come up with appearances, wouldn't supply any objects of empirical knowledge or, therefore, any experience. Actual experience is constituted by

- the apprehension of appearances,
- their association (reproduction), and thirdly
- their recognition;

and the third and highest of these merely empirical elements A125 of experience uses *concepts* that make possible the formal unity of experience, and along with that all objective validity (truth) of empirical knowledge. Among these concepts—these bases for recognition of elements of the manifold—are ones that have to do solely with *the form of an experience as such*; they are the *categories*. It is only by virtue of *them* and the processes they play a part in that appearances belong to knowledge, belong to our consciousness, belong to ourselves. That's because they are the basis not only for all formal unity in the synthesis of imagination, but also, thanks to that synthesis, for •all its empirical employment (in recognition, reproduction, association, apprehension) in connection with the appearances.

Thus the order and regularity in appearances, which we call *Nature*, are put there by ourselves. We could never find them in appearances if it weren't that we, or the nature of our mind, had first put them there. For this unity of Nature has to be a necessary one, an *a priori* certain unity of the

A 126 connection of appearances; and this couldn't be established *a priori* if it weren't that •subjective grounds for such unity are built into the basic powers of our mind, and that •these subjective conditions are also objectively valid.

I have explained what the understanding is, in several different ways:

- an active cognitive faculty (in contrast to the passivity of sensibility),
- a power of thought,
- a faculty of concepts,
- a faculty of judgments.

When you look at them carefully, these accounts are all equivalent. And now I add yet another: Understanding is

- the *faculty of rules*.

This way of characterising it is more useful, and comes closer to understanding's essential nature, than do any of the other four. Sensibility gives us *forms* (of intuition), whereas understanding gives us *rules*. The understanding is always busy in investigating appearances so as to detect some rule in them. Some rules are called 'laws'; they are the objective ones, the rules that necessarily depend on knowledge of the object. We learn many laws through experience, but they are only special cases of higher laws; and the highest of these, of which *all* the others are special cases, issue *a priori* from the understanding itself. *They* aren't borrowed from experience; on the contrary, they have to make appearances conform to law, and so make experience possible. So the understanding isn't a mere power of formulating rules through comparison of appearances; it is itself the lawgiver of Nature. It's only through the understanding that Nature exists at all!

A 127 (If that surprises you, I should explain that I am here using 'Nature' to refer to an empirically studiable *causal order*, not to the things or stuff that are ordered. and so Nature is the synthetic unity of the manifold of •appearances

according to rules. And •appearances can't exist outside us—they exist only in our sensibility. Thus, Nature... is possible only in the unity of self-awareness. And so the unity of self-awareness is the transcendental basis for conformity to law—the conformity that appearances *must* have if they are to belong to one person's experience. What brings items within the scope of a unitary self-awareness is a rule, and these rules are the business of the understanding. Thus,

- all appearances, considered as possible experiences, lie *a priori* in the understanding, and receive from it their formal possibility,

just as

- all appearances, considered as mere intuitions, lie in the sensibility, and are, as regards their form, possible only through it.

...Certainly, empirical laws can never derive their origin from pure understanding, any more than the pure form of sensible intuition can, unaided, explain the inexhaustible multiplicity of appearances. But all empirical laws are only special cases of the pure laws of understanding. These pure laws give appearances their orderly character, just as these same appearances, despite the differences of their empirical form, must still fit the pure form of sensibility. A 128

So pure understanding is, through the categories, the law of the synthetic unity of all appearances, and thereby it first and basically makes experience possible as regards its form. This is all that I had to establish in the transcendental deduction of the categories, namely, to make two things comprehensible: (1) this relation of •understanding to •sensibility, and through sensibility to •all objects of experience, and (2) the objective validity of the pure *a priori* concepts. Achieving (2) also involved establishing the origin of those concepts, and showing their truth.

Stated briefly: This deduction of the pure concepts of understanding is correct and is the only one possible

A 129 If the objects with which our knowledge has to deal were **things in themselves**, we couldn't have *a priori* concepts of them. For in that case, where could we get the concepts from? If we derived them from the object (leaving aside the question how we could have any knowledge of the object), our concepts would be merely empirical, not *a priori*. And if we derived them from ourselves, there would be no assurance that they applied to any objects rather than being altogether empty. But if on the other hand we are dealing only with **appearances**, it's not just possible but *necessary* that certain *a priori* concepts should precede empirical knowledge of objects. An object that is an appearance is something *in ourselves*, because a mere state of our sensibility can't be found outside us! So here are three propositions about all these appearances (and thus about all objects that I have dealings with):

- They are all in me; and so
- They are states of myself—my one and only individual self; and so
- There is complete unity of them in one and the same self-awareness.

A 130 So any knowledge of any object has to satisfy the necessary condition for such knowledge, namely hanging together in a single consciousness in such a way as to represent the facts about some single object. Thus, the way in which the manifold of sensible representation (intuition) belongs to one consciousness precedes—lies deeper than—all knowledge of the object; it is the *intellectual form* of such knowledge, and itself constitutes a formal *a priori* knowledge of all objects, to the extent that they are thought (categories). [The remainder of this paragraph expands what Kant wrote, not *very* much but in ways that the ·small dots· convention can't easily indicate.] Our knowledge

deals solely with appearances, and a crucial fact about appearances is that they can't exist except in ourselves; so *we* have to embody the conditions that make them possible; *we* have to provide the connection and unity that are needed for experience to be possible. This involves the synthesis of the manifold through pure imagination, leading to the unity of all representations in relation to basic self-awareness; all this is *in us* and is prior to all empirical knowledge. All this explains why pure concepts of understanding are *a priori* possible, why indeed (when it comes to experience) they are *necessary*. These are the lines along which I have developed my deduction of the categories; there was no other way to do it. ·THAT ENDS THE 'TRANSCENDENTAL DEDUCTION' IN (A) KANT'S FIRST EDITION. WE NOW PICK UP FROM PAGE 61.·

* * * * *

The illustrious Locke didn't take account of these considerations. So when he encountered pure concepts of the understanding *in* experience, he derived them *from* this experience; and then he proceeded so inconsistently that he ventured to use them in an attempt to get knowledge going far beyond the boundary of all experience. David Hume recognised that such knowledge could be achieved only if these concepts had an *a priori* origin. But he couldn't explain how we could have concepts that •in themselves are not combined in the understanding—i.e. aren't linked by logical necessity—yet •are necessarily combined in the object. ·A possible explanation for this· never occurred to him, namely the possibility that the understanding itself might, by means of these concepts, be the originator of the experience in which its objects are encountered. These gaps in his thinking forced him to derive these concepts from experience. ·For the concept of *cause* his account went like this:·

Our concept of *cause* comes from a subjective necessity—i.e. a *custom* of expecting events of one kind to be followed by events of a certain other kind—which arises from the frequent association in experience of events of those two kinds. And we then wrongly think of this subjective necessity as objective, i.e. we think that our compulsion to expect an F event is the necessity that an F event will occur.

On this basis he declared, quite consistently, that it is impossible to go beyond the boundary of experience with these concepts and the principles they give rise to. But the empirical derivation to which Locke and Hume resorted can't be squared with the fact of the scientific *a priori* knowledge that we actually have—our *a priori* knowledge of pure mathematics and general natural science. The existence of that knowledge shows that the empirical derivation is wrong.

Locke left the door wide open to fanatical extremism, because once reason is given a free hand—rather than being constrained by a critique such as I am offering—it won't let itself be reined in by any vague injunctions to be moderate; whereas Hume's position led to utter scepticism, since he thought he had found that what is generally held to be reason is really a deception in our faculty of knowledge. I'm now going to see whether I can't successfully steer human reason between these two rocks, keeping it within its proper boundaries while giving it a free hand over the entire field of its appropriate activities.

First a word of explanation about the categories. They are concepts of an object in general, by means of which the intuition of the object is regarded as determined with respect to one of the logical functions for judgments. [Kant means something like this: '... by means of which the person grasps how the intuition of the object is to be made the subject-matter of a judgment of one of the basic kinds'. The rest of the paragraph—which expands a

bit on what Kant wrote—*may* help with this, but don't worry if it doesn't. The content of this paragraph will come up again later in more accessible ways.] For example, the role of a categorical judgment is to relate a subject to a predicate, e.g. 'All bodies are divisible'. To make that judgment, you need

- the concept of *body*,
- the concept of *divisible*, and
- the logical features of the categorical or subject-predicate form.

But those aren't enough. Given just those, you might just as well come up with the judgment 'Something divisible is a body'. What you need in addition to those three items is an addition to the logical notion of *subject in a categorical judgment*, namely

- the category of *substance*.

It's clear that *that* applies to *body* and not to *divisible*, so you'll be able to get the judgment the right way around. Something similar holds for all the other categories.

2. Transcendental deduction of the pure concepts of the understanding

2/1 The possibility of combination as such

[This would be a good time to re-read the note about 'manifold' on page 20.] The manifold of representations can be given in an intuition that is merely sensible, i.e. merely something that is passively received; and the form of this intuition can lie *a priori* in our faculty of representation without being anything more than the way in which the subject—i.e. the person's mind—is affected. To express this in terms of one of the two *a priori* forms of intuition: you can have an intuition that is organized spatially because that organisation is imposed on it by your faculty of intuition, this being something in respect of which you are passive—you don't *do* anything to make the intuition spatial. But the combination—i.e.

130 the pulling-together-into-a-unity—of a manifold can never come to us through the senses; so it can't be part of the pure form of passive intuition ·as space and time are·; this combination is an *act* of the *active department* of the faculty of representation—the one we call 'understanding', to distinguish it from ·the passive department, which we call· 'sensibility'. Using this terminology, then: all combining is an action of the understanding; •whether or not we are conscious of it, and •whether it's a pulling-together of the manifold of intuition (empirical or non-empirical) or of several concepts. I want to give this action the general label 'synthesis'; this label reminds us that •we can't represent to ourselves anything as combined in the object unless we ourselves have previously combined it, and that •*combination* is the only one of all our representations that isn't given through objects. [The word 'synthesis' (the same word in German) is supposed to remind us of this because its Greek source means 'putting together', and therefore—Kant thinks—'synthesis' has *activity* built into its meaning.] Because synthesis is an act of the mind's self-activity, it can only be carried out by the mind itself. It is easy to see that •there is just *one* basic kind of action that is equally at work in all combination, and that •the pulling-apart (analysis) that seems to be its opposite in fact always presupposes it; for where the understanding hasn't previously put something together it has nothing to pull apart.

But the concept of combination involves not just

- the concept of the manifold, and
- the concept of its synthesis,

but also

- the concept of the unity of the manifold.

Combination is the representation of the synthetic unity of the manifold. . . . So the representation of this unity can't arise from the combination; rather, by being added to the

representation of the manifold, it's what makes the concept of combination possible in the first place. This unity, which precedes *a priori* all concepts of combination, is not the *category* of unity of which I have spoken [see the Table on page 52]. ·Here is why·. 131

- All the categories are based on fundamental kinds of judgment.
- A judgment of any of these kinds can be made only if some combination is already thought. So
- The category ·*unity*· presupposes that some combination has already occurred, and that the concepts are already unified. Therefore
- We have to look to an earlier stage in the whole process for this unity ·that combination involves·.

Where we have to look is to whatever it is that contains the basis for the unity of different concepts in judgments

2/2 The basic synthetic unity of self-awareness

I think must be able to accompany all my representations. If I could have a representation that wasn't accompanied by *I think*, that would mean that something was represented in me that couldn't be *thought* at all; and such a representation is impossible, or else at least it would be nothing *to me*. The representation that can be given prior to all thinking is called 'intuition'. Thus all the manifold of intuition has a necessary relation to the *I think* in the mind in which this manifold is to be encountered. But this representation—i.e. the thought *I think*—is something done by the •active department of the faculty of representation, which means that it doesn't belong to •sensibility. ·I shall now introduce three bits of terminology, the explanations of which will help to give you a grasp of the **self-awareness** [Kant writes *Apperzeption*—see note on page 38] that is expressed in the representation *I think*, which underlies our whole mental life·. (1) I call it **pure** self-

awareness, to distinguish it from empirical self-awareness. It is presupposed by *all* my thoughts and intuitions, so it can't result from my surveying myself, looking inwards to see what I find. (2) I also call it **basic** self-awareness, because it •is the self-consciousness [this is a literal translation of Kant's term *Selbstbewußtsein*] that produces the representation *I think* (which must be able to accompany all other representations. . . .) and therefore •can't be accompanied by •or in any way derived from• any further representation. (3) I call the unity of this self-awareness **transcendental**, as a way of indicating that it can be a source of *a priori* knowledge. How can that be? Well, the manifold representations that are given in a certain intuition wouldn't all be *my* representations if they didn't all belong to one self-consciousness; and that means that for them to be my representations (even if I don't consciously think 'Those are mine!') they must satisfy the necessary •condition for standing together in some self-consciousness. Thus, my *a priori* knowledge that any representations that are *mine* must satisfy a certain •condition enables me to have more *a priori* knowledge than that, as soon as I know what the •condition in question is.

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[This next paragraph is a somewhat free rendering (not tagged by small •dots• or. . . .ellipses) of what Kant wrote. There seemed to be no other way of making this obscure paragraph at least somewhat accessible.] The unitary always-the-same self-awareness that accompanies any manifold given in intuition involves a synthesis or pulling-together of the various representations of which the given manifold is made up; and it's possible only through the consciousness of this synthesis. Don't confuse this with the *empirical* consciousness that accompanies different representations; there is nothing always-the-same about *that*, and it has no bearing on the identity of the mind in question. What *does* make the different representations that I have belong to *one* mind? I don't bring this about

by accompanying each representation with consciousness, but rather by combining the different representations *with one another* and being conscious of this synthesis of them. Therefore it is only because I can

- combine a manifold of given representations in one consciousness

that I can

- represent there being a single consciousness throughout these representations.

That is to say: the analytical unity of self-awareness is only possible under the presupposition of some synthetic one.¹⁰

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¹⁰ In an extremely compact and difficult footnote, Kant seeks to generalize what he has said about self-awareness etc. to all conceptual thinking. In the main text he has equated

- the representations all relate thus and so to one consciousness

with

- the representations all combine in a certain way with one another;

and in the footnote he equates

- this property is possessed by a thing

with

- this property combines in a certain way with other properties.

He applies this to any thought one might have of a *property*—say the abstract thought of *red*. Just because the concept of *red* is a 'common concept', i.e. represents a general property that might be possessed by various things, the thought of *red* has built into it the thought of possible combinations that red might enter into, i.e. the different things that might be red. (Actually, Kant speaks of combining 'a property' with 'other representations', but that is presumably a slip. He must have meant that •a property combines with other •properties, or that a •representation of a property combines with other •representations (of other properties).) From this he infers something about analysis being possible only if there

So the thought 'These intuitively given representations are all mine' is tantamount to the thought that I do—or at least can—unite them in one self-consciousness. This thought doesn't amount to consciousness of the synthesis of the representations, but it does presuppose the possibility of that synthesis. Why? Because I'm not in a position to call these various representations *mine* unless I can •comprehend their manifold in one consciousness; if I couldn't •do that, my *self* would be as multicoloured and various as are the representations of which I am conscious. •In effect, there would be no such item as *myself*, and Hume would be right! •All my •determinate thinking has *a priori* underlying it the •identity of self-awareness, which in turn is based on the •synthetic unity of the manifold of intuitions, as given *a priori*. But combination doesn't lie in the objects; you can't borrow it from them (as it were) by perceiving it in them and taking it from there up into the understanding. Rather,

135 it is something that the understanding *does*. What the understanding *is* is the faculty of •combining *a priori* and •bringing the manifold of given representations under unity of self-awareness. This is the supreme principle in the whole sphere of human knowledge.

[What this 'principle' is, and why Kant is about to call it 'analytic', can be gathered from the paragraph 'Although this last. . .' on page 78.] Now this principle of the necessary unity of self-awareness is, to be sure, an identical and thus an •analytic proposition, but •it isn't trivial, because• it reveals as necessary a •synthesis of the intuitively given manifold—a synthesis without which the thoroughgoing identity of self-consciousness couldn't

has previously been synthesis. The footnote ends with this rather mysterious sentence: 'So the synthetic unity of self-awareness is the highest point, to which one must affix all use of the understanding, even the whole of logic and transcendental philosophy; this faculty is indeed the understanding itself.'

be thought. Why? Because through the *I* as a simple representation, nothing manifold is given. The only way a manifold can be **given** is through intuition, which is distinct from the *I*; and the only way a manifold can be **thought** is through combination—i.e. through the elements of the manifold being combined—in a consciousness. If there were an understanding through which. . . a manifold could be given, that would be an *intuitive understanding*; •but *our* understanding isn't like that; it isn't intuitive, but intellectual. •All our •understanding can do is to •think; for intuitions •to be •given to us• we must go to our •senses. When a manifold of •representations is given to me in an intuition, what makes me conscious of my identical self •in this experience• is that I call •them one and all *my* representations, constituting *one* intuition. This amounts to saying that I am conscious to myself *a priori* of the synthesis that this required. •What• this •synthesis achieves• is called the *basic synthetic unity of self-awareness*. All representations that are given to me enter into this unity, but they must be *brought* into it by means of a synthesis.

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2/3 The principle of the synthetic unity of self-awareness is the supreme principle of all use of the understanding

•We now have two supreme principles—one laid out early in this work, the other introduced just recently. To help get the latter into perspective, I remind you first of the former. •The Transcendental Aesthetic taught that the supreme principle governing how intuitions can relate to sensibility was this:

- (1) All the manifold of sensibility satisfy the formal conditions of space and time.

The supreme principle governing how intuitions relate to the understanding is this:

- (2) All the manifold of intuition satisfy the conditions

of the basic synthetic unity of self-awareness.¹¹

To the extent that the manifold representations of intuition are given to us, they conform to principle (1). To the extent that they can be combined in one consciousness, they satisfy principle (2). Why? Because in the absence of that synthetic unity there wouldn't be items sharing the act of self-awareness, 'I think', i.e. there wouldn't be items gathered together in a single self-consciousness; in which case nothing would be thought or known.

Understanding is the faculty of knowledge. Our items of knowledge consist in the determinate relation of given representations to an object. And an *object* is something the concept of which unites the manifold of some given intuition. Suppose I have a variety of intuitions—a 'manifold'—involving whiteness, squareness, hardness, and a certain smell; I unify these by the thought 'a peppermint!'; so the object of this manifold is a peppermint. Now, all unifying of representations requires unity of consciousness in the synthesis of them; the scatter of sensory impressions can't be pulled together by the thought that they are all appearances of one single peppermint unless a completely unitary *I* does the pulling together, while being aware that that's what *it* is doing. Consequently the unity of consciousness is

¹¹ Space and time and all their parts are *intuitions*, and therefore they and the manifold they contain are *particulars* [see note on 'intuition' on page 8]. So they are *not* concepts through which

•many representations contain a single consciousness,

but rather •representations through which•

•a single consciousness contains a single representation which contains many representations.

So they are encountered as composite; so the unity of consciousness, as synthetic and yet basic, is to be found in them. Their status as particulars has important applications (see **2/11** on page 85).

what underlies the relation of •representations to an object, thus •their objective validity, and consequently •their status as items of knowledge. So it's only because of the unity of consciousness that there can be any such faculty as the understanding.

The principle of the basic synthetic unity of self-awareness, therefore, is the first pure knowledge that the understanding has, and is the basis for all the other uses of the understanding. It owes nothing to any conditions of sensible intuition. You might think that this isn't so because there is some knowledge—and thus some use of the understanding—involving only the forms of intuition, such as knowledge of *space*. But that is wrong. The mere form of outer sensible intuition, space, isn't •knowledge; all it does is to serve up the manifold of intuition *a priori* for •possible knowledge. In order to know anything in space (such as a line) I must *draw* it, and thus synthetically bring about a definite combination of the given manifold. . . . The synthetic unity of consciousness therefore sets an *objective* pre-condition for any knowledge. It's not merely something that I myself need in order to know an object; it's something to which every intuition must conform if it is to become an object for me; since otherwise, without this synthesis, the manifold wouldn't be united in one consciousness.

Although this last proposition makes •synthetic unity a condition of all thinking, it is in itself (I repeat) analytic; for all it says is that all *my* representations in any given intuition must satisfy the necessary condition for me to be able to ascribe them to a single self as *my* representations, and be able to grasp them all as synthetically combined in one self-awareness, through the all-purpose expression 'I think'.

But this principle doesn't hold for •every possible understanding, but only for •one that isn't *given* any manifold

through its pure self-awareness in the representation 'I am'.
If there is an understanding such that

- 139 •through its self-consciousness the manifold of intuition is at the same time given, i.e. •through its representation the objects of the representation would at the same time exist,

that understanding wouldn't need a special act of synthesising the manifold in order for its various elements to belong to a single consciousness. The human understanding does need such an act, because all it does is to *think*; it doesn't *intuit*; which means that any manifold of intuition that comes before it isn't of *its* making but is brought before it by the faculty of intuition, which is why the understanding has to *do* something in order to pull this material together. The principle I am discussing is the inescapable first principle of the human understanding, so that we can't form even the slightest conception of any other kind of understanding—e.g. one that does the intuiting for itself, or that has a sensible intuition but not one grounded in space and time. [It may help you to grasp all this if you are reminded of these Kantian fundamentals: For Kant, 'intellectual' = 'active', and 'sensible' = 'passive'. Human intuition is sensible; we don't *create* our sensory input—it just comes to us. An active faculty of intuition would involve *making* one's intuitions; for Kant, that means that such a faculty would be intellectual; and he equates having an intellectual faculty of intuition with having an understanding that intuits, i.e. that makes its intuitions.]

2/4 What the objective unity of self-consciousness is

[This one-paragraph section is especially hard to follow, but its gist seems to be this: There are three levels of *unity* to be distinguished and understood. The most basic one is:

- (1) the subjective unity of consciousness: this is a state of inner sense, in which various items are unified in the thought 'I think', i.e. in which they are claimed

as *mine*.

Less basic than that is:

(2) the objective unity of consciousness—also called the transcendental unity of self-awareness—in which I pull together various items in my sensory field and unify them as all being *of* some one object. One might think of the 'peppermint' example on page 78 as an example.

There is definite order of dependence here: (1) is brought about, and that makes it possible for me to create (2). There is no dependence running in the other direction: I can't combine items through the concept of an object unless they have already been brought together as *mine*. And then there is:

(3) the empirical unity of self-awareness or self-consciousness.

It seems clear that in Kant's view (2) depends on (1), while (3) depends on (2) and thus indirectly on (1). But his remarks about what (3) *is* are confusing; which is especially regrettable because we can't get (2) straight without understanding (3), and the announced purpose of this paragraph, as given in its title, is precisely to get (2) straight! Kant's view may be as follows. He is tying

- (1) to my acknowledging items as *mine*,
(2) to my construing items as *perceptions of an objective world*, and
(3) to any *further* interpretations I make of my sensory input.

If this is right, then (3) consists in *whatever it is that I make of my sensory inputs* over and above the central fact of taking them to be perceptions of a world, i.e. to be 'objectively valid'. Kant says that while there is a kind of necessity about (1), and about (2), everything pertaining to (3) is contingent. What I make of my sensory inputs—beyond the 'making of

that is involved in (2)—depends on my circumstances, what I remember my past sensory inputs to have been like, and so on. If this is right, then the ‘peppermint’ example really illustrates (3) rather than (2).—Or perhaps Kant means (2) to include •more than merely construing my sensory inputs as perceptions of an objective world, though •less than *all* my applications of objectivity-concepts to my data; in which case the line between (2) and (3) would have to be drawn differently. But in any case it is clear that (2) must be circumscribed so as to allow (3) to have room to breathe.—Kant will soon mention ‘reproductive imagination’. In a passage sketched between brackets on page 83 he implies that the work of reproductive imagination is to create instances of (3) the *empirical* unity of self-awareness. (This paragraph has used both ‘self-awareness’ and ‘self-consciousness’, following Kant’s *Apperzeption* and *Selbstbewußtsein*; but it is absolutely clear, here and throughout the work, that for him those two terms are synonymous.)

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2/5 The logical form of all judgments consists in the objective unity of the self-awareness of the concepts that the judgments contain

I have never been able accept the explanation that the logicians give of what a *judgment* is. They say that a judgment is the representation of a relation between two concepts. There is something positively wrong in this, namely that it fits only categorical judgments, not hypothetical and disjunctive ones, which contain a relation not of •concepts but of •judgments. But I shan’t argue with them about this here, though it’s an error that has had many troublesome consequences. The point I want to make here is that this account of judgments doesn’t say *what* the relation is between the two concepts. I am now in a position to say what the relation is.

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Let us investigate more precisely the relation of given

items of knowledge in every judgment, being careful not to confuse

that relation, which is the understanding’s business, with

the relations that hold because of laws of the reproductive imagination

—of which the former is objectively valid and the latter only subjectively valid. When I inquire into this, I find that a judgment is nothing but the way to bring given items of knowledge to the objective unity of self-awareness. That’s the role of the little relational word ‘is’ in a judgment: to distinguish the •objective unity of given representations from the •subjective. [In terms of section 2/4 on page 79, Kant is here distinguishing (2) objective unity from (3) empirical unity which is subjective; he is not distinguishing (2) from (1) the synthetic unity of self-awareness—which is also ‘subjective’ but in a different way.] For the word ‘is’ designates the relation of the representations to basic self-awareness and its necessary unity, even if the judgment in which ‘is’ or ‘are’ occurs is empirical, and hence contingent, such as ‘Bodies are heavy’. Let us be careful about how the notion of *necessity* comes in here. I’m not saying that these representations *necessarily belong to one another* in the empirical intuition. My point is that they belong to one another *in virtue of the necessary unity of self-awareness* in the synthesis of intuitions. [The rest of this paragraph is brutally difficult. Its gist is this: We have to distinguish two ways in which two representations can be related. (a) They can be related through the ‘laws of association’—what Locke called ‘the association of ideas’. That is, they can come together in my mind because of some empirical fact about how they occur there—usually an empirical fact about how they have occurred together in my mind. That yields a *subjective* judgment, such as ‘When I carry a body, I feel an impression

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of weight'. (b) They can be related through the principles that govern how representations have to be shaped up if they are to turn into knowledge—all of these principles being derived, Kant says, from 'the principle of the transcendental unity of self-awareness'. That's the only way to get an *objective* judgment such as 'It, this body, is heavy'. This judgment says that these two representations—of *body* and of *weight*—are combined **in the object**. That is, whatever state I may be in, those representations are combined. This is different from saying merely that they are found together in perception, which doesn't yield an objective judgment, no matter how often they are found together. That's the crucial distinction that has to be grasped: (a) combined **in my mind**, (b) combined **in the object**.]

2/6 All sensible intuitions conform to the categories, because otherwise their manifold can't come together in one consciousness

143 When I have an intuition that is various or complex in some way, i.e. involves a manifold, it *must* conform to the basic synthetic unity of self-awareness, because that's the only way the elements in a manifold can be brought together in a single intuition [see page 79]. But that action of the understanding—the one that brings the manifold of given representations (whether intuitions or concepts) within the scope of a single self-awareness—is done through the basic kinds of *judgment*—see **2/5**. So a manifold that is given in a single empirical intuition is shaped up for one of the basic kinds of judgment, by means of which it is brought to one consciousness. Well, the logical shape of any of these kinds of judgment is *a category* (see **3/3** Therefore the manifold in any given intuition necessarily conforms to the categories.

2/7 Remark

·As I have just been arguing·, a manifold contained in an intuition that I call *mine* is represented, through the synthesis of the understanding, as belonging to the *necessary* unity of self-consciousness, and this takes place by means of the category. . . . This shows that

the •empirical consciousness of a given manifold in a single intuition is subject to a •pure *a priori* self-consciousness,

just as

•empirical intuitions are subject to a •pure sensible intuition, which also has an *a priori* status.

In the opening proposition of this subsection, therefore, we make a start on a deduction [see the start of this chapter, on page 57] of the pure concepts of the understanding, ·i.e. the categories·. Now, the categories arise solely in the understanding, independently of sensibility; so in developing the deduction of them I must filter out any •facts about how the manifold for an empirical intuition is given, so as to attend only to •the unity that the intuition gets from the understanding by means of the category. Later on (**2/12** I'll show, from the way the empirical intuition is given in sensibility, that its unity must be just the unity the category prescribes to the manifold of a given intuition,. . . .according to **2/6** . That's when the aim of this deduction of the categories will be fully attained—when I explain their *a priori* validity for all objects of our senses.

In the above proof, however, I still couldn't abstract from the fact that the manifold to be intuited must already be given prior to, and independently of, the synthesis of understanding. I'm not trying to say *how* this happens. Consider the possibility of

an understanding that does the intuiting itself—a divine understanding, for example, which wouldn't

•represent objects given to it ·from elsewhere· but would •produce its objects at the same time as representing them.

For knowledge of that kind the categories would have no significance at all. They are only rules for an understanding that can't do anything except *think*, i.e. bring to the unity of self-awareness the synthesis of the manifold that it received in intuition *from elsewhere*. Such an understanding doesn't unaided know anything; all it does is to combine and order the raw material of knowledge, namely intuition, which must be given to it by the object. We can't explain why •our understanding can bring about the unity of self-awareness
146 *a priori* only by means of categories, or why •this involves just precisely these twelve categories—any more than we can explain why •we have just precisely these twelve basic kinds of judgment, or why •space and time are the only forms of our possible intuition.

2/8 The only work a category can do in the knowledge of things involves applying it to objects of experience

Thus, thinking of an object is not the same as knowing an object. There are two elements in knowledge: •the concept through which an object is thought (the category), and •the intuition through which the object is given. If an intuition corresponding to the concept couldn't be given at all, then the concept would have the •form of a thought but it wouldn't have •any •matter·, any object, so it couldn't bring about knowledge of anything at all. . . . So the only way our thinking of an object through a pure concept of the understanding can become *knowledge* is by the concept's being related to objects of the senses. How do the senses come into this? Through the fact that the only intuitions *we* can have are
147 sensible (see the Aesthetic). Sensible intuition is either •pure intuition (space and time) or •empirical intuition of whatever

it is that sensations immediately represent to us as real in space and time [see note on page 28]. By fixing on pure intuition we can get *a priori* items of knowledge of objects (in mathematics); but this knowledge is only of their form as appearances, and doesn't touch the question of whether there ·are things that are being intuited in this form, or (therefore) the question of whether· there *can* be things that *must be* intuited in this form. Consequently mathematical concepts aren't by themselves items of knowledge except on the supposition that there are *things* that can't be presented to us except in conformity with the form of that pure sensible intuition. Now, things *in* space and time are given only as perceptions (representations accompanied by sensation), which means that they are given only through •empirical representation. So the pure concepts of the understanding, even when they are applied to *a priori* intuitions (as they are in mathematics), provide knowledge only to the extent that these *a priori* intuitions—and through them the concepts of the understanding also—can be applied to •empirical intuitions. Consequently, the categories give us knowledge of things. . . .only through their possible application to •empirical intuition, i.e. they serve only for the possibility of •empirical knowledge. Our name for such knowledge is 'experience'. So the conclusion we reach is ·the one stated
148 as the heading of this subsection·: The only work a category can do in the knowledge of things involves applying it to objects of experience.

2/9

That proposition is of the greatest importance, for it •sets the limits for the use of the pure concepts of the understanding in regard to objects, just as the transcendental aesthetic •sets the limits for the use of the pure form of our sensible intuition. Space and time are valid as conditions that objects

must satisfy if they are to be given to us, but only within limits. What limits? Answer: space and time have that status only with respect to objects of the senses, which implies that they have that status only within the limits of experience. Beyond that boundary, they don't represent anything at all, for they are *in* the senses and have no reality outside of them. The pure concepts of the understanding are free from this limitation; they extend to objects of intuition generally, including intuitions that are nothing like ours (though only to intuitions that are sensible and not intellectual, i.e. passive and not active). But this further stretch of concepts beyond *our* sensible intuition doesn't do anything for us. For out there they are merely empty concepts of objects; we can't even judge whether there *could* be objects for them. . . . The only way the categories can have sense and significance is through *our* sensible and empirical intuition.

[Kant devotes a further paragraph to emphasising and elaborating this point. The paragraph seems not to add anything to the doctrinal content of the work.]

2/10 The application of the categories to objects of the senses as such

The pure concepts of the understanding are related through mere understanding to objects of intuition as such—i.e. to objects of *any kind* of intuition as long as it's sensible = passive; it doesn't have to be *our* kind. Just because of this breadth of applicability, the categories can only be mere forms of thought, conveying no information about any determinate object. Well, then, what enables us to have *a priori* knowledge through the understanding? Two things. (a) The synthesis or combination that is embodied in the categories is the one that results in the unity of self-awareness—i.e. that enables me to claim items as *mine*. That is the basis for the possibility of *a priori* knowledge through the under-

standing; it's purely intellectual, and is transcendental in the sense of 'having to do with the possibility of knowledge' [see page 26]. (b) There is in us a certain basic form of *a priori* sensible intuition that depends on our *passive* faculty of representation (sensibility). The understanding can *actively* work up these passively given representations into a manifold that squares with the synthetic unity of self-awareness; so it can *think* that synthetic unity, which means that it is thinking something that is a necessary condition not only for our identity as experiencing minds, but also for anything that is to be an object of our sensible intuition. That's how the categories, though in themselves they are mere forms of thought, come to have objective reality, i.e. come to be applicable to objects that can be given to us in intuition. But these objects are only appearances; for we can't have *a priori* intuition of anything but appearances.

We have to distinguish two syntheses that the understanding performs. Both of them are transcendental, not merely because they happen *a priori* but also because they are the basis for the possibility of other *a priori* knowledge. (1) *Figurative* synthesis is the synthesis of the manifold of sensible intuition that I have been discussing. As I'll show in a moment, it involves a certain use of imagination. (2) *Combination*, which is the synthesis that the understanding performs, just through categories and without help from imagination, when it is brought to bear on the manifold of any intuition.

[The paragraph in which Kant explains this distinction, and explains what imagination has to do with (1) as distinct from (2), is defeatingly difficult. Here are a few things in it that seem to come fairly clear. Kant calls imagination the faculty for representing in intuition an object that is *not itself present*, and distinguishes two uses of it. The fairly humdrum everyday use of it is what he calls 'reproductive

imagination'; it is what's involved in such thoughts as 'This is like the one I saw yesterday', and also involved in the 'laws of association' according to which certain appearances cause us to have thoughts of certain others. Very different from this is 'productive imagination'. The activities that *it* is involved in are genuinely *active*; Kant holds that imagination is an active faculty, although in a certain way it 'belongs to sensibility', which is by definition passive; that tension is not clearly explained. In its role as active, the imagination works with the understanding, or works as a branch of the understanding, to bring about the synthesis that makes possible the unity of self-awareness. That is the (imaginative) figurative synthesis. The (intellectual) synthesis of combination is what the understanding does when it surveys the given world and makes judgments about what causes what, which things are bigger than which others, which substances have which properties, and so on.]

* * *

..152 This is a good place to clear up the paradox that must have struck everyone in my account of the form of inner sense [see page 33], namely: the thesis that

inner sense presents us to our consciousness only as
 153 •we *appear to* ourselves, not as •we *are in* ourselves; because we intuit ourselves only as we are internally *affected*.

This seems to be contradictory, since we would have to relate to ourselves passively, ·i.e. would •passively undergo what we •actively do to ourselves. This will seem like a paradox or self-contradiction· because it is customary in the systems of psychology to treat •inner sense as identical with •the faculty of self-awareness. I carefully distinguish those from one another, ·which is why the seeming paradox really isn't one. I now explain this·.

What determines inner sense is the understanding and its basic power of combining the manifold of intuition, i.e. bringing it within the reach of self-awareness. . . . Now our human understanding has no power to produce intuitions; it can't even, with intuitions given in sensibility, take them up *into itself* in order to pull them together as a manifold of its own intuition (so to speak). The sensibility comes up with a manifold that conforms to the form of intuition, the understanding determines this internally—getting no help *from* sensibility, but acting *on* sensibility—and the unity of that act of determining is the synthesis that the understanding performs. Under the label 'transcendental synthesis of the imagination', it exercises that •action on the •passive subject. . . .and so we rightly say that in this process the inner sense is *affected*. Self-awareness with its synthetic unity is *not* the same as inner sense. Consider how unlike they are! The synthetic unity of self-awareness

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- is the source of all combination, and so
- applies to the manifold of intuitions in general, and
- applies, in the role of *categories*, to objects in general, doing this prior to all sensible intuition.

Inner sense, on the other hand,

- contains the mere form of intuition, without any pulled-together manifold in it; so
- it doesn't yet contain any determinate intuition at all.

A determinate intuition—·i.e. a detailed sensory state·—is possible only through. . . .the act that I have called 'the figurative synthesis'.

We can always perceive this in ourselves. We can't think of a line without *drawing* it in thought, or a circle without *tracing* it ·in thought·. We can't represent the three dimensions of space without *placing* three lines perpendicular to each other at a point. We can't even represent time except by *drawing* a straight line (to serve as our exter-

nal figurative representation of time), thereby focussing on the stretched-out-through-time aspect of this state of inner sense. [Kant now has an extremely obscure sentence about motion, leading on to something easier to grasp:] So the understanding doesn't find some sort of combination of the manifold ready waiting for it in inner sense; it produces the combination, thereby affecting inner sense.

How can the *I* that actively thinks be **distinct** from the *I* that passively intuits itself. . . . and yet be **identical with** it as the same subject? [In this next sentence, the phrase 'an object that is thought' means 'an object towards which thought is directed'. That is, 'thinking' and 'thought' are an active/passive pair, analogous to 'kicking' and 'kicked'.] How can I say that *I* as an intelligence, a *thinking* subject, know myself as an object that is *thought* by being given to myself in intuition? . . . These questions are no harder and no easier to answer than this: How can I be an object to myself at all, and especially an object of my intuition and inner perceptions? [The remainder of this paragraph is, in Kant's version of it, a single sentence.] But that it really must be so can be clearly shown, if we let space count as merely a pure form of the appearances of outer sense. Here is how. Although time isn't itself an object of outer intuition at all, we can't represent it to ourselves except through the image of a line that we mentally draw; without this sort of representation we couldn't know that time is one-dimensional. Similarly, when we want to settle how long some inner state of ours lasted, or when it occurred, we have to get the answers through correlating those items with events in the outer world. Thus, we have to settle the details of inner sense as appearances in time in just the same way as we settle the details of outer sense in space; so if we don't mind allowing that we know objects through outer sense only because in it we are *affected from outside*, we oughtn't to have trouble accepting that through inner sense

we intuit ourselves only because we are *internally affected by ourselves*, which is to say that our inner intuitions tell us about ourselves only as we appear, not as we are in ourselves. . . .

2/11

In contrast with that, in the . . . basic synthetic unity of self-awareness what I am conscious of is not

- myself as I appear to myself, or
- myself, as I am in myself.

All I am conscious of is *that* I am, i.e. that I exist. In having this representation I am thinking, not intuiting. Now, for me to have *knowledge* of myself I must have—in addition to the act of thinking that brings the manifold of every intuition to the unity of self-awareness—a definite sort of passive-intuition through which this manifold is *given*. It follows that although my own existence is not indeed appearance (let alone mere illusion!), any thought about what I am like has to be based on. . . . the particular way in which the manifold that I combine is given in inner intuition. So I have no knowledge of myself as I am, but only as I appear to myself. My *consciousness* of myself is therefore far from being *knowledge* of myself, despite all the categories that are at my disposal to constitute the general *object*-thought. . . . For any knowledge of an object distinct from me, I need

- the general *object*-thought (in the category), and also
- an intuition through which I add detail to that general concept.

Similarly for knowledge of myself, I need. . . .

- the thought of myself, and also
- an intuition of the manifold in me, through which I add detail to this thought,

I exist as an active intelligence: all that this intelligence is conscious of is its power of combination; but in regard

to the manifold that it is to combine, this intelligence is subject to a limiting condition that it calls 'inner sense'. The limit imposed by inner sense is this: the understanding doesn't get to combine anything that isn't temporally ordered; and temporality is something that lies entirely outside the concepts of the understanding, properly so-called. . . .

2/12 Transcendental deduction of the always-possible use of the categories in experience

In the metaphysical deduction, I established the *a priori* origin of the categories through their perfect fit with the universal logical functions of thinking—i.e. with what goes on in the basic kinds of judgment. In the transcendental deduction, I have shown that they can be items of *a priori* knowledge of intuitively given objects [see 2/6 and 2/7]. What I now have to explain is how the following can be possible:

The categories give us *a priori* knowledge of any objects that happen to come before our senses. I'm not talking about knowledge of the form of their intuition, because *that* knowledge doesn't involve the categories. My topic is knowledge concerning the laws that govern how objects combine with one another. Knowing this *a priori* amounts to telling Nature what its laws should be, and even making Nature possible.

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If the categories didn't make this possible, there would be no clear reason why everything that ever comes before our senses must be subject to laws that arise *a priori* from the understanding alone.

[Kant now introduces a new technical term, 'apprehension' (the German word is the same). In the early-modern period, 'apprehension' was used to mean 'consciously having in mind'. Thomas Reid wrote:

'Conceiving', 'imagining' and 'apprehending' are commonly used as synonymous in our language, signifying the same thing that logicians call 'simple apprehension'.

On page 100 we'll find Kant equating 'apprehended' with 'taken up into

empirical consciousness'. In our present context he announces that he will use the phrase 'the synthesis of apprehension' to stand for 'the assembling of the elements in the manifold in an *empirical* intuition'. This assembling or pulling-together, he says, enables us to have 'empirical consciousness' of the intuition, i.e. consciousness of it as an appearance; and he says that his word for such empirical consciousness is 'perception'.—A page or so later he writes that the •synthesis of apprehension (which is empirical) must conform to the •synthesis of self-awareness (which is intellectual and contained in the category entirely *a priori*). It is one and the same spontaneity pulling together the manifold of intuition, in one case as 'imagination' and in the other as 'understanding'. We now return to the main text.]

We have *a priori* forms of •outer as well as •inner sensible intuition in the representations of •space and •time; and what we are empirically conscious of in appearances must always fit these forms, because it can't occur without fitting them. But space and time are represented *a priori* not merely as *forms* of sensible intuition but also as *intuitions* which themselves contain a manifold—that is, as well as its being the case that the properties •spatiality and •temporality are formal features of all our intuitions, we also intuit those two individual items •space and •time, and each of those contains a manifold because each of them has parts. [There follow some dauntingly difficult remarks about kinds of synthesis, combination. What they are supposed to show can be seen in how Kant goes on:] So *all* synthesis, even the synthesis through which perception itself becomes possible, is subject to the categories; and since experience is knowledge through connected perceptions, the categories are conditions of the possibility of experience, and are therefore valid *a priori* of all objects of experience.

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* * *

162 For example, when I make the empirical intuition of a house into a perception by apprehending its manifold [= 'taking in its details'], my apprehension is based on the necessary unity of space. . . . I *draw* the house's shape (so to speak) to fit this synthetic unity of the manifold in space. But if I abstract from ·or filter out· the form of space, this very same synthetic unity has its seat in the understanding, and is the category of. . . . *quantity*. So the synthesis of apprehension, i.e. the perception, must perfectly fit that category.¹²

Here is another example. If I perceive water freezing, I apprehend two states—fluidity and solidity—as temporally related to each other. . . . But if I abstract from ·or filter out·
163 the constant form of my inner intuition, namely time, this synthetic unity. . . . is the category of *cause*. In applying this to my sensibility, I supply a causal reading for everything that *happens in time*. Thus my apprehension of an event such as water freezing is subject to the concept of the cause-effect relation, and so the event itself, considered as a possible perception, is also cause-effect related. The same kind of thing holds for all the other categories.

* * *

Categories are concepts that prescribe laws *a priori* to appearances, and therefore to the sum total of all appearances, which we call 'Nature'. The laws aren't derived from Nature—they don't follow Nature as their pattern—for that would make them merely empirical. That being so, how can it conceivably be the case that Nature has to follow these laws?

¹² In this way we prove that the empirical synthesis of apprehension *must* conform to the synthesis of self-awareness, which is intellectual and is contained completely *a priori* in the category. The activeness that brings combination into the manifold of intuition is the very same in both cases: in apprehension it does so under the title 'imagination', in self-awareness under the title 'understanding'.

How can the laws determine *a priori* the combination of the manifold of Nature, without being derived from it? Here is the solution to this riddle. It's no more surprising that 164

- the laws of appearances in Nature must agree with the **understanding** and its *a priori* form, i.e. its faculty of combining the manifold in general,

than that

- the appearances themselves must agree with the form of *a priori* sensible **intuition**.

For just as appearances don't exist in themselves, but only relative to the sensing subject in which they inhere, so also laws don't exist in the appearances, but only relative to that same subject, considered as having understanding. •Things in themselves would necessarily conform to *their* laws, even without an understanding that knew them. But •appearances are only representations of things of whose nature in themselves we know nothing. As mere representations, however, they aren't subject to any law of connection except what the connecting faculty prescribes. Now, the faculty that connects the manifold of sensible intuition is **imagination**, which depends on •sensibility for the manifoldness of apprehension, and on •understanding for the unity of its intellectual synthesis ·of that manifold·. Now,

- all possible perception depends on the synthesis of apprehension, and

- that empirical synthesis ·of apprehension· depends on the transcendental synthesis and thus on the categories; and therefore

- all possible perceptions are subject to the categories.

This means that the categories apply to everything that can ever reach empirical consciousness, i.e. to all appearances 165 of Nature. . . . Thus, Nature considered in a general way just as Nature, must be lawful. But the pure faculty of understanding isn't in a position to deploy its categories so

as to prescribe to the appearances any *a priori* laws beyond those that are required for something to be a *Nature*. . . . Specific laws, because they concern empirically determined appearances, can't be •derived from the categories, although they are all •subject to them. To know anything about specific laws, you need experience; but it's to the *a priori* laws •embodied in the categories• that you must turn for knowledge about experience as such, and about what *can* be known as an object of experience.

2/13 Result of this deduction of the concepts of the understanding

We can't think any object except through categories; we can't know any object that is thought except through intuitions that fit the categories. Now, all our intuitions are sensible, and when the object of this knowledge is given,
166 the knowledge is empirical. Such knowledge is experience. *Consequently, we can't have any a priori knowledge except about objects of possible experience.*

But although this knowledge is limited to objects of experience, that doesn't mean that it is all borrowed from experience. Rather, the pure intuitions •of sensibility• as well as the pure concepts of the understanding are elements of knowledge, and both are to be encountered in us *a priori*. Now, we can conceive of only two ways in which it might be *necessary* that experience should fit the concepts of its
167 objects: either •experience makes these concepts possible or •these concepts make experience possible. The former of these is *not* the case with the categories (or with pure sensible intuition); because they are *a priori* concepts, so they don't depend on experience. . . . That leaves us with the second way: the categories contain, on the side of the understanding, the basis for the possibility of there being any experience at all. *How* they make experience possible, and

what principles of the possibility of experience they provide us with in their application to appearances, will be shown more fully in the next chapter—on the transcendental use of the faculty of judgment.

You might want to suggest a middle way for concepts to align with experience—middle, that is, between the two I have mentioned. The suggestion would be that the categories are not •self-thought *a priori* first principles of our knowledge, and are not •drawn from experience; and that they are, rather, subjective *dispositions* to think in certain ways, implanted in us from the outset by our creator in such a way that our thinking exactly fits the laws of Nature along which experience runs. . . . This is at best a risky hypothesis. If we accept it, the floodgates will be opened to endless hypotheses involving 'subjective pre-determined predispositions to think
168 in certain ways'. Anyway, this hypothesis is just wrong, because if it were right the categories would lack the *necessity* that is an essential aspect of the conception of them. The concept of cause, for example, which says that given the cause the effect *necessarily* follows, would be false if it rested only on our having been constructed in such a way that we couldn't help combining certain empirical representations in a cause-effect way. If that were how things stood, I wouldn't be able to say that the effect is combined with the cause *in the object* (i.e. necessarily), but only that I am so constituted that I can't think of this representation except as connected in that way. That's just what the sceptic wants! If it were so, then all our 'insight', based on the supposed objective validity of our judgments, would be sheer illusion; and there would be plenty of people who wouldn't concede that *they* have this subjective necessity, •and who therefore refused to talk in cause-effect terms. Their position would be impregnable: the subjective necessity must be *felt*; we can't quarrel over things that depend on how our minds are organized. . . .

The analytic of principles

[The Analytic is divided into two main parts, Book 1 the analytic of concepts (which began on page 47) and Book 2 the analytic of principles, which begins now.] General logic is constructed on a plan that corresponds quite precisely with the classification of the higher faculties of knowledge. These are: •understanding, •judgment, and •reason. (In everyday informal speech, all three of these are brought under the general label 'understanding'.) The analytic part of logic tracks this three-part classification of the higher faculties by addressing itself to •concepts, •judgments, and •inferences. [When 'judgment' occurs in the singular, without 'the' or 'a', it stands for the faculty of judgment, i.e. the capacity for judgment; not otherwise.]

170 Since this merely formal logic abstracts from all •content of knowledge (whether pure or empirical), and deals solely with the •form of thinking. . . .as such, it can include in its analytical part the canon [see note on 'canon' on page 25] •not just for understanding and judgment, but also for reason. For the form of reason has its secure rules that can be discovered *a priori* simply by analysing the actions of reason into their components, without needing to attend to the special nature of the knowledge that is involved.

Transcendental logic can't imitate general logic by dividing into treatments of understanding, judgment, and reason. That's because transcendental logic, unlike general logic, is limited to a definite content, namely the content of pure *a priori* items of knowledge; and it turns out that there's no such knowledge to be had through reason. When reason is used in a transcendental way the result is not •truth but •illusion; which implies that it has to be handled not in the •transcendental •analytic, but rather in the transcendental •dialectic.

•While we are still in the analytic, therefore, we are left

with two faculties to study—understanding and judgment. They have their canon of objectively valid (and therefore true) use in transcendental logic, so they belong in its analytical part. It's only reason that is altogether dialectical when it tries to establish something about objects *a priori* and to extend knowledge beyond the bounds of possible experience. Its illusory assertions don't fit into a canon of the sort that the analytic is meant to contain. 171

So the analytic of principles will be a canon solely for *judgment*, teaching it to apply the concepts of the understanding. . . .to appearances. For this reason, although I announce my topic in Book 2 as 'principles of the understanding', I'll use the title 'doctrine of judgment' as fitting more closely what I'll actually be doing.

Introduction: Transcendental judgment in general

If the •understanding in general is explained as the faculty of *rules*, then •judgment is the faculty of *applying rules*, i.e. of settling whether something falls under a given rule. General logic doesn't offer help to judgment. It *can't* do so: . . .if it tried to give general instructions for how to apply rules, i.e. how to distinguish whether something does or doesn't fall under them, it would have to do this through another rule. But this, just because it is a rule, would require another application of judgment, and that would create the impossible situation in which judgment couldn't do anything until after it had done something else! So it becomes clear that although •understanding can be instructed, and equipped with rules, •judgment is a special talent that can be used but can't be taught. It's the active ingredient in so-called mother-wit, and the lack of it can't be made good by any school. A school can provide •a limited understanding with an abundance of rules borrowed from the insight of 172

others—grafting them onto •it, as it were—but the ability to use them correctly must belong to the pupil himself. If he doesn't have this natural gift, he can't be made safe from misusing his judgment by any rule that one might prescribe to him.¹³

173 Thus, it can happen that a physician or judge or statesman has many fine pathological or juridical or political rules in his head, and is even able to teach them well, and yet stumbles in applying them, either because

- he is short of the natural power of judgment (though not of understanding); he understands the universal in the abstract but can't tell whether a given concrete case falls under it;

or because

- he hasn't been trained well enough for this act of judgment, through examples and actual practice.

This is the one great benefit of examples: that they sharpen judgment. When it comes to correctness and precision of intellectual insight, examples more often do some harm, in either of two ways. •They very seldom fit the antecedent of the rule precisely enough. •Also, they often weaken the understanding's effort to grasp rules properly, in all their universality and independently of the details of experience, the result being that we become accustomed to using those

174 rules as verbal rules-of-thumb rather than as principles. So examples are training-wheels for the faculty of judgment, and someone who lacks the natural talent for judgment can

¹³ The right word for a lack in one's power of judgment is 'stupidity', and there is no help for it. Someone who is dull or limited in his thinking, having nothing wrong with him except a low-grade understanding and a shortage of concepts, can be *instructed*—even to the point of becoming learned. But people of that sort usually lack judgment as well, so that it isn't unusual to encounter learned men whose applications of their science frequently show signs of that lack, for which there is no cure.

never do without them.

But although general logic can't give instructions to judgment, the situation is quite different with transcendental logic. It seems, indeed, that transcendental logic has as its own special task the correcting and securing of judgment, through determinate rules, in the use of the pure understanding. Here is why. Philosophy has achieved little if anything in the way of new *doctrine* in its attempts to bring the understanding to bear on pure items of knowledge *a priori*; but it can call on all its resources of acuteness and penetration to do good work as a *critique* of our lapses of judgment when we use the few pure concepts of the understanding that we have. But this work is only negative—it consists in instructions *not* to form such-and-such judgments.

•'What', you may ask, 'enables transcendental philosophy to give some instructions to judgment when general logic can't give *any*?' Well, transcendental philosophy has a special feature all of its own: in addition to the rule. . . .that is given in the pure concept of the understanding, it can at the same time specify *a priori* the case to which the rule is to be applied. What gives it this advantage (shared by mathematics 175 but by no other of the teaching sciences) is the fact that transcendental philosophy deals with concepts that have to be related to their objects *a priori*, so •the question of where to apply them can't be answered *a posteriori*. . . .: •if the question couldn't be answered *at all*, these concepts would have no content, which would reduce them to being mere logical forms and not pure concepts of the understanding; so •transcendental philosophy itself must, along with the rule, provide a general but sufficient account of the conditions under which objects that fit those concepts can be given.

This transcendental doctrine of judgment will contain two chapters. The first deals with the **schematism** of the pure understanding, i.e. •the sensible condition under which

alone pure concepts of the understanding can be employed. The second [starting at page 95] deals with the **principles** of pure understanding, i.e. the synthetic judgments that flow *a priori* from pure concepts of the understanding under •these conditions, and form an *a priori* basis for all other items of knowledge. [Book 2 also has a third chapter, starting on page 135, and a long Appendix, starting on page ??.]

Chapter 1: The schematism of the pure concepts of the understanding

176 Whenever an object is brought under a concept, the representation of the object must be *homogeneous with* [*gleichartig* = 'of the same sort as'] the concept. That is, the concept must •contain whatever is represented in the object to which it is to be applied, for that's just what it *means* to say 'This object is •contained under that concept'. Thus the empirical concept of a plate is homogeneous with the pure geometrical concept of a circle, for the roundness that is thought in the concept of the plate can be intuited in the circle. [In several passages—two of which are reported rather than included in the present version—Kant expresses the notion of a thing's •falling under or •fitting or (as he sometimes says) •standing under a concept or general word by saying that the thing •is 'contained under' the concept or word. The word he uses could be translated a bit differently, but the 'contain' is retained in each case (e.g. the Quantity paragraph on page 49), in deference to the present passage where 'contain' clearly does capture the intended meaning.]

But •pure concepts of the understanding have nothing in common with •empirical intuitions (or indeed with any sensible intuitions), and can never be met with in any intuition. No-one would say that any category—for example *causality*—can be intuited through the senses and is contained in

177

appearance. Then how is it possible to apply the categories to appearances? to bring appearances under the categories? It's just because of this question, a natural and important one, that we need a transcendental doctrine of judgment—a doctrine showing *how* pure concepts of the understanding might apply to appearances. Such a doctrine isn't needed in any of the other sciences. In them the concepts through which the object is thought •in the abstract are not so different and heterogeneous from the ones that represent it •as a concrete particular; so that they don't need to provide a special discussion of the application of the general concept to the particular object. [In that sentence, 'the ones that represent it' etc. is naturally taken to mean 'the *concepts* that represent it' etc.; similarly with Kant's German at this point. But presumably he meant 'the *representations* that represent it' etc.—this being a word that covers intuitions as well as concepts.]

If a category is to be applied to an appearance, there has to be some third thing that is like the category on the one hand and like the appearance on the other. This mediating representation must be *pure*, containing nothing empirical, and yet must also be

- intellectual on the one hand, and
- sensible on the other hand.

Such a representation is the *transcendental schema*.

[Kant goes on to explain this, in terms that are exceptionally hard to follow, although the basic message is clear enough. It is that for any category C the transcendental C-schema is a representation of C-in-time, a temporalized cousin of C. This fits the requirements laid down in the preceding paragraph: the C-schema

- has the same conceptual content as C, on the one hand, and it
- has temporality in common with any sensible appearance, on the other hand.

178 Kant continues:] Hence the category can be •applied to appearances because of the temporality which, as the schema of the concept of the understanding, mediates the •application.

After what I have proved in the deduction of the categories, I hope no-one will still be wondering which of these is true:

- These pure concepts of the understanding are of merely empirical use; as conditions of a possible experience, they relate *a priori* solely to appearances.

- These pure concepts have a transcendental use; as conditions of the possibility of things of *any* kind, they can be applied to objects in themselves, without any restriction to our sensibility.

•The second of these is quite out of the question. For we have seen (1) that concepts mean nothing to us unless an object is •given either for the concepts themselves or at least for the elements that make them up; so they can't pertain to things in themselves, without regard to how and whether they can be •given to us. We have also seen (2) that the only way in which objects are given to us is through states of our sensibility; and, finally, (3) that pure *a priori* concepts must

179 contain, along with

- whatever they need to do the work of the understanding,

something further, namely *a priori* formal conditions of sensibility (namely those of inner sense) that contain the general condition that has to be satisfied if the category is to be applied to any object. I shall call this formal and pure condition of sensibility to which the use of the concept of the understanding is restricted the 'schema' of this concept of the understanding, and I shall call what the understanding *does* with these schemas the 'schematism' of the pure understanding.

The schema is in itself always only a product of the imagination; but it mustn't be confused with an *image*. . . .

What is the difference? Well, if I place five dots in a row—

•••••

—this is an *image* of the number five. In contrast with that, if I only *think* of a number in a general way, what I am representing to myself is not an *image*, but a *method for representing in an image* a multitude that fits a certain concept. In some cases—e.g. with the concept of 1,000—it might be quite a task to survey such a multitude and compare it with the concept. Now this representation of a general procedure of the imagination for providing an image for a concept is what I call 'the schema' for this concept.

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In fact it is schemas, not images of objects, that underlie our pure sensible concepts. No image would ever be adequate to the general concept of *triangle*. An image couldn't have the generality of the concept, which is what it would need to be valid for all triangles, right-angled or obtuse-angled, etc.; it would always be limited to one part of this *triangle* territory. The schema of the triangle can't exist anywhere but in thought; it is a rule of the synthesis of the imagination with regard to pure shapes in space. [Kant writes that the schema *signifies* or *stands for* a rule etc., but it seems clear that his considered view is that it *is* a rule.] •So much for •pure sensible concepts such as those of geometry. What about •empirical sensible concepts? In the case of empirical sensible concepts, the gap between the concept and the object of experience that it applies to (or an image of that object) is even greater than the one we have been looking at with pure sensible concepts. An empirical concept is always related immediately to the schema of the imagination, as a rule for creating a detailed intuition that fits the concept in question. The concept of *dog* signifies a rule that guides my imagination in sketching the shape of a four-footed animal in a general manner, without being restricted to any one particular shape—which is what

I would find in experience and in any image that I could have of a concrete particular thing. This schematism of our understanding, in its application to **appearances** and their mere form, is an art concealed in the depths of the human soul; Nature won't easily open it up to us, letting us see how it works. All we can say about it is this:

- the image is a product of the empirical faculty of reproductive imagination [see page 70];
- the schema of sensible concepts (such as figures in space) is a product. . . .of pure *a priori* imagination, through which and in accordance with which the images first become possible.

The image is never in itself completely congruent with the concept; it has to be connected with it by means of the schema that the concept designates. . . .

Rather than holding things up by a dry and boring analysis of the •general requirements for transcendental schemas of pure concepts of the understanding, I prefer to present them •one by one•, connecting them with the categories and ordering them accordingly.

The pure image of all magnitudes for outer sense is •space; the pure image of the magnitudes of all objects of the senses as such is •time. But the pure schema of **magnitude** [note the singular], as a concept of the understanding, is •number, which is a representation that comprises the successive addition of similar units to one another. So *number* is simply the unity of the synthesis of the manifold of a homogeneous intuition as such. . . .

Reality, in the pure concept of the understanding, is what corresponds to *sensation* in general. The concept of reality, therefore, points to a •being in time. The concept of **negation** represents a not-being in time. The opposition between these occurs in the distinction, for a single stretch of time, between filled and empty. . . . Now, every sensation

has a degree or magnitude through which it can more or less fill the same time—i.e. occupy inner sense more or less completely—right down to where it ceases altogether in nothingness. Think of •hearing a noise—the very same noise—as it gradually fades into silence; or seeing a house—the very same house—with one's visual field becoming ever fainter until eventually one isn't seeing anything•. Thus, there can be. . . . a •transition from reality to negation, so that every reality can be represented as a quantum, •a greater or lesser *degree of intensity* of sensation•. The schema of a reality, as the quantity of something filling time, is just this •transition, this• continuous and uniform generation of that quantity in time, as one gradually ascends in time from no-sensation to higher and higher intensities of sensation, or gradually descends in time from sensation that has a certain degree to its disappearance.

The schema of **substance** is the persistence of the real in time, i.e. the representation of the real as •a substratum of empirical goings-on in time—and thus as •something that endures while everything else changes. Time itself doesn't pass away, but changeable things pass away *in* it. Thus, what corresponds in appearance to •time (which lasts, and doesn't pass away) is •substance (which lasts and doesn't pass away). Fixing how events are placed in time—which follow which, and which are synchronous with which—can only be done in relation to substance.

The schema of cause and of the **causality** of a thing in general. . . .consists in the rule-governed succession of the manifold—•of the great complex variety of events that unroll through time•.

The schema of **community**, or of the two-way causality between substances in which they affect one another's properties (•not one another's existence•), is the rule-governed simultaneity of the states of one with the states of the other.

The schema of **possibility** is the agreement of the synthesis of various representations with the conditions of time as such (e.g. since opposites can't exist in one thing at the same time, they can only exist one after another). . . .

The schema of **actuality** is existence at some definite time.

The schema of **necessity** is the existence of an object at all times.

You can see from all this that the schema of each category contains, and makes representable, something to do with time, namely:

- magnitude: the generation (synthesis) of **time** itself, in the temporally drawn-out apprehension of an object;
- quality: the synthesis of sensation (perception) with the representation of **time**, i.e. the filling of time;
- relation: the connection of the perceptions with one another at all **times** in accordance with a rule of time-determination;
- modality: **time** itself, as the correlate of the facts about whether and how an object belongs to time.

So the schemas are nothing but *a priori* rule-governed aspects of time. Taking them in the above order: the •time-series, the •content of time, the •order of time, and finally the •scope of time in regard to all possible objects.

This makes it clear that the schematism of the understanding. . . amounts to the unity of all the manifold of intuition in inner sense, and to nothing else. That means that it indirectly comes down to the unity of self-awareness [see pages 66 and 75], as the active counterpart to inner sense, which is passive. Thus the schemas of the concepts of pure understanding are what enable the concepts to relate to objects, and thus to have significance; nothing else plays this role. So the bottom line is this: the categories can't be used in any way except empirically, because all they do is to bring

appearances under general rules of synthesis. . . .that make them fit for a thoroughgoing connection in one experience.

But all of our items of knowledge lie within the bounds of possible experience. Transcendental truth, which precedes all empirical truth and makes it possible, consists in facts about this relation of knowledge to possible experience.

But it is also obvious that although the schemas of sensibility first give the categories work to do, they also •restrict them by limiting them to conditions that lie outside the understanding (namely, in sensibility). So the schema is really only the phenomenon of an object, the sensible concept of it, in agreement with the category. (Number is the phenomenon's quantity, sensation is its reality, constancy and the endurance of things are its substance, and eternity is its necessity, etc.) [Kant says all that in Latin.] It may seem that if we set aside the •restricting condition, we'll extend the range of the concept that was previously limited. The line of thought goes like this:

The categories, in their pure significance and without any conditions of sensibility, should hold for things in general *as they are*, rather than merely having schemas that represent things *as they appear*. So they would have a meaning independently of all schemas, with a much wider scope than they have.

It is in fact true that the pure concepts of the understanding do have significance even after every sensible condition has been peeled away from them; but it's only a logical significance—all it signifies is how representations relate to one another. The pure concepts are left with no object, and thus with no significance that could yield a concept of some object. For example: if we leave out the sensible condition of persistence, the concept of *substance* would signify merely *something that can be thought as a subject and not as a predicate of something else*. Now, I can't do a

187 thing with this notion, because it tells me nothing about what a thing has to be *like* to count as a basic subject in this way. Without schemas, then, the categories are only the understanding's concept-managing devices, and don't represent any object. Their objective significance comes to them from sensibility, which enables the understanding to do real work at the same time as it restricts it.

Chapter 2: The system of all principles of pure understanding

In the preceding chapter I have considered transcendental judgment [singular] ·only taken in a lump, i.e.· only in connection with the *general* conditions under which it is entitled to use pure concepts of understanding in synthetic judgments. ·Now I come down to details·. My task now is to exhibit the judgments [plural] that the understanding, minding its step, actually achieves *a priori*. I aim to present these *systematically*; and for that, no doubt, the table of categories is the natural and safe lead to follow. That's because all the understanding's *a priori* knowledge has to be made out of the relation of the categories to possible experience, so their
188 relation to sensibility as such will exhibit completely and systematically all the transcendental principles of the use of the understanding. ·Two preliminary points·:-

(1) *A priori* principles are called 'principles' not merely because they contain in themselves bases for other judgments, but also because they are *not* themselves based on higher and more universal items of knowledge. But this property that they have doesn't exempt them from being proved. Indeed they *can't* be proved in any objective way, because they ·don't rest on any facts about *objects*, but rather· lie ·subjectively· at the foundation of all *knowledge* of

objects. This allows for us to prove them from the subjective sources of *the possibility of knowledge of an object, any object*. It's not just that we *can* conduct such a proof; we *must* do so, because otherwise the propositions—the *a priori* principles—will be under suspicion of having slid illegitimately into our theorizing while we weren't watching.

(2) I shall limit my discussion to principles that are related to *the categories*. My present enquiry ·in this chapter· won't deal with ·the principles of the transcendental aesthetic. . . . And for similar reasons ·mathematical principles have no place in this system ·of the principles of pure understanding·, because they are derived solely from intuition, not from the pure concepts of the understanding. Nevertheless, since
189 ·they too are synthetic *a priori* judgments, there will be a place here for the issue of their *possibility*. Their correctness and apodictic certainty don't need to be established, but their possibility as cases of evident *a priori* knowledge has to be rendered conceivable and to be shown.

I'll also have to say something about the principle of analytic judgments, because of its contrast with the principle of synthetic judgments which is my only real topic. By contrasting the two, we can free the theory of synthetic judgments from all misunderstanding and lay their special nature clearly before our eyes.

1. The supreme principle of all analytic judgments

All our judgments, whatever they are about and whatever knowledge-state they express, have to satisfy the negative condition of *not being self-contradictory*. If a judgment is self-contradictory, then we know straight off that it is null and void, without having to look at its object. But that isn't all that is needed for a judgment to be satisfactory. A
190 self-consistent judgment may be *false*, because it connects concepts in a way that isn't borne out by the object; or it

may be *groundless*, because there is no *a priori* or *a posteriori* support for it.

The proposition that *no thing has a predicate that contradicts it* is called the ‘principle of contradiction’, and is a universal (though merely •negative) criterion of all truth. That’s why it belongs only to logic. It is valid for all knowledge considered just as *knowledge*, without reference to its content. It says that if an item of knowledge fails this test, that completely and invalidates it. [See note on ‘knowledge’ on page 2.]

But the principle of contradiction can also be used

•positively—not just for ruling out some kinds of falsehood and error but also for knowing truths. Specifically, for knowing the truth of an *analytic* judgment. If *A is B* is analytic, then the thought of A contains the thought of B; so *A is not B* is self-contradictory, and therefore false; and the principle of contradiction tells us this. So that principle, unaided, tells us that *A is B* is true.

So we must regard the principle of contradiction as the universal and completely sufficient generator of all analytic knowledge; but that’s as far as it goes as a sufficient condition of truth. It sets a •necessary condition for truth across the whole range of our knowledge—a *sine qua non* of truth—but it isn’t a •sufficient condition of truth for •all• our knowledge, •because it doesn’t guarantee the truth of synthetic, i.e. non-analytic, judgments•. Now our only concern here •in our critical enquiry• is with the synthetic part of our knowledge; so we can’t look to the principle of contradiction to tell us what is true, though we must be careful to accept its help in finding that certain judgments are false.

Although this famous principle (•the principle of contradiction•) has no content and is purely formal, as I have explained, it has sometimes been carelessly formulated in

a way that brings in a quite unnecessary synthetic element. I’m talking about the formulation:

•It is impossible that something should both be and not be *at the same time*.

The apodictic certainty expressed by the word ‘impossible’ isn’t needed, because it’s obvious from the proposition itself: •if it *never* happens that something *is* and *is not* at the same time, that would obviously be because it *can’t* happen. But my main complaint against the formulation is that in it• the proposition has the notion of *time* built into it. It’s as though it were saying:

•A thing = A, which is something = B, can’t *at the same time* be not-B, but it may very well be B and then *later* be not-B. A man can’t be young and old at the same time, but he can be young at one time and old, not-young, later on.

But the principle of contradiction is a purely *logical* principle, so it can’t bring temporal limitations into what it says. The above formulation is clean contrary to the principle’s intent. Compare these two:

- (1) A man who is unlearned is not learned.
- (2) No unlearned man is learned.

(1) speaks of two mutually contradictory predicates, saying that they don’t both apply to the same subject; and to this of course one does need to add ‘...at the same time’. But (2) doesn’t separate the subject *man* from the two predicates *learned* and *unlearned*. Rather, it takes the subject *learned man* and says that **unlearned is not applicable to this subject**. The principle of contradiction tells us that this is true, just as it stands, without time being mentioned in any way. That’s why I have altered the formulation of the principle •to *No thing has a predicate that contradicts it*•, so that the nature of an analytic proposition may be clearly expressed by it.

2. The supreme principle of all synthetic judgments

How are synthetic judgments possible? General logic has nothing to do with that problem—it needn't even know it by name! But it is the most important item on the agenda of transcendental logic; indeed, if we •confine the question to the possibility of synthetic *a priori* judgments, and if we •ask •not just about their possibility, but also• about what makes them valid and the scope of their validity, then what we have is *the only* question on the agenda of transcendental logic. Once *that* question has been fully answered, transcendental logic can achieve the whole of its ultimate purpose, which is to determine the scope and limits of pure understanding.

In an analytic judgment I keep to the given •subject•-concept, and try to make something of it. If it is an affirmative judgment I ascribe to it only what is already thought in it. If it is negative, I exclude from it only its opposite. But in synthetic judgments I have to advance beyond the given •subject•-concept, viewing it as related to something altogether different from anything that was thought in it. So
194 this relation is never *identity* or *contradiction*, and the truth or falsity of the judgment can never be discovered just by inspecting the judgment itself.

Granted, then, that we must advance beyond a given concept in order to set it synthetically alongside another concept, there must be some third thing that is needed for the two concepts to be •brought together, i.e.• synthesized. Well, then, what *is* this third thing, this bringer-together in all synthetic judgments? There is only one totality in which *all* our representations are contained, namely •inner sense and its *a priori* form, time. The synthesis of representations rests on •imagination; and their synthetic unity, which is required for judgment, rests on the unity of •self-awareness. So in these—i.e. in inner sense, imagination, and the unity of self-awareness—•we must look for the possibility of synthetic

judgments; and since all three contain the sources of *a priori* representations, they must also account for the possibility of *pure* synthetic judgments. For these reasons they are indispensably necessary for any knowledge of objects, which rests entirely on the synthesis of representations.

If knowledge is to have objective reality, i.e. to relate to an object and have meaning and significance in relation to it, the object must be able to be *given* in some way. . . . I'm using
..195 'given' to signify being immediately presented in intuition, not given through some merely mediate = indirect process. So the first sentence in this paragraph comes down to this:

If knowledge is to have objective reality, i.e. to relate to an object and have meaning and significance in relation to it, the representation of the object **must be related to actual or possible experience.**

Even space and time, free as these concepts are from everything empirical, and certain as it is that they are represented in the mind completely *a priori*, would lack objective validity—would have no meaning or significance—if it weren't shown that they have to be applied to the objects of experience. . . . And so it is with concepts of every kind.

So, what gives objective reality to all our *a priori* items of knowledge is the **possibility of experience** •relating to them•. Now, experience rests on •the synthetic unity of appearances, i.e. on a synthesis guided by the general concepts [= 'concept'?] of *object of appearances*. Without such a synthesis it would be not •knowledge but a •jumble of perceptions that didn't ever hook up together according to rules of a completely interconnected (possible) consciousness, and so didn't conform to the transcendental and necessary unity of self-awareness. Thus, underlying experience there are •*a priori* principles about the form of experience, i.e. •universal rules governing how appearances are synthesised
196 into a unity. Their objective reality. . . .can always be shown

in experience, indeed in the mere possibility of experience. There can't possibly be any synthetic *a priori* principles that don't have this relation to possible experience, for without that they wouldn't have any 'third thing', any *object*, that would confer objective reality on the concepts in question.

We have a lot of synthetic *a priori* knowledge about space in general and about the figures that productive imagination draws in it, and we can arrive at judgments about this without really needing any experience; but even this knowledge would be nothing but fooling around with fantasies if space weren't regarded as a condition that has to be satisfied by the appearances that constitute the material for outer experience. So those pure synthetic judgments do relate, though only indirectly, to possible experience, or rather to the possibility of experience; and that's the entire basis for their objective validity.

197 So we come to this: Experience (with its empirical synthesis) is the only sort of knowledge that can impart reality to every other—i.e. every non-empirical—synthesis; and *a priori* knowledge (with its non-empirical synthesis) can have objective truth only if it contains what is needed for the synthetic unity of experience as such, and its *a priori* status requires that that is *all* that it contains.

The highest principle of all synthetic judgments is, therefore, this: Every object conforms to the necessary conditions of synthetic unity of the manifold of intuition in a possible experience. . . . So the conditions of the *possibility of experience* in general are likewise conditions of the *possibility of the objects of experience*; and that's the source of the objective validity of synthetic *a priori* judgments.

3. A systematic presentation of all the synthetic principles of pure understanding

That there are principles anywhere at all is entirely due to

•pure understanding. The understanding is the faculty of rules that govern *events*, but there's more to it than that. It is also the source of principles according to which everything that can be presented to us as an *object* must conform to rules, for without such rules appearances would never amount to knowledge of an object corresponding to them. Natural laws, even when viewed as principles governing the *empirical* use of the understanding, carry with them an expression of *necessity*, and so contain at least the suggestion of something's being settled by bases that are valid *a priori* and antecedently to all experience. But what we really have is more robust than that: Absolutely all the laws of Nature, without exception, fall under higher principles of understanding; all they do is to apply those higher principles to special cases in the domain of appearance. . . . 198

There can't be any real risk of our regarding •merely empirical principles as •principles of pure understanding, or vice versa. It's easy to avoid confusing these with one another, because of the *necessity according to concepts* that •all principles of pure understanding have and •no empirical proposition has. But there's something that we *might* confuse with principles of pure understanding, namely certain pure *a priori* principles that come from •intuitions and so shouldn't be ascribed to understanding, which is the faculty of •concepts. The principles in question—we find them in mathematics—are derived *through* the understanding *from* pure intuitions. But the understanding is still involved: it is the basis for the application of these principles to experience, i.e. for their objective validity, indeed for the possibility of such synthetic *a priori* knowledge. [Kant throws in a reminder that showing how the principles can be legitimately used is giving what he calls a 'deduction' of them. See page 57.] 199

So I shan't include the principles of mathematics among the ones I'll be discussing; but I *shall* include the higher-

level principles that are the basis for the possibility and *a priori* objective validity of mathematics. These higher-level principles must be regarded as the foundation of all mathematical principles. They proceed from concepts to intuition, not from intuition to concepts.

When pure concepts of understanding are applied to possible experience, their synthesis is being used in one or other of two different ways—*mathematical* and *dynamical*.

m. The synthesis is **mathematical** when it is concerned with the mere **intuition** of an appearance as such.

d. The synthesis is **dynamical** when it is concerned with the **existence** of an appearance in general.

m. The *a priori* conditions of intuition are absolutely necessary conditions of any possible experience.

d. The conditions of the existence of the objects of a possible empirical intuition are in themselves only accidental or contingent.

m. The principles of mathematical employment are absolutely necessary, i.e. unconditionally necessary, i.e. apodictic.

d. The principles of dynamical employment are also *a priori* necessary, but only under the condition of there being empirical thought in an experience; so their necessity is mediate and indirect, i.e. conditional. Despite their undoubted certainty throughout experience, they won't be immediately obvious in the way that the mathematical principles are.

But it would be better to postpone all this until the conclusion of this system of principles.

The table of categories [see page 52] is quite naturally our guide in constructing the table of principles, because the principles are simply rules for the objective employment of the categories. So we have this table of all the principles of pure understanding:

1. Axioms of intuition

2. Anticipations of perception 3. Analogies of experience.

4. Postulates of empirical thought as such.

I have chosen these labels—'mathematical' and 'dynamical'—for a purpose, namely to highlight differences in the evidentness of the principles and in how they are applied. You'll see soon that in both these respects the principles corresponding to the categories of (1) quantity and of (2) quality... differ from the other two sets of principles. As regards evidentness: The 1–2 principles are *intuitively* certain, meaning that they can be simply *seen* as self-evident; whereas the 3–4 principles are only *discursively* certain, meaning that they aren't self-evident but can be *shown* to be certainly true. That is a real difference, although in each case the certainty is complete; the difference is not in *how certain they are* but in *how they are certain*. So I call the 1–2 principles *mathematical*, and the 3–4 ones *dynamical*.¹⁴ But don't think that we are concerned with the principles of

¹⁴ Any case of combining or pulling together or synthesis is either by *assembling* or by *connecting*. **Assembling** is the synthesis or pulling together of a manifold whose constituents don't necessarily belong to one another. For example, a square involves this kind of synthesis, because the two right-angled triangles that are pulled together to make it up don't necessarily belong to one another. This is the kind of synthesis that is involved in anything homogeneous that can be *mathematically* treated. . . . **Connecting** is synthesising a manifold whose constituents *do* necessarily belong to one another—e.g. connecting a quality to a substance, or an effect to its cause. So it's a synthesis or pulling together of items that are heterogeneous but are represented as combined *a priori*. Connection (in this sense) isn't something we choose to do, like the assembling of two triangles to make a square; rather, it is laid down for us by the world. For that reason, and because it concerns the connection of the *existence* of the manifold, I call it *dynamical*. . . .

mathematics or of general physical dynamics. My topic is •the principles of pure understanding in their relation to inner sense—i.e. to inner sense *as such*•, not to the various specific states of inner sense. It is through •these principles of pure understanding that •the special principles of mathematics and of dynamics become possible. My labels for them reflect what they are used for rather than what they contain. I now proceed to discuss them in the order in which they are given in the table on the preceding page.

1. Axioms of Intuition

Their principle is: All intuitions are extensive magnitudes.

Proof

202 All appearances contain an intuition in space and time; this is a feature of their *form*, a condition that they must all satisfy *a priori*. They can't be apprehended—i.e. taken up into empirical consciousness—in any way except through the synthesis of the manifold that generates the representations of a determinate space or time, i.e. by assembling alike items (•such as regions of space, periods of time•) and being conscious of the unity of the resulting homogeneous manifold. And what we are talking about here—what this consciousness of the togetherness of alike items as a homogeneous manifold amounts to—is the concept of a magnitude, •i.e. of something of which there is a certain *amount*•. It follows that an object can't be perceived as an appearance unless one brings the concept of a *magnitude* to bear. In other words, appearances are all *magnitudes*. As intuitions in space or time, they must be represented through the same synthesis whereby space and time in general are determined.

They are in fact all *extensive* magnitudes, •as I now explain•. I call a magnitude 'extensive' when the representation

of its parts makes possible, and therefore has to precede, the representation of the whole. I can't represent to myself a line, however small, without drawing it in thought, i.e. starting with a point and generating all its parts one after another, sketching the line in intuition. Similarly with all times, however small. In representing time to myself, all I do is to think the successive advance from one moment to another, generating •the thought of• a definite amount of time out of •my thoughts of smaller• parts of time. Every intuition, just because it is an intuition, involves space and/or time; so every appearance is an extensive magnitude, •something 203 of which there is a certain *amount*•; so it can be known only through successively joining part to part in the apprehension of it. Thus, all appearances are intuited as *aggregates*, as bunches of previously given parts. This doesn't hold for magnitudes of every kind, but only for ones that we represent and experience as *extensive*.

The mathematics of space (geometry) is based upon this temporally drawn-out synthesis that the productive imagination performs in generating figures. This is the basis of the axioms of geometry, which express the conditions of sensible *a priori* intuition. . . .for instance, that between two points only one straight line is possible, or that two straight lines can't enclose a space, etc. These axioms are really just about magnitudes as such. [It's clear in Kant's German that the 'magnitudes' he is talking about are not •concrete items of which there are certain amounts, but •abstract amounts.]

As regards specific magnitudes—i.e. as regards answers to questions of the type 'How big is it?'—there are no axioms in the strict meaning of the term. Such propositions as

- If equals are added to equals, the wholes are equal,
- and
- if equals are taken from equals, the remainders are equal

204 are analytic propositions; for I'm immediately aware that the production of one magnitude is identical with the production of the other. So they aren't axioms, because axioms have to be *a priori synthetic* propositions. Again, concerning these magnitudes there are a number of propositions that are immediately certain *and synthetic*; but *they* aren't axioms either, because they aren't fully general as the axioms of geometry are. These numerical formulas, as I call them, include the proposition that $7 + 5 = 12$. This isn't an analytic proposition, because neither in the representation of 7, nor in that of 5, nor in the representation of the two assembled together, do I think the number 12. (I *ought* to think 12 in the addition of the two numbers, but that's irrelevant; a proposition is analytic only if in representing the subject one *actually does* think the predicate.) So the proposition is synthetic, all right, but ·it's not an axiom because· it is only a singular proposition. . . . Consider the assertion

•With three lines, two of which taken together are greater than the third, a triangle can be drawn.

205 All that is involved here is the function of productive imagination, which can draw the lines greater or smaller, letting them meet at any angle. Whereas the number 7 is possible only in one way. So also is the number 12, as thus generated through the synthesis of 7 with 5. So propositions like this mustn't be called 'axioms' (that would involve recognizing infinitely many axioms), but 'numerical formulas'.

This transcendental principle of the mathematics of appearances [presumably referring to the principle at the start of this section, 'All intuitions are extensive magnitudes'] greatly enlarges our *a priori* knowledge. For it is what makes pure mathematics applicable—not in a limited and sketchy way, but in its complete precision—to objects of experience. Without this principle, it wouldn't be so obvious that mathematics applies to objects of experience; and many people have said

self-contradictory things in this area because they haven't been guided by this principle. ·Here is the straightforward truth of this matter·:

- Appearances are not things in themselves; ·they are things as they appear to us through intuition·. So
- any conditions that our intuitions have to satisfy must be satisfied by appearances, i.e. by objects of appearance.

Add to this the true proposition that

- empirical intuition is possible only through the pure intuition of space and of time;

·and out rolls the conclusion that·

- what geometry asserts of pure intuition is valid of empirical intuition, ·and thus of the objects that appear to us·.

There's nothing debatable about this. It should put an end to the idle objection that objects of the senses don't have to conform to rules of construction in space, such as that of the infinite divisibility of lines or angles. If we accept this, we would be denying the objective validity of *space*, and consequently of *all mathematics*; we would no longer know why and to what extent mathematics is applicable to appearances. ·Here is the truth again, in somewhat different terms·:

- The synthesis of spaces and times is the essential form of all intuition; so
- that synthesis is what enables us to become conscious of appearance, and consequently of every outer experience; and so
- that same synthesis is what enable us to have knowledge of the objects of outer experience; so
- whatever pure mathematics establishes with regard to that synthesis of apprehension must also hold for the objects apprehended.

206 All objections are tricks by a falsely instructed reason, which wrongly claims to free the objects of the senses from the formal condition of our sensibility, and represents them—those mere appearances!—as objects in themselves that are given to the understanding. If this were right, then of course no synthetic knowledge could be had *a priori* concerning those objects, not even knowledge through the pure concepts of space. Indeed, the science that determines these concepts, namely geometry, would itself not be possible.

2. Anticipations of perception

Their principle is: In all appearances, anything real that is an object of sensation has intensive magnitude, i.e. a degree.

Proof

•Perception is empirical consciousness, i.e. consciousness in which sensation occurs. Space and time can't be •perceived, •because there are no sensations of them•; they are pure, merely formal, intuitions; but the objects of •perception—or 'appearances', as I also call them—are not like that.

Kemp Smith's faithful translation of Kant's next sentence: Appearances contain in addition to intuition the matter for some object in general (whereby something existing in space or time is represented); they contain, that is to say, the real of sensation as merely subjective representation, which gives us only the consciousness that the subject is affected, and which we relate to an object as such.

A guess at what Kant meant: As well as having the •formal features that it needs if it is to be an intuition at all, an appearance also has •material features—detailed content, *sensation*—that enables it to represent some object existing in space or time. This reality-indicating sensation is in

itself merely subjective: to know of its existence you only need to be conscious of a state of your mind; but we relate this state, this sensation, to some object—it could be *any* object—outside ourselves.

Now, there can be a gradual change from (1) empirical consciousness to (2) pure consciousness; in such a change, the reality-indicating element in (1) completely vanishes, leaving only (2) a formal *a priori* consciousness of the spatio-temporal manifold. So there can be a synthesis in which the magnitude of a sensation is taken from its beginning in pure intuition = 0 up to any required magnitude. •This isn't a growth in the sensation's *extensive* magnitude, because it doesn't have any•. The progress from its having magnitude = 0 upwards is framed by space and/or time all through; so there's nothing spatio-temporal about the sensation itself (which, incidentally, stops it from counting as an objective representation); and thus its magnitude has to be *intensive*. . . . And so, because all perception involves sensation, all objects of perception have intensive magnitudes.

The label 'anticipation' fits any knowledge through which I can know and determine *a priori* what belongs to empirical knowledge. . . . But there's an element in appearances—namely, sensation (the 'matter' of perception)—that is never known *a priori*; it is indeed just what marks off empirical 207 from *a priori* knowledge. So sensation really can't be anticipated at all. On the other hand, the label 'anticipations' can very well be given to the pure determinations in space and time, in respect of shape as well as of magnitude, because they represent *a priori* something that can always be given *a posteriori* in experience. But if there's something that can be known *a priori* in every sensation—just *as a sensation*, without reference to *what kind* of sensation it is—then that deserves to be called an 'anticipation' in a very special

and remarkable sense, because it seems surprising that we should have advance knowledge of precisely the aspect of experience that can be had only *through* experience, namely, its **matter**. Yet that is how things stand.

[The preceding paragraph was inserted into (B) the second edition of the work. What comes next was, in (A) the first edition, the *start* of the discussion of the ‘anticipations of perception’.] Apprehension by means merely of sensation occupies only an instant (in saying this I am setting aside ·time-taking· series of many sensations). Sensation is the element in any appearance that doesn’t involve a temporally drawn-out synthesis proceeding from parts to the whole representation; so it has no extensive magnitude. The absence of sensation at that instant would involve the representation of the instant as empty, therefore as = 0. Now, what corresponds in empirical intuition to sensation is reality; what corresponds to its absence is negation = 0. But every sensation can decrease and *gradually* vanish. In appearances, therefore, between •reality and •negation there’s a continuity of many possible intermediate sensations, the difference between any two of which is always smaller than the difference between the given sensation and zero or complete negation. In other words, •the real in the appearances always has a magnitude; but when •it is apprehended through sensation, this happens in an instant and not through a temporally drawn-out synthesis of many sensations going from the parts to the whole; so the magnitude ·of •the real· is to be met with only in the apprehension, ·not in a synthesis leading to the apprehension·. Thus, •the real has magnitude, but not extensive magnitude. [A simple example of the distinction Kant is mainly drawing in this paragraph: for me to have the thought of an hour-long pain, I have somehow to think of an initial pain that *goes on and on* for an hour; but to think of an intense pain, I *don’t* have to think of a mild pain that *becomes more and more intense*.]

I use the label ‘intensive magnitude’ for any magnitude that is apprehended only as a unity, so that the only way multiplicity or manyness can get a grip on it is in terms of how closely it approximates to negation = 0. [Kant really does speak here of *Vielheit* = ‘multiplicity or manyness’. But in the preceding paragraph he gives a reason why one could never say how *many* degrees separate a given sensation from 0. It seems that he ought to have spoken here of *Grösse* = ‘magnitude or muchness’.] So every reality in appearances has •intensive magnitude, or •degree. . . .

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Thus, every sensation—and along with that every reality in appearances—however small it may be, has a degree or intensive magnitude that can always be diminished. Between reality and negation there is a continuity of possible realities and of possible smaller perceptions. Every colour red, for example—has a degree which, however small it may be, is never the smallest; and similarly with heat, weight, and so on.

We call a magnitude ‘continuous’ if no part of it is the smallest possible, i.e. no part is simple. Space and time are continuous magnitudes because the only *parts* either of them can have are ones enclosed between limits (points or instants), so that each part is itself a space or a time. Space therefore consists solely of spaces, time solely of times. Points and instants are only •boundaries, i.e. •positions at which space and time are limited. But •positions always presuppose the intuitions ·of the items· that they are meant to limit or pin down; so there can be no question of starting with positions and assembling them to form space or time. . . . Magnitudes of this sort can also be called *flowing*, because the synthesis of productive imagination involved in producing them is a progression in time, and the continuity of time is ordinarily expressed by saying that time ‘flows’.

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All appearances, then, are continuous magnitudes—both

in their intuition as extensive, and in their mere perception (sensation, and with it reality) as intensive. If the synthesis of the manifold of appearance is broken up, then what we have is not

- a single appearance as a genuine quantum, produced by continuing without a break a productive synthesis of a certain kind,

but rather

- an aggregate of many appearances, produced by repeating over and over again a synthesis that keeps stopping.

If I call thirteen dollars ‘an amount of money’, this is correct •if I mean it only as stating the value of a mark of fine silver. For this ·value· is a continuous magnitude in which no part is the smallest, and in which every part *could* be the value of a coin that would always contain material for still smaller coins. But •if what I’m calling ‘an amount of money’ is thirteen round dollars, then I am using ‘amount’ improperly. I ought to call it ‘an *aggregate*’, i.e. a number of coins. . . .

212 Since all appearances are continuous magnitudes—viewed extensively or intensively—it would be easy to prove with mathematical conclusiveness the proposition

- All alteration—all transition of a thing from one state to another—is continuous,

if it weren’t for the fact that the causality of alterations presupposes empirical principles, and thus lies outside the domain of a transcendental philosophy. No question of the form ‘Can x cause a thing that is F to become non-F?’ can be answered *a priori*. . . .because alterability depends on •certain features of appearances, and. . . only experience can teach us what •they are. In our present enquiry our only data are the *pure* basic concepts of all possible experience, in which there must be *nothing* empirical; so we’ll destroy the unity of our system if we anticipate general natural science, which is

based on certain basic experiences.

Still, there are plenty of proofs of our principle’s great value in enabling us to anticipate perceptions—and even to some extent to make up for our not having them, by slamming the door on all false inferences that might be drawn from our not having them. 213

If •all reality in perception has a degree, with an infinite gradation of ever smaller degrees between that degree and zero, and if •every sense must ·at each moment· have some particular degree of receptivity of sensations, it follows that

- no perception, and hence no experience, could possibly prove—whether directly or in roundabout ways, even *very* roundabout ways, by reasoning—that some part of the domain of appearance has a complete absence of all reality.

In other words, the proof of an empty space or of an empty time can never be derived from experience. The complete absence of reality from a sensible intuition isn’t something that could be *perceived*; and there’s no appearance, and no fact about the difference in the degree of reality between any appearance and any other, from which it can be *inferred*. And it’s not even legitimate to postulate it in order to explain any such difference. For even if the whole intuition of a certain determinate space or time is real through and through, i.e. no part of it is empty, there are infinite different degrees of reality that it may have—running continuously down to *nothing*—without in any way altering its *extensive* magnitude. ·So any supposed empirical evidence of empty space or empty time could in fact be evidence of very low grade reality throughout that stretch of space or time·.

I’ll give an example. Almost all natural scientists, observing a great difference in the quantity of various kinds of matter in bodies that have the same volume (observing this through differences of weight, and of opposition to other 214

matter in motion), conclude that all material bodies must have within their boundaries a certain amount of empty space. Hasn't it occurred to these students of Nature, most of whom are occupied with problems in mathematics and mechanics, that here they are basing an inference solely on a metaphysical presupposition—the sort of assumption they so loudly profess to avoid? They assume that the real in space (I can't say 'impenetrability' or 'weight' because these are empirical concepts) is everywhere the same, and varies only in extensive magnitude, i.e. in amount. This is a purely metaphysical assumption; they have no support for it in experience. I oppose it with a transcendental proof which, though it doesn't explain the differences in the filling of spaces, completely destroys the supposed need to explain those differences by postulating empty space. My proof has the merit at least of *setting the understanding free*, to think

215 about this difference in some other manner if it turned out that some other hypothesis is needed to explain the natural appearances. For my proof enables us to recognise that the following could happen:

- Two equal spaces are completely filled with different kinds of matter, so that there's matter present in every point of each; yet they differ in how resistant they are to the movements of other matter, or in how much they weigh.

The point is that every real thing has ·at any given moment· some specific degree of each of its qualities (e.g. of resistance or of weight), and that this degree can become smaller and smaller *in infinitum*, before it turns into vacuum and vanishes—without the thing's *extensive* magnitude, its amount, being even slightly lessened during this process. Think about how radiation—for instance ·radiant· heat—fills a space: it can become less and less, without leaving the smallest part of this space empty. . . . I don't mean to say that

this is what actually occurs when material bodies differ in specific gravity; all I want here is to establish from a principle of pure understanding that the nature of our perceptions allows of such a mode of explanation. . . .

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This anticipation of perception is bound to seem strange to anyone who is accustomed to transcendental thinking, and who has been made cautious by it. I have been contending that the understanding anticipates—·knows in advance of experience·—a synthetic proposition that ·ascribes a degree to everything real in ·the domain of· appearance, and so ·asserts that there are different ways a sensation can be, *apart from* differences in its empirical quality. Of course your suspicions will be raised! So the question 'How *can* the understanding in *a priori* fashion pronounce synthetically about appearances, anticipating them in respect of the sensation they involve, which in itself is merely empirical?'—this question, I say, deserves an answer.

The *quality* of any sensation, as for instance in colours, tastes, etc. , is always merely empirical and can't be represented *a priori*. But the *reality*, which corresponds to sensation as such—sensation as opposed to negation = 0—represents only something the concept of which includes *being*; all it signifies is *the synthesis involved in empirical consciousness* (i.e. in empirical consciousness as such, not in this or that specific empirical consciousness). In inner sense empirical consciousness can be raised from 0 to any higher degree, so that a certain extensive amount of intuition—as for instance an illuminated surface—may excite as great a sensation as the combined aggregate of many such surfaces has illuminated. We can completely abstract from the extensive magnitude of the appearance,

217 and still represent in the mere sensation in any one of its moments a synthesis that advances uniformly from 0 to the given empirical consciousness. Consequently, though

all sensations as such are given only *a posteriori*, their property of possessing a degree can be known *a priori*. It's a remarkable fact that the only qualitative thing we can know *a priori* about magnitudes as such is that they are continuous, and the only quantitative thing we can know *a priori* is that they do have intensive quantity, i.e. a degree. Everything else has to be left to experience.

3. Analogies of experience

Their principle is: Experience is possible only through the representation of a necessary connection of perceptions

Proof

Experience is empirical knowledge, i.e. knowledge that fixes on an object through perceptions. So it's a synthesis of perceptions; perceptions don't contain knowledge, but any item of knowledge contains a manifold of perceptions pulled together into one consciousness. This synthetic ·or pulled-together· unity is the essential thing in any knowledge of *objects* of the senses, i.e. in ·experience as distinguished
218 from mere ·intuition or ·sensation of the senses. In experience, however, perceptions come together only contingently; the perceptions themselves don't and can't reveal any necessity about how they are connected to one another. For ·apprehension is only a placing together of the manifold—the various elements—of empirical intuition; and we can't find in ·it any representation of any *necessity* guaranteeing that the appearances thus placed together are inter-connected in space and time. But since experience is knowledge of objects through perceptions, the relation involved in the existence of the manifold has to be represented in experience not ·as it comes to be ·subjectively· put together in time but ·as it exists objectively in time. But time itself can't be perceived; so the only way to determine

the time-involving facts about objects is through how they relate to one another in time as such. (·Why 'as such'? Well, we find out how things relate to one another given that they are *in time*, and that general fact is all that we are taking into account. We aren't making use of any facts about *where* in time this or that object is; that's precisely what we *can't* do, because facts of that sort aren't available to us directly, because time can't be perceived·.) Therefore, to determine the time-involving facts about objects we have to connect them through concepts that connect them *a priori*. Since these always carry necessity with them, it follows that experience is possible only through a representation of the necessary connection of perceptions.

The three modes of time are ·*persistence*, ·*succession*, and ·*coexistence*—·*x* lasts through time, ·*x* follows *y* in time, ·*x* exists at the same time as *y*·. So there will be three rules of all temporal relations of appearances—rules that ·govern the establishment of facts about how appearances are inter-related in a unified time, ·are prior to all experience, and indeed ·make experience possible.

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[The next paragraph in Kant's text is entirely omitted from this version. ·It is horribly, defeatingly difficult to follow. ·It *seems* not to be needed for us to follow the main thread of Kant's argument. And ·in his personal copy of the first edition he struck this paragraph out (though he did include it in the second edition).]

[Kant now says that the principles of the 'Analogies' have a special feature all of their own. The other principles actually tell us something, *a priori*, about what appearances must be *like*—e.g. that they must have intensive magnitude. The principles of the 'analogies' don't do that, however: they aren't concerned with how elements are put together in the empirical awareness of appearances, so they have nothing to say about what any appearance will be like. Rather, they are concerned only with 'the *existence* of such appearances and

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their *relation* to one another'. He means that the principles of the 'analogies' tell us only things of the form 'Given one appearance, there exists another that relates to it thus-and-so'. He goes on to insist, however, that this doesn't give us *a priori* knowledge about what appearances *there are*. When we know something about the kind of synthesis that must underlie any appearance, that gives us some *a priori* knowledge of some aspect of every appearance that we shall encounter; but 'the *existence* of appearances can't be known *a priori* in this way'. He adds that even if we *could* somehow contrive to know *a priori* that something-or-other exists, we couldn't know it with any detail, i.e. couldn't know in advance ('anticipate') features of it that would enable us to pick it out, empirically, as the one in question. Then what *do* the principles of the 'analogies' give us if they don't give us knowledge (even in Kant's weak sense of that word)? Kant will answer that shortly, after one preparatory paragraph:]

'You'll recall that I label as 'mathematical' the principles of the 'axioms' and the 'anticipations', because they justify the application of mathematics to appearances. They were concerned with what makes appearances possible; they taught how appearances . . . can be generated according to rules of a mathematical synthesis. Both principles justify us in employing numerical magnitudes, and so enable us to know in advance that much about appearances—they are magnitudes. Take, for example, the degree of brightness of sensations of sunlight: I can fix on this *a priori* by •constructing it, which I do by •assembling about 200,000 illuminations of the moon. These first two principles can therefore be called **constitutive**. [That term hasn't occurred before in this work; nor has its opposite, 'regulative', which we are about to meet. Very roughly, a 'constitutive' rule tells you what a certain thing is, or what it is like, and a 'regulative' one tells you merely how to go looking for the thing. Constitutive: information. Regulative: marching

orders. These terms will occur only once more (on page 135 until they turn up in the Dialectic, where they are worked hard and given an explanation—which, incidentally, seems not to fit their present use.)

It's not at all like that with the principles whose job is to bring the *existence* of appearances under rules *a priori*. Existence can't be constructed or assembled, so these principles can apply only to the relations of existence, and can yield only **regulative** principles. So there's no question of our having either 'axioms' or 'anticipations' in this context, but we do have *something*. If a perception is given in a temporal relation to some other, but with no information about what the 'other' is like (so that we can't say *a priori* *what* it is, or what its *magnitude* may be), we may still be in a position to say that in its existence it is necessarily connected, in this temporal way, with the former perception. In philosophy analogies signify something very different from what they represent in mathematics. A mathematical analogy is a formula that expresses the equality of two quantitative relations, and is always *constitutive*; so that if three members of the proportion are given, the fourth can be constructed—e.g. if we know that x is to 17 as 36 is to 9, we know that x = 68. But in philosophy an analogy is an equality not between two *quantitative* but between two *qualitative* relations; given three members of such an analogy, we can know *a priori* •how the fourth relates to them but not •what the fourth *is*. Still, that relation gives us a rule for *seeking* the fourth member in experience, and a sign by which it can be detected. So an analogy of experience is only a rule governing how a unified experience is to arise from perception. It doesn't tell us how perception—or empirical intuition as such—comes about in the first place. It isn't *constitutive* of the objects, i.e. of the appearances, but only *regulative*. . . . The postulates of empirical thought are also regulative, not constitutive. . . .

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I need to emphasize regarding the analogies something that I have already said about all synthetic principles, namely •that they are significant and valid only as principles of the empirical use of the understanding, not of its transcendental employment; •that they can be proved only as used empirically; and •that appearances must therefore be brought not under the naked categories but under their schemas. That's for the old familiar reason: If the objects to which these principles are to be related were things in themselves, we couldn't possibly have *a priori* any synthetic knowledge of them. They are just *appearances*; and complete knowledge of them—which is what *a priori* principles are all about—is simply the experience we can have of them. So the principles can't have any goal except being the conditions of the unity of *empirical* knowledge in the synthesis of *appearances*. But such a unity can be thought only in the *schema* of the pure concept of understanding. The category expresses a function that isn't restricted by any sensible condition. . . . In the principle itself, we do indeed employ the category; but in applying the category to appearances we replace it by its schema as the key to its use. . . .

FIRST ANALOGY

Principle of the persistence of substance:

In all change of appearances substance persists, and the amount of it in Nature doesn't get larger or smaller

Proof

All appearances are in time—the persisting form of inner intuition, the substratum of all one's intuitions. Only *in time* can coexistence or succession be represented. Thus, the time *in* which all change of appearances has to be thought, remains and doesn't change, because all facts about the succession of events or the coexistence of things have

to be represented as being *within* time. Now time can't by itself be perceived, but it must show up *somehow* in our experience, because—as I have shown—all appearances are, so to speak, drenched in time. Consequently a substratum that represents time as such—not this time or that time, but just *time*—must be found in the objects of perception, i.e. in the appearances; and when any change or coexistence is apprehended, it must be perceived through the relation of appearances to this substratum. Now, the substratum of everything real, i.e. everything that belongs to the existence of things, is *substance*; and all the facts about the real world are facts about the states of substances. So the persisting element in the experienced world, in relation to which all temporal relations of appearances can be determined, is *substance*, i.e. what is real in appearances; and as the substrate of all change, substance always remains the same. And as it is thus unchangeable in its existence, the amount of it in Nature can't alter.

Our •apprehension of the manifold of appearance is always temporally drawn-out, and so it is always changing. So we can't tell just from our apprehension whether the •manifold itself. . . is all-at-once or temporally drawn-out. For *that* we need an underlying ground that exists *at all times*, i.e. something *lasting* and *persisting*, of which all facts about change and coexistence are only so many ways in which the persisting things exist. I highlight change and coexistence because 'x follows y' and 'x exists at the same time as y' are the only temporal relations. So we get the result that it is only in relation to what is persistent that any temporal relations are possible. . . . Persistence, as the abiding correlate of all cases of change and all cases of going-together, expresses time as such. Neither •change nor •going-together apply to time itself. •Coexistence or going-together isn't ever a feature of time itself, because

none of the parts of time coexist; they are all in succession to one another. And •change isn't something that happens to time itself, but only to appearances *in* time. To ascribe succession to time itself, we would have to think yet another time for the succession to occur *in!* Only through what persists can existence in different parts of the time-series acquire a magnitude that we call 'how long it lasts'. For in bare succession existence is always vanishing and re-starting, and never has the least magnitude. Without what persists, therefore, there are no temporal relations. Now, time can't be perceived in itself; so what's persistent in the appearances is the substratum of all temporal facts, and is therefore the condition of the possibility of. . . .experience.

227 So all facts about what exists and what changes occur have to be viewed as simply facts about the states of that which persists all through the changes. . . .

I find that in all ages, not only philosophers but also ordinary lay-people have recognised this persistence as a substratum of all change of appearances, and have always assumed that there can't be any doubt about this. The only difference in this matter between ordinary lay-people and philosophers is that philosophers have said a bit more about it, saying that throughout all changes in the world *substance* remains and only the *accidents* [= 'properties', 'qualities'] change. But I haven't found that anyone has even *tried* to prove this obviously synthetic proposition. Its proper place is right at the top of the laws of Nature that are pure and completely *a priori*; but it is very seldom put there. Certainly the proposition that *substance persists* is analytic, because this persistence is our sole ground for applying the category of substance to appearances. But •if we want to do this• we ought first to have proved that •in all appearances *there is* something that persists, and that •facts about non-persisting items are just facts about the various states of what *does*

persist. But such a proof can't be constructed dogmatically 228 [see note on page 15], i.e. from concepts, because it concerns a synthetic *a priori* proposition. •The only other way of proving it—the *right* way—didn't occur to anyone, because• it has never occurred to anyone •until now• that such propositions are valid only in relation to possible experience, and therefore can't be proved except through a theory about what makes experience possible. So it's not surprising that though the above principle is always postulated as lying at the basis of experience (for in empirical knowledge the need for it is *felt*), it hasn't ever before been proved.

A philosopher was asked how much smoke weighs, and replied: 'Subtract from the weight of the burnt wood the weight of the ashes that are left over, and you have the weight of the smoke.' In this answer he assumed, as undeniable, that even in a fire the •matter (substance) doesn't vanish but only undergoes an alteration of •form. The proposition that *nothing comes from nothing* is just another consequence of the principle of persistence—or rather of the ever-lasting existence of the subject (strictly so-called) in the appearances. [It may be worth noting that in Kant's German 'consequence of the principle' is *Folgesatz aus dem Grundsatz* = 'follow-proposition out of the ground-proposition'.] For if what we call 'substance' in the •domain of• appearance is to be the substratum (strictly so-called) of all temporal facts, it must follow that all such facts, whether concerning past or future time, can be established solely through and in terms of it. So we can give an appearance the title 'substance' just because we presuppose its existence throughout •all time; and this isn't well expressed by the word 'persistence', because that applies chiefly to •future time. But since the inner necessity of persisting •from now on• is inseparably bound up with the necessity of always *having* existed, the expression •'principle of persistence'• may be allowed to stand. The two propositions 229

•Nothing comes out of nothing, and

•Nothing can revert into nothing,

were always run in harness by the ancient philosophers, but these days they are sometimes separated because of the mistaken belief that they apply to •things in themselves, and that the first of them would run counter to the world's depending—even in respect of its substance—on a supreme cause. But there was no need for that worry, because what we are dealing with here are only •appearances in the domain of experience. ·I have said several times why it is that in this context the principle of persistence must be true, but I'll sketch it again here·. Experience couldn't be unified if we allowed that new things—new *substances*—could come into existence; for then we would lose the only item ·in the domain of appearance· that can represent the unity of time, namely the identity of the substratum in which change has thoroughgoing unity. ·But this has nothing to do with any such topic as •the world's dependence on God·. The persistence I am talking about is simply •the way we represent to ourselves the existence of things in the ·domain of· appearance.

The details of a substance that are nothing but special ways in which it exists are called *accidents*. They are always real, because they concern the existence of substance. (Negations are only details consisting in the *non*-existence of something in substance.) We have a special word for how such accidents—e.g. motion, as an accident of matter—exist. We say that their existence is 'inherence', ·and that the accident 'inheres in' the substance·. In contrast to this, we use the label 'subsistence' for the kind of existence that the substance has. But this has led to many mistakes; and it's more precise and correct to handle all the facts about •accidents in terms of facts about what the •substance is like at this time or that—·e.g. to avoid

(1) 'An accident, whiteness, inheres in this substance now'

in favour of

(2) 'This substance is now white'.

Notice that (1) is a relational statement—it affirms that the inheres-in *relation* holds between the accident and the substance—whereas (2) is not relational·. But the logical use of our understanding works in such a way that we can't help picking out and isolating, as it were, •that which can change in the existence of a substance while the substance still remains, and to viewing •this variable element as standing in a certain *relation* to what is truly persistent and basic. So this category belongs among the categories of relation, not as itself *containing* a relation, but as making relations possible.

This persistence is the basis for a correct understanding of the concept of *alteration*. Coming into and going out of existence are not *alterations* of whatever it is that comes into or goes out of existence. You have an alteration when a single object exists first in one way and then in another—·e.g. exists first as white and then as blue·. All that alters *stays on*, and only its state changes. [In this passage, 'alter' and 'alteration' translate one of Kant's words and its relatives, while 'change' translates a different cluster. They sharply differ here, because a 'change' in Kant's sense occurs only to something that comes into or goes out of existence.] Since this change thus concerns only the states of the substance, which can go out of existence or come into existence, we can say, odd as it may seem, that only what persists (substance) is altered, and that what is transitory— 231 what comes and goes—doesn't undergo any *alteration* but only undergoes a *change*, because certain states ·of the substance· cease to be and others begin to be.

Alteration can therefore be perceived only in substances. There couldn't possibly be a perception of something's •absolutely coming into existence or going out of existence. (I use

‘absolutely’ to exclude cases where the ‘something’ is an accident, so that its existence-change is just a persisting substance’s alteration.) Why couldn’t such an event be perceived? Because it’s the persistent thing that *makes possible* the representation of the shift from one state to another, and from not-existing to existing. These shifts can’t be empirically known except as changes of state in something that persists. If you try to suppose that something •absolutely comes into existence, you’ll have to have a point of time at which it didn’t exist. But what would you attach this point to if not to something that already existed ‘at that time’? For a preceding empty time is not an object of perception. But if we connect the coming into existence with something that previously existed and stayed in existence right up to the time of the coming into existence, then this coming into existence must be only a change of state in this already-existent persisting item. Similarly also with going out of existence; it presupposes the empirical representation of a time in which the item in question no longer exists.

Substances, in the domain of appearance, are the substrata of all temporal characterisations of anything. If some of these substances could come into existence and others stop existing, that would remove one condition of the empirical unity of time. Appearances would then relate to two different times, and existence would flow in two parallel streams—which is absurd. There is only one time in which all different times—i.e. parts of the one time—must be located not as coexistent but as one after another.

...What is the empirical criterion of this necessary persistence and thus of the substantiality of appearances? I’ll have a good opportunity to answer that later on [page 117].

SECOND ANALOGY

Principle of temporal sequence, in accordance with the law of causality:

All alterations take place in conformity with the law of the connection of cause and effect.

Proof

Before stating the proof, I want to give a preliminary reminder: The principle of the first analogy showed that all appearances of succession in time are only *alterations*, . . . and that therefore there can’t be any case of a substance’s coming into existence or going out of existence. The principle could have been stated thus: *All change (succession) of appearances is merely alteration*. If a substance came into existence or went out of existence, that wouldn’t be an *alteration* of it, because the concept of alteration presupposes a single subject that is first in one state and then in a different one, staying in existence throughout. Now for the proof of the principle of the second analogy.

•BRIEF, FAIRLY SKETCHY VERSION OF THE PROOF•

I perceive that appearances follow one another, i.e. that there is a state of things at one time and then the opposite state at the next time. So I really •connect two perceptions in time. Now, •connection is not the work of mere sense and intuition; in this case—i.e. in the perception of happenings—it is the imagination’s power of putting the contents of inner sense into temporal order. But imagination can •connect these two states in either of two ways, depending on which it puts temporally first. They can’t be put in the right order just by perceiving *when* each occurred, because time itself can’t be perceived, which means that no state of affairs has its *when*—the time to which it belongs—as an empirically perceptible feature of it. All I am conscious of is that my

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234 imagination sets one state before and the other after, not that one state objectively precedes the other; which is to say that the *objective relation* of appearances that follow upon one another is not to be settled through mere perception. For this relation to be known as objectively settled, the relation between the two states must be thought in a way that fixes one ordering of them as necessary and the other ordering as ruled out. But the concept that carries with it a *necessity* that items be brought together in one way rather than another has to be a pure concept that lies in the understanding, ·i.e. a category·; it can't come from perception; and in this present case it is the concept of the *relation of cause and effect*. ·It does the ordering job that I have been talking about, because· the *cause* fixes the objective temporal position of the *effect* as its consequence. . . . Experience itself—in other words, empirical knowledge of appearances—is thus possible only if we bring the sequence of appearances (and therefore all alteration) under the **law of causality**; and it also follows that appearances, as objects of experience, are themselves possible only in conformity with that law.

·INTERLUDE CONCERNING THE TERM 'OBJECT'·

235 Our sensory intake of the manifold of appearance is always successive: the *representations of* the parts follow one another. Whether the parts also follow one another *in the object* is quite another question, not settled by the temporally drawn-out nature of the representations. Of course *anything* can be called an 'object'—even a representation that one is conscious of (·such a representation can be called 'an object of one's consciousness'·). But it is a question for deeper enquiry what the word 'object' ought to signify in respect of appearances when we speak of a representation as *standing for* an object ·or *having* an object·. When appearances are being thought of merely as representations, i.e. as objects of consciousness, they're in no way different from the apprehen-

sion of them, i.e. from their being received into the synthesis of imagination; and ·with 'appearances' understood in that way· we must agree that the manifold of appearances is always generated in the mind successively. Now, if appearances were things in themselves—if things in themselves were the 'objects' we are trying to pin down—we could never discover from the succession of representations how they are all connected 'in the object'. That's because all we have to go by are representations; how things may be in themselves, apart from the representations through which they affect us, is right outside our sphere of knowledge. So there's the problem: I can't take appearances to be things in themselves, but I want to distinguish the •temporally drawn-out nature of our conscious representations of appearances from •the temporal relations among the elements of the appearances themselves, ·i.e. among the 'objects of those representations'·. For instance, there is a house in front of me; I take in successively the various aspects of *its appearance*; but no-one will say that various aspects of *the house* are also successive. [Most of the rest of this paragraph is unduly hard to grasp as Kant wrote it. The gist of it is this: I am to distinguish (1) the temporal nature of my apprehension of some representations (always successive) from (2) the temporal nature of whatever it is that the representations are representations of (in some cases successive, in others not). But this latter item—what the representation is of—isn't a thing in itself. In fact, it is nothing but 'the sum of these representations, viewed as being their object'. The only way we can get the result that the always-successive temporal set-up among •the representations is not always the temporal set-up in •the object of the representations—given that the object is 'the sum of the representations or perhaps some kind of construct out of them—is for the representations. . . . Kant now takes over:] . . . to fall under a rule that distinguishes the apprehension of

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them from every other apprehension, and necessitates that the manifold be temporally hooked up in one particular way. The **object** is whatever-it-is in the appearance that contains the condition of this necessary rule of apprehension—i.e. that makes this rule kick in·.

·PUTTING FLESH ON THE BONES OF THE PROOF·

Let us now proceed to our problem. That something *happens*—i.e. that some thing or state comes into existence—
 237 can't be empirically perceived unless it is preceded by an appearance that doesn't contain this thing or state. (What about an event that follows an empty time, i.e. a coming-into-existence preceded by *no* state of things? We could no more apprehend *that* than we could apprehend empty time!) So every apprehension of an event is a perception that follows upon another perception; but as we saw in the case of the house, every apprehension of a *non*-event is also like that; so we still don't have a way of picking out apprehensions of events from other apprehensions. But I offer this: in an appearance that contains a happening in which state A of the perception is followed by state B, B *can't* be apprehended except as following A; the perception A *can't* follow B but can only precede it. (·This is an application of the general thesis about necessitating rules, given at the end of the preceding paragraph·.) For example: I see a ship being sailed downstream. My perception of its lower position *follows* the perception of its position higher up in the river, and it *couldn't* happen that in apprehending this appearance I first perceived the ship lower down and then afterwards higher up. In this case the order in which the perceptions occur in apprehension is fixed, and my apprehension has to stay with this order. In the 'house' example, my perceptions could
 238 begin with the apprehension of the roof and end with the basement, or could begin from below and end above; and
 ·in taking in the view of the house from a single position·, I

could go from right to left or from left to right. Thus, in the series of these perceptions there was no determinate order making it *necessary* for me to start at some one point. But in the perception of an *event* there is always a rule that makes the order in which the perceptions (in the apprehension of this appearance) occur a *necessary* order.

In this case, therefore, we must derive the *subjective succession* of apprehension from the *objective succession* of appearances (·with the appearances being understood objectively, of course, i.e. as being what the representations are representations *of*·). Otherwise the order of apprehension is entirely undetermined, and doesn't distinguish one appearance from another. The **•subjective succession**, taken in itself, is altogether arbitrary, and proves nothing about how the manifold is connected in the **•object**. So the objective succession has to consist in the order of the manifold of appearance according to which, *in conformity with a rule*, the apprehension of what happens *follows* the apprehension of what went before. That's the only way I can be entitled to say (not merely of my apprehension, but) of appearance itself that a succession is to be met with in it. This is only another way of saying that I can't arrange the apprehension otherwise than in this very sequence.

Where such a rule applies, what precedes an event must contain the condition of a rule according to which this event
 239 invariably and necessarily follows—i.e. must contain something that makes this rule kick in·. I can't reverse this order, going back from the event to find through apprehension what came before it. For appearance never goes back from **•the later to the earlier one**, though **•it does indeed stand in relation to some preceding point of time**. On the other hand, the advance from a given time to the determinately following one is a *necessary* advance. Therefore, since there certainly is something that follows, I must relate it to something else

that •precedes it and that •it follows in conformity with a rule, i.e. necessarily follows. The event (as the conditioned item) thus provides reliable evidence that there was some previous condition, and this condition is what determines the event. •Or, to put it in slightly different language: The event (as the **effect**) provides reliable evidence that there was some previous **cause**, and this cause is what necessitates the event. •

•A QUICK RESTATEMENT OF THE PROOF•

[This paragraph and the next are notably repetitious, and most of the unnecessary repetitions are omitted from this version.] Suppose we had an event *x* that wasn't preceded by something that made a rule kick in according to which *x* *must* follow. In that case, the successiveness in perception would come solely from apprehension—i.e. it would consist only in the subjective fact that our sensory intake is successive—and we'd have nothing enabling us to sort out objectively which perceptions really precede and which really follow. . . . I wouldn't be able to say that one state follows the other in the •objective domain of• appearance, but only that one *apprehension* follows the other. That's a merely subjective fact, giving no information about any object; so it can't be regarded as knowledge of any object, not even of an object in the •domain of• appearance.

Thus, whenever we experience that •something •objectively• happens, that involves us in presupposing that •it was preceded by something from which •it followed according to a rule. Otherwise I wouldn't say of the object that it follows—i.e. I wouldn't say that something objectively happened. The only way I can make my subjective synthesis of apprehension objective is through a rule in accordance with which the appearances are determined by the preceding state. The experience of an *event* is itself possible only on this assumption.

•INTERLUDE CONCERNING THE CONCEPT OF CAUSE•

This may seem to contradict everything we've been told about how our understanding goes about things. The accepted view has been this:

- We perceive and compare repeated sequences of events—first an A event, then a B one.
- From that we discover a rule—whenever an A event occurs, a B event follows. 241
- And that leads us to construct for ourselves the concept of *cause*.

If that's how the concept of cause were formed, it would be merely empirical, and the rule that it supplies, namely *Everything that happens has a cause*, would be as contingent as the experience it was based on. The universality and necessity of the rule wouldn't be based on anything *a priori*, but only on induction; so they would be merely fictitious, and •the rule• would have no genuinely universal validity. It's the same with *cause* as with other pure *a priori* representations—•the concepts of• space and time, for example—which we can get in clear form *from* experience only because we first put them *into* experience in the course of *creating* experience. It's true that the concept of *a rule that determines the series of events* is one that we can't get logically clear in our minds until after we have used it in experience. But •the rule has to be at work in our thought if appearances are to be inter-related in time, so experience itself is based on •it, so that it—the rule—has preceded experience *a priori*.

•YET ANOTHER RESTATEMENT OF THE PROOF•

. . . We have representations in us, and can become conscious of them. But extend this consciousness as far as you like, make it as exact and detailed as you like, it will still be merely a matter of representations, inner states of our mind that are temporally related thus and so. So how does it come about that we posit an object for these representations,

overlying their •subjective reality as states of our minds with who-knows-what kind of •objective reality? Objective significance for representation x can't consist in x's relation to another representation y (that is, another representation that we take to be *of* an object), because that would simply raise the question again: how does representation y reach out beyond itself, acquiring objective significance in addition to the subjective significance that it has as a state of mind? If we inquire into what new character *relation to an object* confers upon our representations, what dignity they get from that, we find that there's nothing to it beyond bringing the representations under a rule, and •thereby• forcing us to connect them in some one specific manner. . . .

. . . .When I perceive that something x •objectively• happens, the **first** thing that is contained in this representation is that *something y happened just before*, because it's only by reference to a preceding y that this appearance x gets

- its time-relation, i.e.
- its existing *after* a time when it didn't exist, •i.e.
- its status as an event or happening•.

But •the experience of something x's happening also contains a **second** element, namely that• the preceding y necessitated x in accordance with a rule (because x can't have its determinate temporal position unless that is so). From this it follows (1) that I can't reverse the series, putting x before y; and (2) that if y is given, the determinate event x follows inevitably and necessarily. So the situation is this: there's an order among our representations, in which the present—just because it *has* happened—points back to some preceding state as a correlate of the given •present• event; this correlate is not yet determined, but it determines the event as its consequence. [That last clause is a kind of short-hand for: 'We haven't yet settled what this correlate *is*, but we do know that it has settled the occurrence of the event we are investigating'.]

•REWORKING ALL THIS IN THE CONTEXT OF ITS BEARING ON EMPIRICAL DOINGS•

Thus, if it's a necessary law of our sensibility—and therefore a formal condition of all perceptions—that one **time** necessarily determines the following **time** (because I can't reach the later time except *through* the earlier one), it is also an indispensable law of empirical representation of the time-series that the **events** in past time determine all **events** in the following time, and that an event can't occur unless a past event determines—in accordance with a rule—that it will occur just then. [In that sentence, the word 'events' has been used once where Kant's word means 'appearances', and once where his word means 'existences'; but he does also explicitly call them *events*. His basic point has to do with moving from relations among *times* to relations among *things IN* time. You'll remember that his word for 'appearance' usually stands not for a state of mind but for something objective.] For only in appearances—•things *in* time•—can we empirically detect this continuity in the way times hang together. [Despite the phrase 'this continuity', the most recent mention of continuity was on page 106, before Kant started on the analogies of experience; but continuity will become a central topic very soon.] Understanding is integral to all experience—it's needed for the possibility of experience. The first thing it does is not to make the representation of objects •clear, but to make it •possible. It does this by carrying the time-order over into the appearances and their existence—•i.e. into the events that occur *in* time•. What the understanding does is to relate each event to the preceding ones, thus assigning it a position determined *a priori* in time. If it didn't do that, the events wouldn't accord with time itself, which *a priori* determines the position of all its parts. What settles •for us• the position in time of a given event can't be *its relation to time*, because absolute time can't be perceived. Rather, the appearances must determine for one another their position in time, and make their temporal

order a necessary order. In other words, what follows or happens must follow in conformity with a universal rule from what was contained in the preceding state. Out of this comes a series of appearances which, by means of the understanding, produces and makes necessary the same order and continuous connection in the series of possible perceptions as is met with *a priori* in time—the form of inner intuition in which all perceptions must have their place.

246 So the rule by which we fix the temporal location of an event is that some sufficient condition for its occurrence is to be found in what happened just before it. The •principle of sufficient reason, therefore, is the basis for possible experience, i.e. for objective knowledge about when individual events occur.

The proof of this •principle rests on the following considerations. (1) All empirical knowledge involves the **synthesis** of the manifold by the imagination. (2) This synthesis is always temporally drawn-out—the representations in it come in a stream, •not in a block•. (3) As the representations occur in the mind, there is nothing to fix the order in which they occur—the series of them could equally well be taken in one order or in the reverse order. (4) But if what we have is a **synthesis** of apprehension of the manifold of appearance [remembering that for Kant ‘appearances’ are objective, not subjective], the order is determined in the object. . . . (5) In accordance with this order something y must necessarily precede •a given event x•, and when y is given x must necessarily follow. Thus, if my perception is to contain knowledge of an event, i.e. of something as actually •objectively• happening, it must be an empirical judgment in which I think of the sequence as determined—i.e. as being preceded by some other appearance in time from which it follows necessarily, according to a rule. If that weren’t so—if I were given the antecedent event and the other event *didn’t* follow necessar-

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ily from it, I would have to think I was undergoing a merely subjective play of my imagination; and if I still thought of it as representing something objective, I would have to think I had been dreaming. . . . Within the general framework of the question of how my present doctrine relates to work in empirical science, three more specific questions come up: they concern •relations between the concepts of cause and of substance, •the continuity of alterations, and before those two this one•:

•NON-SEQUENTIAL CAUSATION•

At this point there arises a difficulty that must be dealt with at once. Consider how I have formulated the principle of causal connection among appearances: I have stated it in terms of series or sequences of appearances—•first cause, then effect•—but really cause and effect can go together, can be simultaneous with one another, and the principle of causation covers those cases too. For example, a room is warmer than the outside air; I look around for the cause, and find a heated stove. Now the stove, as cause, is simultaneous with its effect, the heat of the room. In this case the cause and the effect don’t constitute a series—•first cause, then effect•—because they are simultaneous, and yet the law •of cause and effect• holds here as well. The great majority of natural causes are simultaneous with their effects; and when an effect is strung out in time, that is purely because the cause can’t achieve its complete effect in one moment. But at the moment when the effect first comes into existence, it is always simultaneous with the causality of its cause: if the cause had ceased to exist a moment before, the effect wouldn’t have happened. •To overcome this apparent difficulty•, we have to bear in mind that what matters here is the *order* of time, not the *lapse* of time; the •cause-effect• relation remains even if no time has elapsed. The time between the causality of the cause and its immediate effect

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can be vanishingly small, so that they can be simultaneous; but the *temporal* relation of one to the other will still be determinate. If I view as a cause a ball that makes a dent in the surface of a cushion on which it is lying, the cause is simultaneous with the effect. But I still distinguish the two by the way their dynamical connection relates to time—i.e. by such facts as that if I put the ball on the flat surface of the cushion, a dent follows; but it is *not* the case that if for
 249 some reason there is a dent in the cushion, that brings a leaden ball down onto it!

So the sequence in time is the only empirical criterion of an effect in its relation to the causality of the cause that preceded it. [Kant follows this with a second example. Then:]

·CAUSE AND SUBSTANCE·

Causality leads to the concept of •action, this in turn to the concept of •force, and thereby to the concept of •substance. I leave the detailed exposition of these concepts to a future system of pure reason; indeed there's a lot of that already in the accepted text-books. ·Why not go into them now? Because· my critical project is concerned solely with the sources of synthetic *a priori* knowledge, and I don't want to clutter it by bringing in analyses that aim only at clarifying concepts, not at extending them. Still, I mustn't neglect the empirical criterion of a substance, because substance seems to show up better and more readily through •action than
 250 through •persistence of an appearance.

Wherever there is •action—and therefore •activity and •force—there is also •substance, and *that's* where we have to look for the seat of this fruitful source of appearances. So far, so good; but can we explain in a non-circular way what we mean by 'substance'? It turns out to be hard to do. How are we to conduct an inference from a premise about *action* directly to the *persistence* of that which acts? I state the problem in terms of persistence because that is

an essential and quite singular characteristic of experienced substance. There would be no solution to it if we stuck to the usual procedure that deals with concepts in a purely analytic fashion, but there's no such difficulty if we tackle it from the standpoint of the doctrines I have been expounding. [The next bit is needlessly unclear. The gist of it is this: An instance of *action* has to involve *something that acts*; so we have

- an effect, which is an event or happening, and so belongs on the 'transitory = changing' side of the line, and

- a cause or agent, a thing that acts, and this belongs on the 'persisting = unchanging' side of the line.

If you try to get out of this by supposing that the acting thing is itself something transitory—i.e. is itself an event—then you'll have to find a subject or thing-that-acts for *that* event as well. Either you'll come to a persisting substance at that stage, or you'll postulate a still deeper-lying event, and so will be launched on an infinite regress.] So you have as a sufficient empirical criterion to establish that something *x* is a substance the fact that it *acts*; and this spares you
 251 from having first to check on whether *x* is *persistent* by comparing your perceptions—i.e. by looking to see whether *x* appears to stay in existence through all the variations in my sensory intake. And anyway, that comparing-perceptions method, ·as well as being laborious, couldn't give us a solid decision on whether *x* is substantial, because it· couldn't be *completed* in the way it would have to be if our result was to match the strict universality involved in the concept ·of substance·. Here is something we know for certain:

- The first subject of the causality of *all* coming into and going out of existence can't itself, in the domain of appearances, come into or go out of existence. And this leads to ·the concept of· empirical necessity and

persistence in staying in existence, and so to the concept of a substance as appearance.

·PREPARING TO TACKLE QUESTIONS ABOUT ALTERATION·

When something happens, the mere fact of a coming-into-existence is something to be looked into, quite apart from any issue about *what* came into existence. The transition from the non-existence of a state to its existence demands investigation, even if the state in question doesn't show up at all in the domain of appearance. (I express this in terms of a 'state' because what comes into existence must be a •state; it can't be a •substance because, as I showed in the First Analogy, substances don't come into existence out of nothing. Suppose that a substance did come into existence out of nothing. This would have to be caused by something other than that substance; so it would be a case of creation properly so-called, and we can't allow that creation might show up among appearances, because the mere *possibility* of a creation would destroy the unity of experience. On the other hand, if I view all things not as 252 phenomena but as things in themselves, and as objects of mere •understanding without bringing •intuition into it, then despite their being substances they can be regarded as being brought into existence by a cause other than themselves. But that involves changing the very meanings of our words, and it wouldn't imply *anything* about what we might encounter in our experience.

We are confronted by a very general question: How can anything can be altered? How is it possible that one state at a given moment is followed by an opposite state at the next moment? From the *a priori* standpoint we haven't an inkling. To answer that question we need to have knowledge of actual forces, which can only be given empirically; for example, knowledge of

•the forces of motion,

or, what amounts to the same thing, knowledge of

•certain successive appearances that add up to motions, indicating the presence of such forces.

But we *can* get some *a priori* results, aided by the law of causality and the conditions of time, concerning the *form* of every alteration—the condition that has to be satisfied for one state to give rise to another—and that gives us results about the series of states, i.e. the event. And this we can do without any reference to the content of any alteration, i.e. to *what* state is changed. [Kant wrote 'what state is altered', but that was evidently a slip. See note on page 110.]¹⁵

·CONTINUITY OF ALTERATIONS·

If a substance passes from one state y to another state x, the point in time of x is distinct from that of y, and comes later than it. Similarly, the state of affairs including x—considered as a reality in the domain of appearance—differs from the previous state of affairs in which it didn't exist; the difference is like that between x and zero. That is to say, even if x differed from y only in magnitude, the alteration would involve the coming into existence of x-minus-y, which didn't exist in the previous state of affairs counts as zero in respect of •it. [Kant states this in terms of a case where x involves something's being *bigger* than it was earlier (its earlier size being y). His point should apply also when the move from y to x is something's becoming *smaller*, but it's not clear how he would state this in terms of something's not existing at the time of y.] 253

¹⁵ Please note that I'm not talking about all alterations in any respect whatsoever (e.g. an alteration in a thing's relational properties), but only about alterations of state. For example, I am not concerned with the 'alteration' that someone undergoes through his parents' dying and his becoming an orphan. Thus, when a body moves uniformly, its •relations to others things change, but it doesn't in any way alter its •state of motion; that occurs only if it speeds up or slows down.

Well, then, *how* does a thing pass from state y to different state x? Between any two instants there is a time, and between any two states in the two instants there is always a difference which has magnitude (it *must* do so, because all parts of appearances are always themselves magnitudes). So every transition from one state y to another x occurs in a time that is contained between •the instant of y and •the instant of x. So those two instants are the boundaries of the time. So those two instants are the boundaries of

•the time of an alteration,

which is

•the time of the intermediate state between x and y;

and so they form part of the total alteration. Now, every alteration has a cause that shows its causality at work through the whole time in which the alteration takes place. So this cause brings about the alteration (not suddenly, 254 *snap!* in one instant, but) over a period of time; so that as that period runs its course from the initial instant of y to its ending at x, the magnitude of the reality x-minus-y is •correspondingly• generated through all smaller degrees between the first and the last. All alteration is thus only possible through a *continuous* action of the causality •that brings it about•

That is the law of **the continuity of all alteration**. Its basis is this: time doesn't consist of smallest parts—there are no atoms of time—and the same is true of time-taking events. Despite this, when a thing alters, its state x passes through all the intermediate parts to its second state y. In the •domain of• appearance there is no *smallest difference* between two real items, any more than there is a smallest difference that there can be between two periods of time. So what happens in an alteration is that the new state of reality x grows out of the earlier one y in which x didn't exist, going through all the infinity of intermediate degrees. . . .

It's not my present purpose to enquire into what use this principle may have for scientists; but I do have to face the question of how such a principle, which seems to extend our knowledge of Nature, can be possible •as something that is known• completely *a priori*. Even if we can tell just by looking at the principle that it is correct and •empirically• real, which might make us think we can excuse ourselves 255 from tackling the question 'How is it possible?', we *do* have to tackle it. Here is why. There are so many baseless claims to the extension of our knowledge through pure reason that we must make it our rule—with no exceptions—to look with suspicion at every such claim, and not to accept it—however clear the *dogmatic* proof of it may seem to be—unless we are given the materials for a thoroughgoing deduction. [For 'dogmatic', see page 15. For 'deduction', see pages 4 and 57.]

When my empirical knowledge increases, when I come to have new perceptions, what is happening is just further goings-on in my inner sense, i.e. an advance in time. (This is true whether the objects I am learning about are •objective• appearances or mere •subjective• intuitions.)

what Kant wrote next, conservatively translated: This progress in time determines everything, and is not itself determined by anything further: i.e. its parts are only in time, and given through the synthesis of it, but they are not given before it. For this reason every transition in perception to something that follows in time is a determination of time through the generation of this perception and, since that is always and in all its parts a magnitude, the generation of a perception as a magnitude through all degrees, of which none is the smallest, from zero to its determinate degree.

what he seems to have been getting at: In this empirical knowledge-gathering, it is *time* that calls the tune. You don't conceptually construct time on the basis of relations

amongst items that you know about independently of time; there aren't any such items. What about the parts of time—short periods, or moments? Not even them, because you are presented with parts of time only *in* time; you don't experience short periods of time and then notice that they hang together so as to add up to a single continuous time. So when you perceive a transition from one state of affairs to a later one, the whole story about this perception-of-an-event is a story about what your perceptual states are at a series of *times*. Any such perception has to be, so to speak, drenched in time. And since time is always and in all its parts a magnitude, the same is true of the perception-of-an-event: each of *its* temporal parts also involves a magnitude, and it runs through the entire series of these magnitudes from zero up to whatever is the case at the end of the event; and because there are no temporal atoms in this series, no smallest durations, the whole process is strictly continuous.

256 This shows how we can know *a priori* a law about the form of alterations. All we are doing is to anticipate a formal feature of our own mental state; and, given that this formal pre-condition of our mental life dwells in us prior to all given appearances, *of course* we can know it *a priori*.

So we have two parallel results. •The form of inner sense, time, contains the sensible *a priori* condition of the possibility of a continuous flow of the world. •The understanding... is the *a priori* condition of the possibility of giving events their positions in this continuous flow, doing this through the series of causes and effects. Because the causes inevitably draw the effects after them, they make our empirical knowledge of time-relations valid universally for all time—i.e. objectively valid.

THIRD ANALOGY

Principle of coexistence, in accordance with the law of interaction or community:

All substances that can be perceived to coexist in space are in thorough-going interaction with one another.

Proof

Things are coexistent when in empirical intuition we can 257 perceive them in either order—which (as I showed in the proof of the second principle) can't happen in the temporal series of appearances. Thus I can look first at the moon and then at the earth, or first at the earth and then at the moon; and because neither of these objects has perceptual primacy in the way a cause has perceptual primacy over its effect, I say that they are 'coexistent'—i.e. existing at the same time, i.e. simultaneous. For a given pair of things, we can't assign each its place in time and then notice that the temporal locations are the same and from this infer that they coexist and thus that our perceptions could take them in either order. Because time itself can't be perceived, we can't assign anything a temporal location just by seeing *where in time it is situated*. If we don't look at how the objects are related to one another, all we could get from the way they show up in our perceptions would be things like this:

- At time t_1 I have a perception of object x but not of object y.
- At time t_2 I have a perception of object y but not of object x.
- At time t_3 I again have a perception of object x but not of object y.

We couldn't learn in this way that the objects coexist, and that it's *because* they coexist that we can perceive them in either order. If we are to have grounds for saying that

the take-it-either-way sequence of the perceptions is based on something that is out there, and thus for •representing them as *objectively* coexistent, we need to have a concept of the understanding that would apply to them if the detailed nature of each depended in part on the other. What concept? Well, it has to be the concept of *influence*, the concept that
 258 applies when one substance has certain features because of the features of some other substance; and when this relation holds in both directions between two substances, it gets the special names ‘community’ and ‘reciprocity’. Thus, our experiential knowledge that two substances exist in space at the same time has to be based on the presupposition that they are interacting. So *interaction* is the condition of the possibility of *the things themselves* as objects of experience. . . .

Suppose there are several different substances—appearances—each of them completely isolated, i.e. none having any influ-
 259 ence on any of the others. I maintain that •we can’t possibly learn perceptually that they coexist, and that •there is no empirical-synthesis track leading from any one of them to any other. . . .

So as well as the mere existence of •substances• x and y, there must be something through which x determines y’s position in time, and through which, conversely, y determines x’s; otherwise these substances can’t be empirically represented as *coexisting*. Now the only way in which something x can determine the temporal location of something else y is by •causing it to exist or •causing it to have some of its features. It’s the latter of these—causing some of the features—that applies when x and y are substances; so we get the result that the coexistent substances x and y cause certain of one another’s features; that is, the substances must be in a *dynamical community* with one another (perhaps an indirect one), if it’s to be possible to know through perception that

they exist at the same time. Now, quite generally if something is necessary for z to be an object of experience, then that same condition is necessary for z to exist. So we get the result that all co-existing substances in the •domain of appearance should stand in a thoroughgoing community of mutual interaction. 260

The word *Gemeinschaft* (‘community’) is ambiguous. It may stand for a group of items that are together in some way without interacting, or it can stand for a group whose members interact. [Kant explains that by equating the two senses with two Latin words.] I am using it in the latter sense, as signifying a dynamical community; •it is in a way the more basic of the two senses, because• even the weaker kind of community that consists in things’ standing in *spatial* relations to one another couldn’t be empirically known unless there were a dynamical community. We can easily see from our own experience

- that our senses can be led from one object to another only by the continuous influences in all parts of space,
- that the light that plays between our eye and the stars produces an indirect community between us and them, and thereby shows us that they coexist,
- that we can’t knowingly change our perceptual position unless matter in all parts of space enables us to know where we are; and only thus by means of their two-way influence can objects establish their simultaneous existence, and thereby the coexistence of even the most remote objects.

Without community, each perception of an appearance in space is broken off from every other, and the chain of empirical representations—i.e. experience—would have to start all over again with each new object, with its immediate predecessor having not the least connection with it or being temporally related to it. I am not arguing here against empty 261

space; there may be empty space where perceptions can't reach, and where there is therefore no empirical knowledge of coexistence. But such a space is not for us an object of any possible experience.

[Kant now offers a difficult paragraph purporting to explain the third analogy further. Its final sentence, a comment on all three analogies, is worth noting: 'The three dynamical relations, from which all others spring, are therefore (1) inherence, (2) consequence, and (3) composition.']

* * *

·SUMMING UP THE THREE ANALOGIES OF EXPERIENCE·

..262 These, then, are the three analogies of experience. They are simply principles governing how appearances fit into time, according to all three of time's modes, namely the relation that

- an appearance has to time itself as a magnitude (the magnitude of existence, i.e. *duration* = persistence·);
- appearances have to one another in time as a *successive* series;
- appearances have in time as a sum of all *simultaneous* existence.

This unity of time-determination is altogether dynamical. For time is not viewed as that wherein experience immediately determines position for every existence. Such determination is impossible, inasmuch as absolute time is not an object of perception with which appearances could be confronted. What determines for each appearance its position in time is the rule of the understanding through which alone the existence of appearances can acquire synthetic unity as regards relations of time; and that rule consequently determines the position ·in a manner that is· *a priori* and valid for each and every time.

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By 'Nature' in the empirical sense, we understand the hanging together of real appearances in accordance with laws. Certain laws—*a priori* ones—make it possible for there to be a Nature in the first place. Empirical laws can exist and be discovered only through experience, and indeed under the guidance of those basic laws through which experience becomes possible. . . . The analogies, taken together, declare that all appearances do lie within *one* Nature; indeed they *must* do so, because without this *a priori* unity—this *oneness*—experience wouldn't hang together as a unity, and that would make it impossible for us to know anything about the world.

I want to say something about the way I have gone about proving these transcendental laws of Nature, ·i.e. the principles of the three analogies·. What I have to say is of great importance for *any* attempt to prove *a priori* propositions that are synthetic. (I'm talking about intellectual propositions, ·not practical or moral ones, for which a different story has to be told·.)

[Kant will speak of coming at things ·'dogmatically'—see note on page 15. He *seems* to equate that here with coming at them ·'through conceptual analysis, but that is because his topic is *a priori* knowledge. He would probably allow that one might tackle a topic dogmatically starting from contingent premises, but then one's conclusions would be *a posteriori*. When he refers to 'this third ·item·', he might be ·echoing what he said earlier—see page 97—about the need for a 'third thing' to connect subject and predicate in a synthetic *a priori* judgment; or he may be referring to the third item in this list of procedures:

- proceed dogmatically in pursuit of *a priori* results; this requires conceptual analysis, and the results will all be analytic;
- proceed perhaps-dogmatically in an empirical way; this requires appealing to experience, and the results will all be *a posteriori*;
- proceed in Kant's **critical** way, getting synthetic results in an *a priori* manner.

Oddly, it doesn't matter which way we take 'this third ·item·'. The bottom line is the same.]

If I had tried to prove these principles of the analogies dogmatically, trying to show *from concepts* that

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- everything that exists is to be met with only in that which persists,
- every event presupposes something just before it from which it follows in conformity with a rule; and finally
- in a manifold that all exists at one time, the items in it coexist in a rule-governed set of relations to one another, and so stand in community,

it would have been a complete waste of time. Getting from one object and its existence to the existence of another object or to its mode of existence—we can't do that through mere *concepts* of these things, analyse them as we may. Well, then, how else can we go about this? By investigating the possibility of experience as a sort of knowledge in which the objects that are known about—if our representation of them is to have objective reality for us—must ultimately be capable of being *given* to us. In this third item, the essential form of which consists in the synthetic unity of the self-awareness of all appearances, we have found *a priori* conditions of complete and necessary determination of time for all existence in the domain of appearance—without which even *empirical* determination of time would be impossible. In it we have also found rules of synthetic unity *a priori*, by means of which we can anticipate experience. Consider the principle of sufficient reason, which is a version of the principle of the second analogy. I have proved it. Others have tried to prove it, many times; but they have always failed because they didn't have this critical method, and because they started from the wrong assumption that synthetic propositions that the empirical employment of the understanding recommends as being its principles can be proved dogmatically. As for the principles of the other two analogies: although they have always been silently *used*, no-one has previously

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managed to *think about* them; because no-one has had the guiding-thread of the categories, which is needed if one is to reveal and highlight every gap in the understanding—in its concepts as well as in its principles. . . .

4. Postulates of empirical thought

1. Whatever agrees with the formal conditions of experience—i.e. with the conditions of intuition and of concepts—is *possible*. 266
2. Whatever is tied to the material conditions of experience—i.e. to sensation—is *actual*.
3. Whatever is connected with the actual in a way that is required by universal conditions of experience exists as *necessary*.

[It is worthwhile to get those clear in one's mind: (1) consistent with **formal** requirements, (3) entailed by **formal** requirements, and in between those (2) satisfying **material** conditions.]

Explanation

The categories of modality have a feature all of their own: when one of them is applied to an object, this doesn't add *anything* to the concept of the object, but only says how the object relates to the faculty of knowledge. Even when I have an entirely complete concept of something, I can still ask of this object: is it merely possible? or also actual? or even necessary? Answering this won't add any details to my account of the object; all it will do is to say how the object (in all its detail) is related to the understanding and its empirical use, to empirical judgment, and to reason in its application to experience.

So the principles of modality are nothing but explanations of how the concepts of possibility, actuality and necessity

work in their empirical employment; and that results in their restricting all the categories to their merely empirical use, not approving or allowing them to be used in a transcendental way. For if they are not to have a merely logical significance, analytically expressing the form of *thought*, but are to refer to the possibility, actuality, or necessity of *things*, they must concern possible experience and its synthetic unity, that being the only way in which objects of knowledge can be given. [Kant now proceeds to put flesh on those bones, taking the three categories in order, and giving each about a couple of pages.]

·POSSIBILITY·

The postulate of the *possibility* of things says that a thing is possible only if its concept agrees with the formal conditions of experience as such, and these conditions contain all the synthesis that is required for knowledge of objects. A concept that contains a synthesis is empty and not related to any object unless this synthesis belongs to experience, either as

- being derived from it, in which case the concept is an *empirical concept*, or as being
- an *a priori* formal condition for there being any experience at all, in which case it is a *pure concept*; though it still belongs to experience because its object can be met with in experience (and indeed only there).

We want to use a synthetic *a priori* concept to give ourselves the thought of an object's being *possible*; where could *that* possibility come from if not from the synthesis that constitutes the form of—the formal condition for—the empirical knowledge of objects? Of course any concept of something possible must satisfy the logical condition of not containing any contradiction; but that's not enough to imply that it's possible for there to be an object that fits the concept. For example, there is no contradiction in the concept of *a figure enclosed within two straight lines*, because the concepts of *two straight lines* and of *their intersection* don't contain any

negation of a figure. The impossibility of such a figure arises not from the concept in itself but from the construction of it in space, i.e. from the conditions of space and of its properties. And because these conditions contain *a priori* in themselves the form of experience as such, they apply to possible *things*.

Now I am going to lay bare the far-reaching usefulness and influence of this postulate of possibility. If I represent to myself

(1) a thing that persists, so that the only changes it is involved in are changes of its *state*,

I can't know just from my concept whether a thing of this kind (·substance·) is possible. Or if I represent to myself

(2) a thing that is constituted in such a way that if it occurs then something else invariably and inevitably follows from it,

there is certainly no contradiction in this thought; but the thought—i.e. the concept—provides no way of judging whether it is possible for any thing to have this property (causality). Lastly, I can represent to myself

(3) different things (substances) that are constituted in such a way that the state of each carries with it some consequences for the states of the others (·community·);

but I can't tell just from this concept—which exists only because I have *chosen* to put its parts together in that way—whether it is possible for there to be things that are inter-related in that way. Our only way of knowing that these concepts are objectively real, i.e. transcendently true, is through their expressing *a priori* the relations of the perceptions in every experience. You'll recognize, of course, that these three concepts are the central ones in the three analogies of experience. . . .

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If we tried to construct quite new concepts of (1) substances, (2) forces, and (3) reciprocal actions from materials that we find in perception, but without experience presenting any examples of the constructed concepts, we would be occupying ourselves with mere fancies, having absolutely no way of checking on their possibility, because we hadn't •borrowed the concepts *en bloc*• from experience and hadn't •let experience guide us in constructing them. Such man-made concepts can't be possible in the *a priori* way that the categories can, namely by being conditions on which all experience depends; the only kind of possibility they can have would be an *a posteriori* one, from the concepts' 270 being given through experience itself. . . . Here are three examples, each of which has actually made an appearance on the philosophical stage. We might construct the concept of

- (1) a substance that is persistently present in space, but without filling it (like the mode of existence intermediate between •matter and •thinking thing that some •philosophers• have wanted to introduce);
- (2) a special ultimate mental power of *intuitively* anticipating the future—just *seeing* the future, as it were—and not merely inferring it;
- (3) a power of standing in a community of *thoughts* with other men, however distant they may be.

There is no basis for these concepts to be *possible*: they can't be based on experience and its known laws; and without such confirmation they are arbitrary constructs, free from contradiction indeed, but with no claim to objective reality. . . .

That's enough about the kind of possibility that can be derived from experienced actuality. I want to consider here only the possibility of things through *a priori* concepts; 271 and I stand by my view that merely constructed concepts

can't unaided show that they are possible; for *that* we need concepts that are viewed as formal and objective conditions of experience as such.

The concept of *triangle* might seem to go against this. It is certainly independent of experience, yet it seems as if we could know it to be possible just from its concept, for we can provide an object for it completely *a priori*, because we can *construct* it [see note on page 8]. But all we get from that is the *form* of an object; it would still be a mere product of imagination, with the possibility of its object still being doubtful. What is required for that to be no longer doubtful is that the triangle be thought only under the conditions upon which all objects of experience rest. What enables us to connect •the concept of *triangle* with •the representation of the possibility of there being such a thing as a triangle? Just these two considerations:

- that space is a formal *a priori* condition of outer experiences, and
- that the synthesis in which we construct a triangle in our imagination is precisely the same as the synthesis we perform when we apprehend an appearance so as to make for ourselves an empirical concept of *triangle*.

It's the same with the concepts of magnitudes, whether continuous or not: those concepts are all synthetic, so the possibility of there *being* such magnitudes is never clear from the concepts themselves, but only from viewing the concepts as formal requirements for our having any experience of any 272 objects. . . .

•ACTUALITY•

The postulate about the knowledge of things as *actual* requires perception (and thus sensation of which one is conscious), but it doesn't have to be perception directly of the object whose existence is to be known. What is needed is an actual perception that *connects* with the object in one

of the ways dealt with by the analogies of experience, which define all real connection in experience as such.

273 No mark of a thing's •existence can be found in its •mere concept. The concept may be complete, contain everything that is needed for getting into one's thought the thing and its entire intrinsic nature; but existence has *nothing* to do with all this, but only with the question: Is such a thing given to us in such a way that the •perception of it can, if need be, precede the •concept? 'The concept precedes the perception'—that tells us merely that the concept is possible. What indicates actuality is the perception that provides the concept with its content. But we can also know the existence of a thing before perceiving it, this being knowledge that is comparatively *a priori* but not absolutely *a priori* [that is, knowledge of x that can be had before any perception of x but not before any perception of anything]. What lets us have such knowledge is x's being connected with certain perceptions ·that we do have·—connected in accordance with the principles of. . . .the analogies. . . . For example, from our perception of attracted iron filings we know of the existence of magnetic matter pervading all bodies, though our sense-organs aren't sharp enough for us to be able to perceive this matter directly. . . . Our knowledge of the existence of things reaches as far as we can get through •perception and •extensions of it in accordance with empirical laws. If we don't •start from experience, or don't •move on from there in accordance with laws of the empirical connection of appearances, we are just putting up an idle *pretence* of wanting to discover things about what exists. Idealism, however, raises a serious objection to these rules for proving existence indirectly, and this is the proper place for its refutation.

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* * *

Refutation of Idealism

Idealism—by which I mean *material* idealism—is a theory about the existence of objects in space outside us. There are two forms of it:

- problematic idealism, which holds that the existence of objects in space outside us is doubtful and indemonstrable (as with Descartes's view that only one empirical assertion is indubitably certain, namely 'I am');
- dogmatic* idealism, which holds that space, along with all the things that couldn't exist without space, is in itself impossible (as with Berkeley's view that the things in space are merely imaginary entities).

There's no way of avoiding dogmatic idealism if space is interpreted as a property of things in themselves; for then space is a non-entity, and so is everything of which it is a condition. ·But I don't have to refute this form of idealism here, because· the ground on which it rests has already been undermined in my transcendental aesthetic. ·With problematic idealism, however, it's a different story·. It doesn't assert that space and its contents are unreal; it merely says that through our immediate experience we can't prove the existence of anything except ourselves. That is a reasonable upshot of a sound principle of philosophising, namely: don't make your mind up about something for which you don't have sufficient proof. ·But we *can* give 'sufficient proof' of the reality of space and things in it·. The proof the idealist demands comes from showing that we have *experience* of outer things, rather than merely imagining them; and the only way to prove *this* is to show that even our inner experience is possible only on the assumption of outer experience. ·That should be enough to refute· Descartes, who regards inner experience as indubitable.

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THESIS

My consciousness of my own existence and of details about myself proves the existence of objects in space outside me.

Proof

I am conscious of my own existence as determined in time, ·i.e. I am conscious of myself as being in various states at various times·. All ·knowledge of· temporal details presupposes ·knowledge of· something *persistent* in perception. But this persistent thing can't be an intuition in me. For the only grounds there are *in me* for any account of my various states are *representations*; and as representations they themselves require a persistent thing distinct from them, in relation to which their change, and so my existence through the time in which they change, can be determined. Thus perception of this persistent thing is possible only through a *thing* outside me and not through the mere *representation of a thing* outside me; and consequently

•my sense of the details of my existence in time is possible only through the existence of actual things that I perceive outside me.

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Now, •my consciousness of my own existence in time is necessarily tied to •a consciousness of the possibility of my having this sense of myself as being in various states at various times; and so it follows that

•my consciousness of my own existence in time is necessarily tied to the existence of things outside me.

In other words, the consciousness of my existence is at the same time an immediate consciousness of the existence of other things outside me. ·Q.e.d·.

Note 1. You see that in the foregoing proof the game played by idealism has been turned against itself, and with greater justice. Idealism assumed that the only immediate experi-

ence is inner experience, and that from it we can only *infer* outer things—and this, moreover, only in an untrustworthy manner, as in all cases where we are inferring from given effects to determinate causes. In this particular case, the cause of the representations that we ascribe (rightly or wrongly) to outer things may lie in ourselves. But my proof shows that outer experience is really immediate,¹⁶ and that only by means of it is inner experience possible (I'm not talking here about the consciousness of my own existence, but about my having some sense of what states I am in at different times). Certainly, the representation 'I am', which expresses the consciousness that can accompany all thought, immediately includes in itself the existence of a subject; but it doesn't immediately include any *knowledge* of that subject, or therefore any empirical knowledge, i.e. experience, of it. For experience we need not just the •thought of something existing but also •intuition—in this case *inner* intuition, namely time—and the subject must be determined with respect to that, ·i.e. must have some knowledge of what his states are at different times·; for that to happen, outer objects are quite indispensable; from which it follows that inner experience is itself possible only indirectly, *through* outer experience.

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¹⁶ In the preceding proof, the *immediate* consciousness of the existence of outer things isn't presupposed, but proved; and the proof holds good whether or not we have insight into the possibility of this ·immediate· consciousness. The issue about this consciousness is whether the following is the case:

•Our only sense is the inner sense; we have no outer sense, but merely an outer imagination.

But it's clear that in order even to *imagine* something as outer—i.e. to present it to ·inner· sense in intuition—we must already have an outer sense, through which we must immediately distinguish •our passivity in respect of any outer intuition from •our activeness in every act of imagination. . . .

Note 2. All this perfectly fits what happens when we use our knowledge faculty in experience, in sorting out the temporal aspects of what happens. It's not just that

I can't perceive any facts about *when* this or that occurs except through facts about how things move relative to persistent things in space (for instance, the motion of the sun relative to objects on the earth);

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but also

The only persisting thing that is given to me in intuition and could be the basis for the concept of a substance is *matter*; and even *its* persistence isn't something I learn from outer experience; rather, I presuppose it *a priori* as a necessary condition of having any grasp of any temporal sequence of events, and therefore also as required for my sense of myself as lasting through time—which means that my *inner* sense depends on my *outer* sense.

You might think that matter doesn't have to come into the story, because my consciousness of myself in the representation *I* presents me, through intuition, with something persistent that could serve to anchor my thoughts about the temporal aspects of my inner sense. . . . But this is quite wrong, because my representation *I* isn't an *intuition*, but a merely *intellectual* representation of the activeness of a thinking subject, so it doesn't have the faintest touch of anything intuitional about it, so it can't play the 'persistence' role that matter plays.

Note 3. From the fact that the existence of outer things is required for the possibility of a determinate consciousness of myself, it doesn't follow that every intuitive representation of outer things involves their really existing; for a representation of them may well be the product merely of the imagination (as in dreams and delusions). But this doesn't weaken the thesis I have been defending against problematic idealism,

because such a representation merely reproduces previous outer perceptions, which I have shown to be possible only through the *actuality* of outer objects. That's all I need. All I have been trying to prove is that inner experience *in general* is possible only through outer experience *in general*. To show that any individual experience is veridical rather than imaginary, one has to look into the details of the case to see how well they fit with the criteria for all real experience.

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·LONG FOOTNOTE TRANSFERRED FROM B PREFACE· [see page 16]

The new refutation of psychological *idealism* is the only addition, strictly so-called, in the second edition; it is, I believe, a strict proof—and the only possible proof—of the objective reality of outer intuition. Even if idealism didn't do any harm to the essential aims of metaphysics (as in fact it *does*), it would still be a scandal to philosophy and to human reason in general if the existence of things outside us had to be accepted merely *on faith*, and if we had no satisfactory proof to bring to bear on anyone's doubts as to whether those things do exist. (All the more scandalous because these are the outer things from which we derive the whole material of knowledge, even for our inner sense!) [At this point Kant asks that a short passage in the proof be replaced by something else, which he provides. In this version the replaced passage doesn't appear; the replacement is 'But this . . . be determined.' in the proof on page 127.] You may want to object against this proof:

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'I am immediately conscious only of what is *in me*, i.e. of my *representation* of an outer thing; so there is still an unsettled question about whether there is anything outside me corresponding to that representation.'

But that objection is wrong. Through inner *experience* I am conscious of *my existence* in time (and therefore also conscious of the possibility of knowing details about what it is like at different times), and experience is more than merely being conscious of a representation. My experience

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is identical with my *empirical consciousness of my existence*, and I can't have any details about that except through a relation to something. . . .that is outside me. Because this consciousness of my existence in time essentially involves my consciousness of a relation to something outside me, it follows that what connects this outside something with my inner sense is •experience and not •invention, •sense and not •imagination. . . . Suppose this were the case:

Along with having an intellectual consciousness of my existence in the thought 'I am' which accompanies all my judgments and acts of understanding, I can at the same time have a sense of my existence through *intellectual intuition*.

In *that* case I wouldn't need to be conscious of a relation to something outside me. •But that's not how things stand•. The only intuition I have is not *intellectual* but *sensible*, so it necessarily brings time into the story; and my argument takes over from there. . . . The reality of outer sense is thus necessarily bound up with inner sense, if it is to be possible to have any experience at all. . . . To decide which of my given intuitions correspond to actual objects outside me—i.e. which of them belong to outer sense and not to imagination—I must go by the rules according to which *any* experience (even inner experience) is distinguished from imagination—always presupposing that *there is such a thing as outer experience*. I would add one last remark: The representation of something *persistent* in existence is not the same as a *persistent representation*. The representation of •something persistent• may be very transitory and variable, like all our other representations (even those of matter!), but it *relates to* something persistent. The persistent thing must be external, and distinct from all my representations. . . .

•END OF FOOTNOTE FROM B PREFACE•

•NECESSITY•

Finally the third postulate. [Discussions of the other two started on pages 124 and 125 respectively.] The third postulate concerns •material necessity in existence, and not merely •formal and logical necessity in the connection of concepts. The existence of an object of the senses can never be known •absolutely *a priori*; but can be known •comparatively *a priori*, i.e. relative to some other existing thing that is already given.

[Kant's terminology here suggests that his topic is the notion of 'comparatively *a priori*' that he mentioned on page 126; but in fact it isn't. On page 126 the topic was the case where

•x's existence is known comparatively *a priori* because it is known in advance of any perception of x (or, more broadly, because x's existence is known in advance of any perception of—with the blank filled in somehow).

His present topic is the case where

•x's existence is comparatively or relatively necessary, meaning that it is necessitated by facts about some other existing thing that has already been perceived.

The two have nothing to do with one another.]

And even in that case, we can get to necessity only through how the given perception hangs together with others in experience. So the necessity of x's existing can never be known •from concepts, but only •from x's being connected, through the universal laws of experience as such, with something that is perceived. Now, the only way we can know that

•x's existence is necessary, given that y has already been perceived,

is for x to be •known to be• an *effect of* y, the two being connected in accordance with the laws of causality. (I'm not talking here about *substances* as effects. The only items that can be caused—and thus the only ones that we can know to be necessary in the manner I'm discussing—are *states of substances*, which will be effects of other perceptually given states, in accordance with empirical laws of causality.) It follows that the criterion of necessity lies solely in this

law of possible experience: **Everything that happens is determined *a priori* through its cause in the domain of appearance.** So the range of our knowledge of necessary existence is triply narrowed. (1) We know the relative necessity only of effects in Nature whose causes are given to us, i.e. perceived by us; (2) the notion of existing necessarily extends no further than the domain of possible experience; and (3) even within that domain it isn't applicable to the existence of substances, because substances don't happen, or begin to exist, so they can't be empirical effects. Necessity concerns only the relations among appearances in accordance with the dynamical law of causality, which makes it possible for us to infer *a priori* from a given existence (a cause) another existence (the effect). The proposition that

Everything that happens is hypothetically necessary—i.e. is necessitated by something else—is a principle that brings alteration in the world under a law, i.e. under a rule of necessary existence, without which there wouldn't even be a Nature. So the proposition that

(1) Nothing happens through blind chance (Latin: *non datur casus* [= 'There is no chance'])

is an *a priori* law of Nature. And so is the proposition that

(2) No necessity in Nature is blind; necessity is always a conditioned and therefore an intelligible necessity (Latin: *non datur fatum* [= 'There is no fate']).

[In (2) Kant is rejecting the idea that such-and-such might be bound to happen, have to happen, be fated to happen, not *because so-and-so is the case*, but just simply bound or necessitated or fated, *period*. He is saying that there's no such thing as 'fate' in that sense; whatever is necessitated to happen is *caused* to happen, and that makes its necessary status intelligible.] These are both laws through which the play of alterations is rendered subject to a *nature of things* (i.e. of things as appearances)... These two are dynamical principles. (1) is really a consequence of the principle of

causality, which belongs in the analogies of experience. (2) is a principle of modality, adding the concept of necessity to causal determination, which itself stands under a rule of understanding. And then there is the proposition that

(3) There are no leaps in the series of appearances, i.e. of alterations (Latin: *non datur saltus* [= 'There are no leaps']);

This principle of continuity doesn't just forbid leaps; it also lays down that

(4) In the totality of empirical intuitions in space there are no gaps or blanks between any two appearances (Latin: *non datur hiatus* [= 'there are no gaps']).

This last can be expressed as the proposition that experience can't offer anything that proves a vacuum, or that even allows for the possibility of one. What about empty space that doesn't involve a *gap* between two appearances, because it lies beyond the field of possible experience, i.e. outside the world? The mere understanding can't tackle such a question, because the understanding answers only questions that concern the use of given appearances for obtaining empirical knowledge. The question of empty space surrounding the world is a problem for idea-wielding *reason* that goes out beyond the sphere of possible experience and tries to reach judgments about what surrounds and bounds it; so it's a problem to be considered in the Transcendental Dialectic. The above four propositions—

(4) *Non datur hiatus*, (3) *Non datur saltus*, (1) *Non datur casus*, (2) *Non datur fatum*

—like all principles of transcendental origin, can easily be presented in an order dictated by the categories, with each put in its proper place. But you've had enough practice by now to be able to do this for yourself, or easily to discover the thread that will lead you through it. The four principles have this in common: they don't allow empirical theories

that do violence or harm to the understanding and to the continuous connection of all appearances—i.e. to the unity of the concepts of the understanding. . . .

Is the domain of possibility larger than the domain that contains all actuality? Is the domain of actuality larger than the sum of everything that is necessary? Those are perfectly good questions, to be answered synthetically, and yet they come under the jurisdiction of reason alone. For they are tantamount to asking which of these is correct:

- Things as appearances all belong to the sum and context of a single experience, of which every given perception is a part, a part which therefore can't be connected with any other series of appearances.

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- My perceptions could belong to—be connected up with—more than one possible experience.

The understanding, in accordance with the subjective and formal conditions of sensibility as well as of self-awareness, prescribes *a priori* to experience in general the rules that are needed to make experience possible. • Forms of intuition other than space and time, • forms of understanding other than through concepts—even if these were possible, we can't conceive of them or make them intelligible to us; and even if we could do that, they still wouldn't belong to *experience*, which is the only kind of knowledge in which objects are given to us. The understanding can't decide whether, in addition to all the perceptions that constitute our possible experience, there are *other* perceptions—ones of a quite different domain of reality from the one to which we have access. All that the understanding can deal with is the synthesis of what is *given*. That's why I said that the question of whether the domain of possibility is larger than that of actuality is not for understanding to answer, and falls within the scope of reason. Let's look at the standard reason-involving inferences through which people have sought to open a great

realm of possibility, of which what's actual (the objects of experience) is only a small part. Here is how one of them goes. From the proposition

- Everything actual is possible

we infer, in accordance with the logical rules of conversion, the merely particular proposition

- Something possible is actual;

which seems to amount to saying that

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- Much that is possible is not actual.

It's obvious that this inference is a poor thing, because the 'seems to amount to' relation is so weak. Then here is a second argument: We seem to be justified in holding that there are more possible things than actual ones, on the ground that for something to be actual it must be possible *and* . . . something else. But I refuse to allow this addition of 'something else', because the something else that would be needed is *impossible*.

[There seems to be no way to make good sense of the reason Kant gives for this, and it is therefore omitted. The thesis that

- actuality = possibility-plus-something

is one that he explicitly asserts in footnote 17 below. In the omitted passage he seems to slide from that true thesis to the plainly false thesis that

- actual things have the features of possible things plus some features that possible things don't have.

After this passage, Kant reverts to his earlier line of thought, which seems to cast doubt on 'There are possibilities that aren't actual' by equating it with 'There are actualities that have no connection with any actuality that we do or can know about'. That material is omitted also.]

I have mentioned these matters only because I wanted to cover everything that is *ordinarily counted as* a concept of understanding. But in fact *absolute possibility*—possibility that holds in all respects—is no mere concept of the understanding, and can never be employed empirically. It belongs solely to *reason*, which goes beyond all possible empirical

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use of the understanding. So I've had to settle for offering some merely critical remarks, leaving the matter in the dark until I come back to it at a later time.

Before concluding this fourth section, thus concluding the system of all principles of pure understanding, I must explain why I call the principles of modality 'postulates'. [Kant goes on to reject the usage of 'some recent philosophical writers' who take a 'postulate' to be a proposition that is self-evident and needn't be defended. Proceeding in that way with any synthetic proposition, he says, would be inviting disaster. He then proceeds to repeat what is essentially the material given on page 123 above—the accounts of the three modal concepts, and the claim that what each does is not to enlarge the item that is called 'possible' or etc., but just to say how that item relates to the faculty of knowledge. He calls these accounts 'postulates', he says, because of how that term is used in mathematics:] In mathematics a 'postulate' means the practical proposition that contains nothing except the synthesis through which we first •give ourselves an object and •generate its concept—e.g. to describe a circle from a given point with a given line on a plane. Such a proposition can't be proved, because the procedure that it dictates is precisely the one through which we first generate the concept of such a figure. With exactly the same right we can 'postulate' the principles of modality, because they don't increase our concept of a thing¹⁷ but only show how it is connected with the faculty of knowledge.

¹⁷ In taking something to be actual, I certainly say more than merely that it is possible; but I don't say more *about the thing*. For there can never be more to the thing if it is actual than there is if it is merely possible. But while calling a thing 'possible' is relating it to the understanding (in its empirical use), calling it 'actual' is at the same time connecting it with perception.

General Note on the System of the Principles

It is very remarkable that the unaided categories can't show us that a thing is possible, and that to exhibit the objective reality of a category—i.e. to show that what it's a concept of is possible—we must always have an intuition available to us. Take for example the categories of relation. Mere concepts won't show us

- (1) how something can exist as subject only, and not as a mere state of something else, i.e. how a thing can be **substance**; or
- (2) how something's existing necessitates something else's existing, i.e. how a thing can be a **cause**; or
- (3) how, when several things exist, the facts about one of them imply things about the others, and vice versa, i.e. how there can be a **community** of substances.

The same holds for the other categories—for example, how one thing can be identical with many things taken together, i.e. can be a **magnitude**. So long as we don't have intuitions, we don't know whether with this or that category we are thinking an object—whether indeed there *can* be an object that fits it. All this confirms •that the categories are not in themselves items of knowledge, but are merely *forms of thought* for making items of knowledge out of given intuitions. It also confirms •that no synthetic proposition can be made from mere categories—I'm thinking of propositions such as that

- there is substance, i.e. something that can exist only as subject and not as mere predicate;
- everything is a quantum, etc.

—unless we have something enabling us to go out beyond a given concept in order to connect it with another. Thus, no-one has ever succeeded in proving a synthetic proposition—e.g. that every contingently existing thing has a cause—

merely from pure concepts of the understanding. The most we can prove ·in that way· is that without the causal relation we couldn't comprehend the existence of anything contingent, i.e. couldn't know its existence *a priori* through the understanding; which doesn't imply that this (·i.e. causal connectedness·) is also a condition of the possibility of *the things themselves*. If you look back at my proof of the principle of causality, you'll see that I was able to prove it only of objects of possible experience: 'Everything that happens—i.e. every *event*—presupposes a cause' [page 130]. ·That is narrower than 'Everything contingent has a cause', and anyway· it was proved not from mere concepts, but only as a principle of •the possibility of experience, and therefore of •the knowledge of an object given in *empirical intuition*. [In the remainder of this paragraph Kant says that it's obvious to everyone 'from mere concepts' that everything contingent must have a cause, but that's because people equate 'x is contingent' with 'x depends on something else for its existence', which amounts to equating 'x is contingent' with 'x is an effect'—which makes 'Everything contingent has a cause' analytic. What Kant says here about contingency in relation to 'thinking the opposite' is linked to a footnote.¹⁸]

¹⁸ We can easily think the non-existence of matter, but the ancients didn't infer from this that matter exists contingently. All alteration consists in some state's changing from existing to not existing, but this change doesn't prove that the state exists contingently because its opposite is real. For example, when a moving body comes to rest, that doesn't prove that its •motion was contingent because it was the opposite of •rest. The point is that motion is 'opposed' to rest only logically, not in reality. ·The *real* opposition is between 'motion at time t' and 'rest at time t'. To prove the contingency of the body's motion, we would have to prove that *instead of* moving at that earlier moment it could have been at rest—could have been at rest *then*. That it is at rest *later* has nothing to do with it; 'moving at t₁' is not the opposite of 'at rest at t₂'.

But it is even more remarkable that in order to understand the possibility of things in accordance with the categories, and so to demonstrate the categories' *objective reality*, we need specifically **outer** intuitions. Think about this in connection with the categories of *relation*. (1) To obtain something *persistent* in intuition corresponding to the concept of *substance*, and so to demonstrate the objective reality of this concept, we need an intuition of matter in **space**; because it's only space that is characterized by persistence, whereas time (and therefore everything in inner sense) is in constant flux. (2) If we are to present *alteration* as the intuition corresponding to the concept of *causality*, we must take as our example motion, i.e. alteration in **space**, because this is the only way we can have an intuition of alterations—or at any rate, it's where our intuitions of alterations have to •start·. The possibility of an alteration can't be grasped through pure understanding. An alteration is a combination of contradictorily opposed states in the existence of a single thing. How can one state of a thing be followed by an opposite state? Without help from intuition, this can't be grasped by reason; it can't be understood at all. And the needed intuition is the intuition of the movement of a point in space. The presence of the point in different locations (as a sequence of opposed states of affairs) is the thing—the only thing—that gives us our •'starter' intuition of alteration. Later on we can also make *inner* alterations thinkable, but to do this we have to

- represent time (the form of inner sense) figuratively as a *line*,

and to

- represent the inner alteration through the drawing of this line (motion),

which means that we are using outer intuition to make comprehensible to ourselves the temporally drawn-out existence

of ourselves in different states. Why? Because perceiving an alteration *as* an alteration presupposes that there is something persistent in intuition, and that can't be found in *inner* sense. (3) The possibility of the category of *community* can't be grasped through mere reason alone; so the objective reality of this category has to be determined through intuition—and indeed through outer intuition in **space**. Think about what is involved in community:

Several substances exist in such a way that from the existence of one some effect *follows* regarding the existence of the others, and *vice versa*;

or, in other words:

Because there is something in any one of them *x*, there must also be in each other one *y* something that isn't to be understood solely from the existence of *y*.

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[Kant expressed the former of those two in a manner implying that what follows from each substance is *the existence of* the others; but this has to have been a slip, because he firmly holds that within the domain of appearance nothing can cause a substance to exist. See page 118.] We can't make sense of the idea of community as holding between things that stand in complete isolation from one another so far as their existence is concerned. Leibniz believed that the world contains substances that could be thought through the understanding alone, and ascribed community to them. So he had to fall back on the thesis that God arranges all this; for he rightly thought that a number of substances *of the sort he believed in* couldn't form a community unaided. But we can easily make the possibility of community—of substances as appearances—perfectly comprehensible, if we represent them to ourselves in space, i.e. in outer intuition. For space contains in itself, *a priori*, formal outer relations as conditions of the possibility of the real relations of action and reaction, and therefore conditions of the possibility of community.

And it can just as easily be shown that the possibility of things as *quantities*—and therefore the objective reality of the concept of *quantity*—can be exhibited only in outer intuition, and that only *through* the mediation of outer intuition can it be applied also to inner sense. Not wanting to go on for too long, I leave you to supply your own examples of this.

These remarks are of great importance, not only in confirmation of my refutation of idealism (above), but even more for their bearing on a later discussion, *in the Dialectic*,

•of *self-knowledge* by mere inner consciousness, i.e. 294
by determination of our nature without the aid of
outer empirical intuitions.

The bearing on this of the present remarks is that they show the limits of the possibility of this kind of self-knowledge.

[Reminder: What we have been in since page 98 is chapter 2, section 3: 'A systematic presentation of all the synthetic principles of pure understanding'.] The upshot of this whole section is therefore this: all the principles of the pure understanding are nothing more than *a priori* principles of the possibility of experience; and all *a priori* synthetic propositions relate to experience, and wouldn't be possible if they didn't.

Chapter 3: The basis for distinguishing all objects into phenomena and noumena

We have now not merely explored the territory of pure understanding, and looked carefully at every part of it, but have also mapped it and put everything in its proper place. This territory is an island, however, enclosed by Nature itself within unchangeable borders. It is the land of *truth*—
 295 enchanting name!— surrounded by a large stormy ocean, the sea of illusion. In this ocean many fog banks and swiftly melting icebergs give the deceptive appearance of distant shores, for ever deceiving the roving seafarer with empty hopes, enticing him into adventures that he can't ever bring to their end but also can't abandon. Before we set sail on this sea, to explore it in all directions and find out for sure there is any reason for such hopes, it will be useful to glance at the map of the land we're about to leave, with two questions in mind. (1) Couldn't we be satisfied with what *it* contains? Indeed, mightn't it be that we *have to* settle for that because there is no other land for us to go to? (2) What entitles us to possess even this land and to secure it against all hostile claims? I have already answered these questions well enough in the course of the Analytic, but still a compact overview of those answers may help to make you more confident that they are right, by condensing the various considerations into a single point.

It is a point that we have already seen, namely that everything the understanding derives from itself is, though not *borrowed from* experience, available to the understanding solely for *use in* experience. The principles of pure
 296 understanding—and this includes both the constitutive *a priori* mathematical principles and the merely regulative dynamical ones—contain nothing but a sort of *pure sketch* of possible experience. For the unity of experience comes

entirely from the •synthetic unity that the understanding confers—this being a basic, underived, unaided action on its part—on the synthesis of imagination that is involved in self-awareness; and the appearances—which are the basis for any knowledge that we can have—must conform to that •synthetic unity. (Conform to it *a priori*, of course; none of this comes *from* experience.) But although these rules of understanding are not only true *a priori* but are the source of all truth, . . . we aren't satisfied with an account merely of *what is true*; we want also an account of *what we want to know*. •This generates an argument for saying that what I have done up to here isn't of much value•:

If •this critical enquiry doesn't teach us any more than what we would have known in any case—without this subtle inquiry—through our merely empirical use of our understanding, •it seems not to bring any advantage that makes it worth the trouble.

Here is one reply to that:

When we are trying to extend our knowledge, the attitude of 'I want to know. . . ' is at its most harmful when it occurs in constantly insisting 'I want to know whether this is going to be useful' in advance of doing
 297 any of the work. •As well as being harmful, it is absurd•, because before the inquiry has been completed we aren't in a position to form the least conception of this usefulness, even if it were staring us in the face.

But there is in fact one kind of usefulness that •can be grasped in advance of doing the work, and indeed• can be understood and found interesting by even the most sluggish and hard-to-please student. namely:

The understanding can get along pretty well when it is occupied merely with its empirical use, and not thinking about the sources of its own knowledge; but there is one •two-part• job that it can't do, namely

•discovering the boundaries of its use, and •coming to know what lies within its domain and what lies outside it. And *this* demands precisely the deep enquiries that I have embarked on.

If the understanding in its empirical use can't tell whether certain questions lie within its domain or not, it can never be sure of its claims or of its possessions, and is setting itself up for many embarrassing corrections that will occur whenever it steps outside its own domain and loses itself in delusions and deceptions. And this will keep happening—that's inevitable ·if the use of reason is not accompanied by a critique like mine·.

If we can know for sure that

The understanding can't use its *a priori* principles—can't even use its *concepts*—transcendentally or in *any* way except empirically,

298 this knowledge will yield important consequences. In any given principle, a concept is being used •transcendentally when the principle is asserted of •things in themselves; and a concept is being used •empirically when the principle is asserted merely of •appearances, i.e. things of which one could have experience. The use of concepts in application to appearances is the only use that is possible ·and legitimate·, and here is why. (·The explanation will occupy the remainder of this paragraph·.) Two things are required for every concept: (1) the logical form by virtue of which it is a concept, and (2) the possibility of applying it to some object. If there is no (2) ·possibility of an· object, the concept has no meaning and is perfectly empty, even if it still (1) contains the logical function for making a concept out of any data that may come its way. [Those two versions of (1) are not obviously equivalent, nor are the two German formulations that they represent. It does look, however, as though Kant meant them to be equivalent, though their shared label '(1)' is not his.] Now, the only way a concept can

be given an object is through intuition. A *pure* intuition can precede the object *a priori*, but even this intuition can only get an object (and thus be objectively valid) from an *empirical* intuition, of which it is the mere form. Therefore all concepts relate to empirical intuitions, i.e. to the data for possible experience—and what holds for the concepts holds also for the principles in which they occur, including the ones that can be known *a priori*. Without this relation to empirical intuition, they have no objective validity, and. . . are a mere play of imagination or of understanding. Take for example 299 the concepts of mathematics, considering them first of all in their pure intuitions. Space has three dimensions, between two points there can be only one straight line, etc. Although all these principles, and the representation of the object with which geometry occupies itself, are generated in the mind completely *a priori*, they wouldn't mean anything if we couldn't present their meaning in appearances, i.e. in empirical objects. So we are required to take the bare concept and *make it sensible*, i.e. present a corresponding object in intuition. . . . The mathematician meets this demand by constructing the figure ·corresponding to the concept·; it is produced *a priori*, but all the same it's an appearance present to the senses. Also in mathematics, the concept of magnitude seeks its standing and sense in number, and this in turn in the fingers, in the beads of the abacus, or in strokes and points that can be *seen*. The concept itself is always *a priori* in origin, and so also are the synthetic principles or formulas that come from it; but it's only in experience that they can be used and can have objects—·i.e. things for the concepts to be concepts *of*, and for the principles to be principles *about*·. . . . 300

The situation is the same with all categories and the principles derived from them: the only way we can provide for any one of them a *real definition*, i.e. a definition that shows how it can have an object, is by descending to the conditions of

sensibility, and thus to the form of appearances. . . . It is only by relating such a concept to appearances that we can get a grip on what the concept means. . . . ·THE REMAINDER OF THIS PARAGRAPH WAS OMITTED FROM THE SECOND EDITION.·

When I introduced the table of categories [page 52] I let myself off from defining each of them, because my concern was only with their synthetic use, and for that I didn't need such definitions; and one isn't obliged to tackle unnecessary tasks. I wasn't merely evading work! What I offered was an important practical rule: Don't rush into defining a concept, trying to characterize it completely and precisely, if you can get what you want ·for your theoretical purposes· with just one of its properties, without needing an enumeration of all of them. But now it turns out that there is an even deeper reason for the stand that I took back then, namely the fact that we couldn't give *real* definitions of those concepts even if we wanted to. For if we remove all the conditions of sensibility that mark them out as concepts of possible empirical use, and instead view them as concepts of things in general—things of whatever kind, things in themselves, things *period*—and therefore as concepts that can be used transcendently, . . . we have no way of showing that they can have an object. . . ., no way of showing how they can have meaning and objective validity. ·END OF PASSAGE OMITTED FROM SECOND EDITION.·

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·CATEGORIES OF QUANTITY·

No-one can explain the entirely general concept of *magnitude* except like this: '**Magnitude** is the fact about a thing that makes possible a thought about *how many units* are involved in it.' But this how-many-times is based on successive repetition, and therefore on **time** and synthesis. . . .in time.

·CATEGORIES OF QUALITY·

To explain **reality**'s contrast with negation we have to think

of **time** (which contains all being) as either filled with being or as empty.

·CATEGORIES OF RELATION·

If my concept of **substance** is to have anything more to it than the mere logical representation of a subject—which I try to cash in by giving myself the empty and possibly useless thought of 'something that can exist only as subject and never as predicate'—I'll have to bring in persistence, which is existence in all **time**. If I omit from the concept of **cause** the **time** in which x follows from y in conformity with a rule, all I'll find in the pure category is the idea that there is something from which we can infer the existence of something else; and that doesn't tell us how to distinguish cause from effect, and. . . .it wouldn't give me the slightest help in identifying any individual case of causation. As for the concept of **community**: given that the categories of substance and causality admittedly can't be explained ·without bringing **time** into the story·, no ·such· explanation can be given of two-way causal interaction between substances. 301

·CATEGORIES OF MODALITY·

The supposed principle *Everything contingent has a cause* ·essentially involves time·. It is solemnly paraded as highly important, just in itself; but if I ask 'What do you mean by "contingent"?' and you reply 'Something is contingent if its nonexistence is **possible**', then I want to know how you can tell that something's nonexistence is possible if you don't tie this to a change—a **time**-taking series of appearances in which something's existence comes after its nonexistence or vice versa. ·You might try to keep time out of this by saying that a thing is contingent if its nonexistence isn't self-contradictory, but· to say that something's nonexistence doesn't contradict itself is a lame appeal to a ·merely· logical condition. It is of course *needed for* the concept of real 302

possibility, but it's far from being the whole concept. There is no self-contradiction in the thought *There are no substances*, but it doesn't follow from *that* that every substance is objectively contingent, i.e. could have not existed. So long as the definition of **possibility, existence, and necessity** is sought solely in pure understanding, and thus without bringing in **time**, they can't be explained except through an obvious tautology. You would have to be very new to this sort of inquiry to be taken in by the move in which the logical possibility of the *concept* (namely, its not contradicting itself) is substituted for the transcendental possibility of *things* (namely, an object's corresponding to the concept).

From all this it undeniably follows that the pure concepts of understanding can never admit of *transcendental* use but always only of *empirical* use, and that the principles of pure understanding can apply only to objects of the senses. . . . and never to things in general without regard to how or whether we can intuit them.

So the Transcendental Analytic leads to this important conclusion, that the most the understanding can do *a priori* is to anticipate the *form* of any possible experience, and that. . . . the understanding can never step across the boundaries of sensibility within which alone objects can be given to us. . . . So the proud name 'Ontology'—under which philosophers claim to supply, in systematic doctrinal form, synthetic *a priori* knowledge about things as such (for instance, the principle of causality)—must give place to the modest title 'Analytic of pure understanding'.

Thinking is the business of relating given intuitions to an object. If we don't have a specification of what *kind* of intuition it is, then the 'object' is merely transcendental, and the concept of understanding has only a transcendental use, namely as the unity of the abstract general thought *manifold*. Thus, no object is latched onto by a pure category from which

every condition of sensible intuition is filtered out. (Why specify 'sensible'? Because that's the only kind of intuition we can have.) In that case, all the category expresses is the thought *object*—the thought 'Something'! Now, the use of a concept involves the judgment's doing something to *apply* the concept to some object; so a concept can't be used unless the formal requirement for something to be given in intuition is satisfied; and of course what's required for anything to be given in intuition is also required for any judgment to occur, because judgment is the application of a concept to something given in intuition. If this requirement for judgment isn't satisfied, the concept in question can't be applied to anything, because nothing has been given for it to be applied to. So the merely transcendental 'use' of the categories isn't really a *use* at all. . . . It follows from all this that a *pure* category doesn't suffice for a synthetic *a priori* principle, that the principles of pure understanding are usable only empirically and never transcendently, and that outside the domain of possible experience there can be no synthetic *a priori* principles.

This paragraph presents what may be a good way to state the situation. The pure categories, separated from formal conditions of sensibility, have only a transcendental meaning. But it's impossible for them to be *used* transcendently, because they don't satisfy the formal requirements for having some object to which they can be applied; and with no object, there is no application; with no application, there is no judgment; with no judgment, there is no *use* of the concept. So there we have it: *pure* categories aren't to be used empirically, and can't be used transcendently; so they cannot be used at all. . . .

We have now come to the source of an illusion that it's hard to avoid. The categories don't basically come from sensibility (as do the *forms of intuition*, space and time);

so it seems that they can be applied to objects that are not objects of the senses. This is an illusion, because in fact the categories are nothing but *forms of thought*: all there is to them is the merely logical capacity for uniting the manifold given in intuition into one consciousness; so that when they are separated from the only kind of intuition that is possible to us, namely sensible = passive intuition—they have even less meaning than the pure sensible forms have. Consider one of these sensible forms while separating it from anything empirical, and what do you have? You don't have much, but you do at least have *an object*—namely time and/or space. Now consider a category apart from anything empirical—i.e. consider a way of combining the manifold apart from any intuitions in which such a manifold can be given—and what do you have? *Nothing!* And yet the illusion persists, perhaps encouraged by a certain use of language. If we give to certain objects, as appearances, the label

'sensible entities' (*phenomena*),

this label distinguishes *how we intuit them* from *their nature considered in themselves*; and that encourages us to think we have a use for the label

'intelligible entities' (*noumena*).

This label looks right for (1) the things-as-they-are-in-themselves that are correlated with our intuitions, i.e. things that appearances are appearances *of*, and also for (2) other possible things that aren't objects of our senses (even in the remote way that the members of group (1) are), but are merely thought through the understanding. The question then arises: can our pure concepts of understanding have meaning in respect of—and be a way of knowing—these non-sensible entities?

Right at the outset, however, there's an ambiguity that may lead to serious misunderstanding. When the understanding labels as a 'phenomenon' an object-related-to-it-

thus-and-so, it also starts off a sequence of other actions.

(1) It simultaneously represents to itself—apart from that relation—an *object in itself*,

and as a result of that

(2) It comes to think that it can form *concepts* of such objects. 307

But its own basic stock of concepts contains nothing but the categories, and so

(3) It supposes that the categories must enable us to know in some way—at least to *think*—the object-in-itself.

And as a result of this

(4) It is misled into treating the entirely *indeterminate* concept of a something that lies outside our sensibility as being a *determinate* concept of an entity that can be known in a certain way by means of the understanding.

We can give 'noumenon' [singular; 'noumena' is the plural] either of two senses. If we take it to mean

'thing that is not an object of our sensible intuition', we are using the word in its negative sense. If instead we take 'noumenon' to mean

'object of a non-sensible intuition',

we are using 'noumenon' in its positive sense. This goes much further than the negative sense, because in this positive use of the word we are presupposing that there is a special kind of intuition—*intellectual* intuition. It's not the kind that we actually have, and we can't understand how it could even be possible.

The doctrine of sensibility is at the same time the doctrine of the noumenon, with 'noumenon' understood **negatively**—i.e. of things that the understanding must think

without this reference to our kind of intuition, and therefore must think

•not as mere appearances but as things in themselves. But the understanding is well aware that in viewing things in this way, apart from our kind of intuition, it can't make
 308 any use of the categories. That's because the categories have meaning only in relation to the unity of intuition in space and time. . . . Where this unity of time isn't to be found, as it isn't in the case of the noumenon, the categories can't be used and don't even have any meaning; because in that case we have no way of finding out whether it is even *possible* that the categories apply to anything. . . . A thing can't be shown to be possible merely by showing that the concept of it isn't self-contradictory; what's needed is to back the concept up by showing that there is an intuition corresponding to it. So if we want to apply the categories to objects that aren't viewed as being appearances, we must of course think that such objects are *possible*, and so we have to lay a foundation for that with a non-sensible intuition—and so we would be assuming that the object is a 'noumenon' in the **positive** sense of the word. But our cognitive powers don't include any such type of intuition—i.e. any *intellectual* intuition—so *our* use of the categories can never go outside the domain of the objects of experience. No doubt there *are* intelligible entities corresponding to the sensible entities;
 309 there may also be intelligible entities that have no relation at all to our sensible faculty of intuition; but the concepts of our understanding couldn't apply to them in any way at all, because those concepts are mere forms of thought for use in connection with the output of our sensible intuition. So we mustn't use the term 'noumenon' in anything but its negative sense.

If from my empirical knowledge I remove **all thought** (through categories), no knowledge of any object remains. Through mere intuition nothing at all is thought; and the occurrence in me of this sensory event—the one that re-

mains when all thought is removed from an item of empirical knowledge—doesn't amount to a representation of any object. On the other hand, if from an item of empirical knowledge I remove **all intuition**, the form of thought still remains—i.e. the procedure for sorting out details of a manifold of intuition if an intuition is added. So the categories have a wider range than sensible intuition does, because they think objects in a perfectly general way, without regard to how they may be given. But that doesn't imply that they apply to a larger range of objects: to assume that such a larger range of objects can be given involves assuming that there can be some kind of intuition other than the sensible intuition, and we aren't entitled to assume that. If from my empirical knowledge I remove **all thought** (through categories), no knowledge of any object remains. Through mere intuition nothing at all is thought; and the occurrence in me of this sensory event—the one that remains when all thought is removed from an item of empirical knowledge—doesn't amount to a representation of any object. On the other hand, if from an item of empirical knowledge I remove **all intuition**, the form of thought still remains—i.e. the procedure for sorting out details of a manifold of intuition if an intuition is added. So the categories have a wider range than sensible intuition does, because they think objects in a perfectly general way, without regard to how they may be given. But that doesn't imply that they apply to a larger range of objects: to assume that such a larger range of objects can be given involves assuming that there can be some kind of intuition other than the sensible intuition, and we aren't entitled to assume that.

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I call a concept 'problematic' if

- (1) it contains no contradiction, and
- (2) it is related to other items of knowledge, by serving as a boundary to the concepts involved in them, and yet

(3) it can't be known to be objectively real, i.e. to have real objects.

Now consider the concept of a *noumenon*—i.e. of a thing that isn't to be thought as an object of the senses but is to be thought (solely through a pure understanding) as a thing in itself. This concept

(1) is not at all contradictory,

for we can't maintain that sensibility is the only *possible* kind of intuition. Furthermore the concept of a noumenon

(2) is needed to •prevent sensible intuition from being extended to things in themselves, and thus to •set limits to the range of objective validity of sensible knowledge.

(The things that lie outside that range are called 'noumena', so as to show that sensible knowledge can't extend its domain over everything that the understanding thinks.) And yet

(3) we can't get any understanding of how such noumena might be possible, so that the domain that lies out beyond the sphere of appearances is for us *empty*.

That is to say, we have an understanding that *problematically* extends further, but it can't be used *assertorically* outside the domain of sensibility, i.e. it can't be used to *say* anything about what things are like outside that domain. For that, there would have to be relevant intuitions; and we don't have any such intuitions, indeed we don't even have the *concept* of a *possible* intuition, through which objects outside the field of sensibility can be given. So the concept of a noumenon is only a *boundary* concept, whose role is to limit the pretensions of sensibility; which means that its only use is the negative one. [Clearly the 'negative use of the concept' of noumenon is parallel to the 'negative sense of the word "noumenon"'.] But it's not a sheer human invention; it is bound up with the limitation of sensibility, though it can't affirm anything

positive beyond the domain of sensibility.

[In this next sentence, Kant speaks of 'sensible concepts' and 'intellectual concepts'. He means 'concepts that apply to sensibly given things' and 'concepts that are appropriate only for intellectually given things (if there are any such things)'.] Thus: we can properly divide concepts into •sensible concepts and •intellectual ones, but we cannot properly divide objects into •phenomena and •noumena, or divide the world into a •world of the senses and a •world of the understanding, with these terms understood in a positive sense. For no object can be picked out for the intellectual concepts, and consequently we can't pass them off as objectively valid. . . . But if the concept of a noumenon is taken merely problematically, it's not only admissible but unavoidable, because of its role in setting limits to sensibility. (But in that use of the concept, a noumenon isn't a special kind of object for our understanding—an *intelligible object*. Indeed, the sort of understanding that *that* might involve is itself a problem; because we haven't the faintest notion of what could be involved in an understanding that knew its object not discursively through categories but *intuitively* 312 in a non-sensible intuition.) What our understanding gets through this concept of a noumenon is a *negative extension!* I mean that the understanding is not limited through sensibility; on the contrary, it limits sensibility by applying the term 'noumena' to things in themselves (things not regarded as appearances). But in doing this it also sets limits to itself, recognising that it can't know these noumena through any of the categories, and that it must therefore confine itself to the thought that they are 'an unknown something'.

In the writings of modern philosophers I find the expressions *mundus sensibilis* [= 'sensible world'] and *mundus intelligibilis* [= 'intelligible world'] used with quite different meanings from the ones the ancients gave those phrases. There's no special *difficulty* about this modern usage, but it

doesn't *do* anything—it's just word-play. It consists in using the phrase 'the world of the senses' to stand for

- the totality of appearances in so far as they are
- intuited; so that observational astronomy, which merely presents observations of the starry heavens, would give an account of this 'world';

and using 'the world of understanding' for

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- the totality of appearances in so far as their inter-connections are thought in conformity with laws of understanding; theoretical astronomy, as explained according to the Copernican system or even according to Newton's laws of gravitation, would give an account of this.

But such a twisting of words is merely a sophisticated trick; it tries to avoid a troublesome question by turning it into something more manageable. Of course understanding and reason are used in dealing with appearances; but the question is whether there is any use for them when the object is not an appearance (i.e. is a noumenon); and *this* question concerns 'intelligible objects' with 'intelligible' used properly—i.e. it concerns objects thought of as given to the understanding alone, and not to the senses. The Newtonian account of the structure of the universe isn't 'intelligible' in this sense, because it involves the •empirical use of the understanding. So: can there be a •transcendental use of the understanding, in which it deals with the noumenon as an object? To this question I have answered 'No'.

So when we say that the senses present us with objects *as they appear*, while the understanding presents them *as they are*, we mustn't take 'as they are' in a transcendental sense. Its proper meaning in that statement is empirical:

- the understanding presents us with objects as thoroughly inter-linked appearances, which is what they have to be if they are to count as objects of *experience*.

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It doesn't mean that

- the understanding presents us with objects in a way that doesn't involve possible experience (or, therefore, the senses), presenting them as objects of *pure* understanding.

We'll never know such objects of pure understanding; indeed, we don't even know whether such transcendental or exceptional knowledge is *possible* at all—at least if it's to be the same kind of knowledge as that to which our ordinary categories apply. *Understanding* and *sensibility*, with us, can latch onto objects only when they are employed in conjunction. When we take them separately, we have intuitions without concepts, or concepts without intuitions; either way, we have representations that we can't apply to any determinate object.

If after all this discussion you are still reluctant to abandon the merely transcendental use of the categories, then put that use to the test by trying to get a synthetic proposition from it! Why a *synthetic* proposition? I have already explained this more than once, but I'll say it again here. An analytic proposition doesn't take the understanding any further; it is concerned only with what is already thought in the concept, so it leaves open the question of whether this concept actually applies to any objects. When the understanding is working analytically, it simply isn't interested in what if anything the analysed concept •applies to. But the test I am proposing is, precisely, a test of the understanding as •applied to noumena, so the analytic attitude can't have any bearing on it. So the test has to involve a *synthetic* and supposedly transcendental principle, such as:

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- 'Everything that exists, exists as a substance or as a state of a substance.'
- 'Everything contingent exists as an effect of some other thing, i.e. its cause.'

Now I ask: Where can the understanding get these synthetic propositions from, given that the concepts are to be applied not to things that could be given in experience, but to things in themselves (noumena)? A synthetic proposition needs a third something, to establish a connection between two concepts that aren't related [see page 97 above]; so where is the third item in the present case? You won't be able to prove your proposition, indeed you won't be able to show that your proposition *could* be true, unless you bring in the empirical use of the understanding—hereby dropping the claim that this is a pure and non-sensible judgment. Thus the concept of pure and merely intelligible objects is unable to support any principles that might make possible its application. We can't think of any way in which such intelligible objects might be given. The ·legitimate· problematic thought that leaves open a place for such objects serves only to limit empirical principles, but doesn't itself contain or reveal any object of knowledge beyond the sphere of those principles. It could be compared with empty space surrounding the material world.

Appendix: amphiboly of the concepts of reflection arising from the confusion of the empirical use of the understanding with its transcendental use

[‘Amphiboly’ translates Kant’s *Amphibolie*. This means ‘ambiguity (of a certain kind)’; but on page 146 and perhaps elsewhere Kant uses it to refer both to •an ambiguity and to •intellectual muddles arising from an ambiguity.] Reflection. . . .is our consciousness of how given representations relate to our different sources of knowledge; and only through such consciousness can we get straight about how the sources of knowledge relate to one another.

Before we go on with anything else about our representations, we must ask this: In which of our cognitive faculties do our representations belong together? Is it by the •understanding, or by the •senses, that they are combined or compared? . . . [In this context, ‘compare’ = ‘hold in mind together, and relate in *some way*’. Comparing in *our* sense is just one special case of this; making a judgment is another.] Some judgments don't need any *inquiry*, i.e. any directing of our attention to the grounds of their truth; for if a judgment is immediately certain (for instance, the judgment that between two points there can only be one straight line), the best evidence we can have of its truth is what the judgment itself says. But all judgments, and indeed all comparisons, require *reflection*, i.e. picking out the cognitive faculty to which the given concepts belong. I use the phrase ‘transcendental reflection’ for the act by which I bracket a comparison of representations with the cognitive faculty to which it belongs, thus sorting out whether the comparison belongs to pure understanding or to sensible intuition. Now, the relations in which concepts can go together in a state of mind are:

- sameness and difference,
- agreement and opposition,
- intrinsic and extrinsic, and
- determinable and determination (matter and form).

Getting the relation right ·in a particular case· depends on knowing in which faculty of knowledge the concepts go together *subjectively*—whether it's sensibility or understanding. For the difference between the faculties makes a great difference to how we have to think the relations.

Before making any objective judgments, we compare the concepts to find in them

- sameness (of many representations under one concept) for purposes of universal judgments,
- difference, for purposes of particular judgments,

•agreement, for purposes of affirmative judgments,
 •opposition, for purposes of negative judgments,
 and so on. So it looks as though we ought to label the concepts that I have cited ·in pairs, in the preceding paragraph·, ‘comparison concepts’. But now suppose that our concern is not with the logical •form of the concepts but with their •content—i.e. with whether *the things themselves* are the same or different, in agreement or in opposition, and so on. In that context, the things can relate either to our sensibility or to our understanding; and this difference in *where they belong* creates a difference in *how they relate to one another*. So you can’t settle how given representations relate to one another without engaging in transcendental reflection, i.e. becoming conscious of their relation to one or other of the two kinds of knowledge. You want to know whether things are the same or different, in agreement or in opposition, and so on? You can’t find out just by comparing the concepts; you have to engage in transcendental reflection so as to pick out the cognitive faculty to which they belong. So we have:

•Logical reflection: a mere act of comparison of representations, taking no account whatsoever of the faculty of knowledge to which they belong. In this context, the representations are all on a par so far as their place in the mind is concerned.

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•Transcendental reflection: ·I have already described this·. Since it bears on the objects of the representations, it makes possible the objective [here = ‘object-involving’] comparison of representations with one other; so it is totally different from logical reflection. Indeed the two kinds of reflection don’t even belong to the same faculty of knowledge.

If you want to make *a priori* judgments about things, you need transcendental reflection. Let us now take it in hand; it will cast light on what the understanding’s real business is.

1. **Sameness and difference.** If an object is presented to us on several occasions, always with the same intrinsic features of quality and quantity, then if it’s being taken as •an object of *pure* understanding it is always the very same object on each occasion, one single thing, not many. But if it is •an appearance, conceptual comparisons ·among the presentations· don’t matter, because even if they are conceptually *exactly* alike ·in quality and quantity· we can still judge them to be presentations of different objects on the grounds that they have different spatial locations at the same time. Take two drops of water, and set aside any intrinsic differences (of quality and quantity) between them; the mere fact that they have been intuited simultaneously in different locations justifies us in holding that they are numerically different, ·i.e. that they really are *two* drops·. 320
 Leibniz took appearances to be things-in-themselves, and thus to be objects of the pure understanding (though he called them ‘phenomena’ because—he thought—we represent them confusedly); and on that basis his principle of the identity of indiscernibles certainly couldn’t be disputed. [The principle says that for any x and y, if x’s intrinsic nature is exactly the same as y’s, then x is y. Another way of putting it would be ‘Between any *two* things there is some qualitative difference’—the discernibility of non-identicals.] But since the things he was talking about are objects of sensibility, a topic for the empirical use of understanding and not its pure use, they have to be in space because that is required for outer appearances; and space gives us answers to questions of the form ‘Two things? or one thing presented twice?’, ·independently of conceptual comparisons of intrinsic natures·. This holds for •things in space because it holds for •parts of space. One part of space, though exactly like another part in shape and size, is still outside the other; so they are different, and the two together constitute a space larger than either of them.

2. **Agreement and opposition.** If reality is represented as noumenal, i.e. represented only by the pure understanding, we can't make sense of the idea of two realities that are opposed to one another in such a way that when they are combined in the same subject they cancel each other's consequences, in the way that $(3 \text{ minus } 3) = 0$. [Underlying this difficult sentence is the idea that (a) objects of pure understanding are concepts, or made out of concepts, or logically on a par with concepts; (b) the only way two conceptual items—e.g. two propositions—can logically conflict is for one of them to be or involve the *negation* of the other or of some part of it; and (c) realities are by definition positive, not negative, and so involve no negations. On page 148 Kant will speak of noumenal or conceptual realities as 'sheer affirmations'; and page 151 is also relevant.] On the other hand, there can certainly be
 321 opposition between phenomenal realities, realities in the domain of appearance. When *those* realities are combined in a single subject, one may wholly or partially destroy the consequences of another. Examples: •two moving forces in the same straight line, pushing or pulling a point in opposite directions; •pleasure counterbalancing pain.

3. **Intrinsic and extrinsic.** The intrinsic nature of an •object of pure understanding consists of the features of it that have no relation whatsoever (so far as its existence is concerned) to anything other than itself. It is quite otherwise with a •phenomenal substance in space; its intrinsic properties are nothing but relations, and the substance itself is entirely made up of sheer relations. The only way we can encounter a substance in •a region of space is through *forces* that are at work in the region, either bringing others [= 'other substances?'] to •it (attraction) or preventing them from getting into •it (repulsion and impenetrability). We don't encounter any other properties constituting the concept of the substance that appears in space and that we call 'matter'. As an object of pure understanding, on the

other hand, every substance must have intrinsic qualities and powers that make up its intrinsic reality. When I try to think about these intrinsic qualities, all I can come up with are qualities of myself that inner sense presents to me. [Here 'intrinsic' and 'inner' are translations of a single German word.] So they—the intrinsic qualities of these substances—have to consist in *thinking* or something analogous to thinking. When substances are regarded as noumena or objects of pure understanding, therefore, we must

(1) *negatively* strip them of any relations to other things, including the relation '*... is made up of ...*'; which means that we must deny that they are composed of parts; and

(2) *positively* credit them with something like thoughts.

And so we find Leibniz, who did regard substances as noumena,³²² conceiving them as what he called 'monads', that is,

(1) simple = partless things, with

(2) powers of representation.

He said this even about the ingredients in matter.

4. **Matter and form.** All other reflection is based on these two concepts because they are so inseparably bound up with every use of the understanding. 'Matter' signifies whatever it is that can have qualities, and 'form' signifies the qualities that matter can have—all this being understood absolutely generally, with no constraints on what matter may be or on what qualities it may have. [See note on form/matter on page 20.] [Kant's next four sentences sketch some other ways in which 'matter' and 'form' have been used by philosophers. Then:] If the understanding is to say something (form) *about* something (matter), it demands that it first be given—at least conceptually—the matter that
 323 its assertion is to be about. In pure understanding's way of looking at things, therefore, matter comes before form; and that is why Leibniz •first took on board *things* (monads)

with intrinsic powers of representation, in order •then to give them outer relations including the community of their states (i.e. of their representations) [see treatment of ‘community’ on page 50]. On that basis he could have space (as an upshot of how substances are inter-related) and time (as an upshot of how the states of substances are interrelated). [Kant also says, puzzlingly, that in this Leibnizian scheme space and time are possible (not only as upshots or ‘consequents’, but also) as ‘grounds’ or ‘bases’. Then:] And in fact that is how things would stand if pure understanding could be directed immediately onto objects, and if space and time were states of things as they are in themselves. But if they are only sensible intuitions, in which we inform ourselves about objects solely as appearances, then ·the matter-then-form order is switched to form-then-matter·: the form of intuition (as a subjective property of sensibility) precedes all matter (sensations); space and time come before all appearances and all data of experience, and are indeed what make the latter at all possible. The intellectualist philosopher ·Leibniz· couldn’t allow that the •form comes before •the things themselves, making them possible; and he would have been quite right about this if it had been the case that we intuit things, though confusedly, as they really are. But sensible intuition is a quite specific subjective condition, which lies *a priori* at the base of all perception as its original form; so the •form is given by itself, and the •matter (or the things that appear) comes after it, because the matter isn’t even possible unless a formal intuition (time and space) is antecedently given. If we were looking at the situation purely in terms of concepts, we would of course have to adopt the order: matter first, then form.

Remark on the amphiboly of the concepts of reflection

When we assign a concept either to sensibility or to pure understanding, I shall say that we are assigning it its *transcendental location*. And the business of judging where each concept belongs on the basis of how it is used, and of developing rules for doing this, is *the transcendental topic*. This body of doctrine, by sorting out which concept belongs in which cognitive faculty, will guard us against having the pure understanding quietly sliding things past us and thereby leading us into error. We can label as a *logical location* every concept or general heading under which many items of knowledge fall. That is what Aristotle’s *logical topic* was about. Teachers and orators could use its headings and lists to find what would best suit the material they were dealing with, so as to put on a show of thoroughness in their hair-splitting and verbose chattering. The transcendental topic, on the other hand, puts all comparison and distinctions under just the four headings I have listed. . . .

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We can •logically compare concepts without bothering to settle which faculty their objects belong to, i.e. whether their objects are noumena for the understanding or phenomena for the sensibility. But that’s exactly what we *do* have to bother with—in transcendental reflection—if we want to move from the concepts to their objects. It is risky to use these concepts without engaging in such reflection, because that can give rise to alleged synthetic principles that critical reason can’t recognise, and that are based on nothing but a transcendental amphiboly, i.e. a muddling of an •object of pure understanding with an •appearance.

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The illustrious Leibniz didn’t have any such transcendental topic, so he was defenceless against the amphiboly of the concepts of reflection. That led to his constructing his *intellectual system of the world*, or—more accurately—to his thinking he had come to know things’ intrinsic natures just

by comparing all objects merely with the understanding and its stock of abstract formal concepts. My table of concepts of reflection—the quartet of pairs on page 143—gives us an unexpected advantage: it sets openly before us •the distinctive features of Leibniz’s system in all its parts, and •the main basis for this idiosyncratic way of thinking—the basis being nothing but a misunderstanding! He conducted all his comparisons of things purely through concepts, and so of course the only differences he found were ones that the understanding can pick out in conceptual terms. What about the conditions of sensible intuition, which carry with them their own differences? He didn’t regard them as parts of the basic story, because he thought that sensing is just •having confused representations rather than •plugging into a separate source of representations. He thought that appearances are representations of *things in themselves*. . . . In brief, Leibniz *intellectualised* appearances, just as Locke. . . . *sensualised* the concepts of the understanding. . . . Instead of

•looking at understanding and sensibility as two sources of quite different kinds of representations that have to be linked together to yield objectively valid judgments about things,

each of these great men

•holds to one only of the two faculties, taking *it* to be the one that directly refers to things in themselves, while marginalizing the other faculty as merely something that serves to confuse (Leibniz) or to organize (Locke) the representations provided by the favoured faculty.

So Leibniz compared the objects of the senses with each other solely through the understanding, taking them to be *things*—i.e. not things of this or that kind, but merely things, *period*. I’ll describe four aspects of his procedure, each of

them related in some way to one of my quartet of contrasts on page 143.

(1)•SAME and DIFFERENT• He compared things in terms of ‘same or different?’, doing this solely through the understanding. All he had to work with were things’ concepts, ignoring their position in intuition (though that is where objects have to be *given*), and leaving entirely out of account the concepts’ transcendental location—i.e. the question of whether their objects should be counted as appearances or as things in themselves. So *of course* he extended his principle of the identity of indiscernibles, which really holds only for general concepts of things, to cover also the objects of the senses, and thought that in doing this he was adding significantly to our knowledge of Nature. Certainly, if a drop of water is **a thing in itself** whose whole intrinsic nature I know, and if the intrinsic nature of some other drop is identical with the nature of this one, I can’t allow that they are really two drops. But if the drop is **an appearance in space**, it has a location not only

•in the understanding (because of the concepts that fit it)

but also

•in sensible outer intuition (in space);

and the spatial locations are completely independent of the intrinsic states. Two spatial locations can just as easily •contain two things (one each) that are intrinsically exactly alike as •contain two things that are intrinsically as unlike as you please. If appearance *x* is in a different physical place from appearance *y*, then *x* must be different from *y*; they must be two, not one. So the identity of indiscernibles isn’t a law of Nature, but only an analytic rule for the comparison of things through mere concepts.

329 **(2) ·OPPOSITION·** The principle that realities (as sheer affirmations) never logically conflict with each other is entirely true with respect to relations between concepts [see note on page 145], but it has no significance as applied to Nature or to things in themselves (of which we know nothing). Real conflict certainly does take place; there are cases where $(A \text{ minus } B) = 0$, i.e. where two realities combined in one subject cancel one another's effects. Examples are repeatedly brought to our attention in all the hindering and counter-acting processes in Nature; these depend on forces, so they count as phenomenal *realities*. •General mechanics can indeed give an *a priori* rule stating the conditions in which such conflicts occur; but that's because •it takes account of the forces' going in opposite directions, which is something that the transcendental concept of reality doesn't know about. •We are dealing here with two quite different sorts of opposition: (a) the opposition between two forces working in opposite directions, (b) the opposition between two items of which one involves the negation of the other. In the noumenal sphere, only (b) can be recognised; but to us (a) is perfectly familiar, and is a genuine opposition—the kind that can produce a cancelling-out. Although Leibniz didn't announce the above proposition (•that realities never conflict•) with all the pomp of a new principle, he did use it as a basis for new assertions, and his followers explicitly incorporated it into their Leibniz-Wolff doctrinal structure. For example, according to this principle all evils are merely consequences of the limitations of created beings, i.e. they are negations, because only negations can conflict with reality. . . . Similarly, Leibniz's disciples consider it not just possible but *natural* to combine all reality into one being, without fear of any conflict, because the only conflict they recognise is that of contradiction, in which the concept of a thing is wiped out. They don't make room for things like this:

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Two real processes related in such a way that each cuts off what would have been the later stages of the other.

This is a real opposition—the processes *annul* one another—and we can't encounter it except through sensibility.

(3) ·INTRINSIC and EXTRINSIC· The entire basis for Leibniz's theory of monads consists in his way of representing the intrinsic/extrinsic distinction wholly in terms of the understanding. •His case for monads goes as follows. All substances must have some intrinsic nature, which doesn't involve any extrinsic relations and therefore doesn't involve composition, •i.e. being composed of parts. So the basis for whatever is intrinsic in things-in-themselves must be simple, i.e. not made up of parts. Also, the intrinsic state of a substance can't involve place, shape, contact, or motion, because these are all extrinsic relations; so the only states we are left with as candidates for belonging to the intrinsic nature of a substance are the •kinds of• states through which we ourselves inwardly [*innerlich*, which could = 'intrinsically'] note what our senses are giving us, namely, states consisting in representations. That's all that monads were equipped with, to serve as the basic material of the whole universe—an active force consisting of *representations!* And, strictly speaking, no monad could exert force on anything but itself.

Just because of this, Leibniz's principle of the possible community of substances had to be a *pre-established harmony*, and couldn't be a physical influence. For since every substance is. . . concerned only with its own representations, the state of the representations of one substance couldn't have an *effect* on the state of any other; so there had to be a third cause—God—which influences *all* the substances in such a way as to make their states correspond to each other •in a 'harmony'. God doesn't do this, •according to Leibniz, by intervening in each particular case. [The next

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sentence takes more than usual liberties with what Kant wrote, but it is true to his meaning.] What produces the harmony is God's having in his mind a single unified *plan* which assigns to each substance its persistence and the whole of its history of temporary states—a plan which in this way assures that the states of the different substances correspond with one another according to universal laws.

(4) **FORM** Leibniz's famous doctrine of time and space, in which he intellectualised these forms of sensibility, owed its origin entirely to this same delusion arising from his failure to make use of transcendental reflection. If I want through mere understanding to represent to myself extrinsic relations of things, the only way I can do this is by means of a concept of their interaction; and if I want to connect two states of a single thing, I have to do it through the notion of grounds and consequences [evidently meaning 'cause and effect']. And this led Leibniz to conceive of space as a certain order in the pseudo-causal community of substances, and time as the dynamical sequence of their states. This implied that space and time are conceptually parasitic on things and events, respectively: for space to exist is for *substances* to be thus and so, and for time to exist is for *states of substances* to be so-and-thus. What about the status that space and time seem to have all to themselves, independently of things in space and time? Leibniz wrote those off as results of conceptual confusion that has led us to regard what is really a form of dynamical relations as being a special intuition, free-standing and antecedent to the things themselves. For Leibniz, then,

- space and time were the intelligible form of the connection of things (substances and their states) in themselves; and
- the things were intelligible or noumenal substances.

[In this context, 'intelligible' is the antonym of 'sensible'; what is *thought* through the understanding is being contrasted with what is *intuited* through the sensibility.] And he wanted to treat the intellectualised concepts as being valid for appearances as well as for noumena. He *had* to, because he didn't allow sensibility any kind of intuition all of its own, and attributed all representation of objects, even empirical representation, to the understanding. All he left for the senses to do was the despicable work of confusing and distorting the understanding's representations.

But even if we *could* by pure understanding say anything synthetically about things in themselves (which we *can't*), we couldn't re-apply that to appearances, which don't represent things in themselves. In dealing with appearances I shall always be obliged to compare my concepts, in transcendental reflection, solely under the conditions of sensibility; and accordingly space and time won't be states of or relations among things in themselves, but will have their reality in the domain of appearances. What the things in themselves may be I don't know and don't need to know, because I can never encounter anything except in appearance. 333

I deal with the remaining concepts of reflection in the same way. **Matter** is a phenomenal substance. I look for its intrinsic nature in all the parts of the space that it occupies, and in all the effects that it brings about, though these can only be appearances of outer sense. The result is that the best I can do is to find relatively intrinsic states of matter, which are themselves made up of extrinsic relations; I don't come up with anything that is absolutely intrinsic. The absolutely intrinsic nature of matter, as it would have to be conceived by pure understanding, is nothing but a phantom; for matter isn't an object of pure understanding. What about the transcendental object that matter is an appearance of? I answer that even if someone were in a position to tell

us what it is like, we wouldn't be able to understand him! That's because we can understand only expressions that correspond to something in intuition. It is absurd and unreasonable to *complain* that we have no insight into things' intrinsic natures, because this amounts to complaining that we can't conceive by pure understanding what the things that appear to us may be in themselves; which involves demanding that we should be able to know things, and therefore to intuit them, without senses; which asks for a faculty of knowledge wholly different from the human one. . . .; while we have no idea of what such non-human knowers would be like, and don't know whether they are even *possible*. Through observation and analysis of appearances we penetrate to Nature's inner recesses, and no-one can say how far this knowledge may in time extend. But even if the whole of Nature were revealed to us, we *still* couldn't answer the transcendental questions that go beyond Nature. To see how cut-off we are, consider the fact that we don't get to observe *our own minds* with any intuition except that of inner sense, which means that we observe our minds merely *as appearances*, and never get through to the transcendental basis for the unity of our mind. Yet it is precisely in our mind that the secret of the source of our sensibility is located! If even our selves-in-themselves lie too deep for us, it's not to be expected that our sensibility could be a suitable instrument for investigating the nature of *anything* except further appearances. . . .

I have been offering criticisms of certain inferences—criticisms based merely on acts of *transcendental* reflection. What makes this critique so very useful is that it *•makes plain the nullity* of any conclusions about objects that are compared with each other solely in the understanding, and at the same time *•confirms the main point* I have been insisting on, namely that appearances, although they are not things

in themselves that can be tackled by pure understanding, are the only objects of which we can have objectively real knowledge—i.e. knowledge where there is an intuition corresponding to the concepts.

[This might be a good time to look back at the note about 'comparing', on page 143.] If we reflect in a merely logical fashion, we are only comparing our concepts in the understanding, asking:

- Do these two have the same content?
- Do these two contradict one another?
- Is. . . intrinsic to this concept or added to it from outside?
- Of these two, which is given and which counts only as a way of thinking about the given one?

But if I apply these concepts to an *object as such*, . . . without settling whether it's an object of sensible intuition or of intellectual intuition, *·i.e. of passive intuition or of active intuition·*, it immediately turns out that the very concept of this object (we don't have to go beyond it) sets boundaries that forbid any non-empirical use of the concept. What *this* shows is that the representation of an object as

- a thing as such, *·i.e.*
- a thing, *period·*,

rather than as

- a thing that is given through sensible intuition, or
- a thing that is given through intellectual intuition,

is not only *insufficient*, but is downright *self-contradictory*. That's because this concept *•contains within itself the barrier to non-empirical use while also •purporting to be used non-empirically·*. The moral is that we must (in logic) filter out all talk of objects, or else bring objects in under the conditions of sensible intuition

* * *

..336 As I have shown, the concepts of reflection have, through a certain misinterpretation, had so much influence upon the use of the understanding that they have misled even one of the sharpest of all philosophers (·Leibniz·) into a would-be system of intellectual knowledge—a system that undertakes to find out about its objects without any help from the senses. We need a reliable method of determining and securing the limits of the understanding, and we can be helped towards that by an account of *what goes on* when the amphiboly of
337 these concepts leads people to accept false principles. . . .

The principle of the identity of indiscernibles is really based on the assumption that if a certain detail isn't to be found in the absolutely general concept of *thing*, it's not to be found in individual *things* either. This does imply that if the concepts of x and y are exactly the same (in quality or quantity), then x is numerically identical with y—'they' are one thing, not two. ·It's a strange blunder to go this way·. In the general concept of *thing* we filter out many details, including the necessary conditions of the intuition of a thing; and now we have Leibniz and his followers jumping to the conclusion that what we have filtered out wasn't there in the
338 first place, so that no thing is credited with anything beyond what is contained in the *thing* concept. ·I shall discuss three examples of this·.

(1) The concept of *a cubic foot of space* is always and everywhere completely the same; but two cubic feet are distinguished in space merely by their locations. These locations aren't to be found in the concept of a cubic foot of space, but instances of the concept are firmly tied to locations by the sensibility.

(2) Similarly there is no conflict in the concept of a thing unless it combines something negative with something

affirmative; you can't get a cancelling-out by putting together purely affirmative concepts [see note on page 145.]. You can't, for example, get an annulment by putting together 'x moves' and 'y moves'. But in the general concept of *motion* we filter out such details as the *direction* of motion; yet motions do have directions, as we find through sensible intuition; and so in the real world there can be cases where

x moves in one direction, y moves in the opposite direction, and when they collide they come to a halt, which is a cancelling-out of their movements (though not a logical one), despite the fact that the example involves nothing negative. So we aren't in a position to say that all reality is in agreement with itself because not all conflict is to be found in the *concepts* of reality.¹⁹

(3) [Reminder: Through all this, 'intrinsic' is exchangeable with 'inner', and 'extrinsic' with 'outer'.] According to mere concepts, a thing's ·intrinsic nature is the substratum of all its relational or ·extrinsic features. So if I form the general concept of *thing*, filtering out all conditions of intuition, that will involve filtering out all extrinsic relations, leaving me with a concept of something that doesn't signify any relations and signifies only intrinsic characteristics. Here is what seems to follow from this:

In every substance there is something absolutely intrinsic, which precedes all extrinsic characteristics because it is what makes them possible in the first place; so this substratum, being free of any extrinsic rela-

¹⁹ You might want to dodge this result by maintaining that *noumenal* realities, at least, don't act in opposition to each other. But then you should produce an example of such pure and sense-free reality, so that we can tell whether you are talking about anything! Our only source of examples of anything, however, is experience, and that yields only phenomena, not noumena. So your proposition comes down to this: a concept in which everything is affirmative includes nothing negative—and who ever questioned *that*?

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tions is *simple*, ·i.e. has no parts·. (There is nothing to a *body* but relations—the relations amongst its parts.) And since the only absolutely intrinsic characteristics we know of are the ones given through our inner sense, this substratum is not only simple but—on an analogy with our inner sense—is characterised by *representations*. This means that all things are really *monads*, simple beings endowed with representations. These contentions would be entirely justified if it weren't for this fact: the conditions under which objects of outer intuition are given to us (the only conditions under which they *can* be given to us) involve something more than the general concept of *thing*—something that has been filtered out when that concept is formed. Under these further conditions we find ·something that makes the above indented passage wrong, namely· that an abiding appearance in space can •be the primary substratum of all outer perception and yet •contain only relations and *nothing* absolutely intrinsic. [Kant throws in some phrases that are omitted above. They are an extremely compressed way of saying this: How can that be? *Only* relations? Yes indeed: a permanent thing in space is a body, and all there is to a body is its being •extended and its being •impenetrable by other bodies. And these are purely relational: a thing's •extendedness is just its having parts that relate to one another thus and so, and •impenetrability is obviously relational, because it means that a thing x can't be penetrated *by another thing*.] Through mere concepts, it's true, I can't have the thought of extrinsic relations without also having the thought of something intrinsic; that's because relational concepts presuppose things that are independently given—you can't have a *relation* without *things that are related* by it·. But in an intuition there is something that mere concepts don't capture, and this 'something' provides the substratum ·of the relational

properties·. What I am talking about is a *region of space* which, with all that it contains, consists solely of relations (formal relations ·among the parts of the region·, and perhaps also real relations ·among the parts of any bodies the region happens to contain·) From this premise:

- A thing can't be represented by mere concepts unless **the conceptual representation** includes something absolutely intrinsic,

I am not entitled to infer this:

- A thing can't be represented by mere concepts unless **the thing itself, and the intuition of it**, involve something absolutely intrinsic.

Once we have abstracted from all conditions of intuition, there's admittedly nothing left in the mere *concept* but something intrinsic and the interrelations *within* that; without this, extrinsic relations aren't possible. But this impossibility is based solely on abstraction; it doesn't hold for things as given in intuition with features that express mere relations and don't have anything intrinsic as their basis; for these aren't things in themselves, but merely appearances. All that we encounter in *matter* is merely relations (what we call matter's intrinsic qualities are merely *more intrinsic* than the rest); but some of these relations are •free-standing—•basic, not dependent on any underlying intrinsic whatnot—and are also •permanent, and through *these* we are given a determinate object. It's true that if I abstract from these relations there's nothing left for me to think; but that doesn't rule out the concept of a thing as appearance, or indeed the abstract concept of *object*. What it *does* remove is all possibility of •an object than can be characterized through mere concepts, i.e. the possibility of •a noumenon. I admit that it's startling to be told that a thing is to be taken as consisting wholly of relations! But the thing in question is a mere appearance, which can't be thought through pure

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categories; and all there is to it is the relation to the senses of a Something as such—i.e. one about which there's nothing to say except that it's a Something; because any details that we tried to give would be immediately absorbed into the Something's relation to the senses. [Kant now launches another example, starting with 'Similarly, . . .'. What it has in common with examples (1)–(3) is very general: all four are examples of *attempts at purely conceptual thinking that are fundamentally incompetent, just because they are purely conceptual*. Thus:] Similarly, the only thought we can have about the relations amongst things—if we are doing this abstractly, using nothing but concepts—is by thinking of one thing as the cause of states of another thing, because that is our understanding's concept of relatedness between two things. But with that kind of thinking we are disregarding all intuition and thus cutting ourselves off from one special way in which elements of the manifold fix one another's locations, namely through the form of sensibility—*space*—and yet in all empirical causality space has to be presupposed!

If by 'merely intelligible objects' we mean **things that are thought through pure categories**, without any schema [see page 91] of sensibility, such objects are impossible. For us to use any of our concepts of understanding objectively, we need the sensible intuition by which objects are given to us; so if we abstract from that intuition, our concepts have no relation to any object, i.e. aren't concepts of anything. 'But suppose there were a kind of intuition other than the sensible kind that we have?' Even then the functions of our thought would get no grip on it. But if we have in mind only **objects of a non-sensible intuition**, then noumena in this purely negative sense must indeed be admitted. Our categories wouldn't apply to them, so we could never have any knowledge whatsoever (no intuitions, no concepts) of them. To 'admit' them is merely to say that *our* kind of intuition doesn't extend to all things but only to objects of our

senses; so that its objective validity is limited, and therefore a place remains open for some other kind of intuition and thus for things as its objects, i.e. things that it has intuitions of. But the concept of a noumenon reached in this way is problematic, i.e. it's the representation of a thing that we can't say is possible but also can't say is impossible. Why? Because the only intuition we know is our own sensible kind, and the only concepts we know are the categories, and neither of these can get any grip on a non-sensible object. So we can't positively extend the domain of the objects of our thought beyond the conditions of our sensibility, and assume that in addition to appearances there are objects of pure thought, i.e. *noumena*; because such objects have no positive significance that we can indicate. . . . Thought isn't itself a product of the senses, and to that extent it's not limited by them; but it doesn't follow from *that* that it has a pure use of its own, unaided by sensibility, because then it would be without an object. Don't think 'The noumenon would be its object'. We cannot call the noumenon that we have admitted an *object* in the relevant sense; because all it signifies is the problematic concept of an object for a quite different intuition and a quite different understanding from ours. So the concept of the noumenon isn't the concept of an object; rather, it is a question that inevitably comes up in connection with the limits on our sensibility—the question 'Might there be objects entirely disengaged from any such intuition as ours?' This question can only be answered vaguely: because sensible intuition doesn't extend to all things of every kind, *a place remains open* for other and different objects; so these latter mustn't be absolutely denied, though. . . .they can't be asserted, either, as objects for our understanding.

Thus, the understanding limits sensibility, but doesn't extend its own domain in the process. When the understand-

ing warns the sensibility ‘Don’t claim to deal with things in themselves, but only with appearances’, it does indeed give itself the thought of an object in itself, because that thought is involved in its telling the sensibility what *not* to do. But here the understanding thinks of it only as a *transcendental* object, which is the cause of appearance and therefore not itself appearance. It can’t be thought of in terms of quantity or reality or substance etc. (because these concepts apply to objects only with help from sensible forms). We don’t know *anything* about whether this transcendental object is to be met with in us or outside us, or whether it would still remain in existence or vanish if all sensibility stopped. If we want to call this object ‘noumenon’ because the representation of it isn’t sensible, we are free to do so. But since we can’t apply to it any of the concepts of our understanding, the representation of it remains empty for us. All it does is to mark the limits of our sensible knowledge, leaving an open space that we can’t fill through possible experience or through pure understanding. . . .

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Before leaving the Transcendental Analytic I must add something which (though not of special importance in itself) might be thought to be needed for the completeness of the system. The top concept that transcendental philosophies usually begin with is the division into the possible and the impossible. But any division presupposes a concept to be divided, so that’s not the top concept after all. We need a still higher one, namely the concept of *an object as such*—this being understood not only

- indeterminately, i.e. without providing any details about the object,

but also

- problematically, i.e. without even settling whether it is something or nothing.

And that *something or nothing* is the top concept we were looking for. The only concepts that refer to *objects as such* are the categories; so our examination of our top concept, the something/nothing distinction, should follow the order of the categories and be guided by them. [In fact Kant’s four-part taxonomy of varieties of *nothing* follows the categories only for Quantity and Quality. Item 3 has nothing to do with Relation, and 4 is only loosely linked to Modality. Anyway, this page of material is neither enjoyable nor instructive, and is therefore omitted from this version. This brings us to the end of the transcendental analytic. What lies ahead is mainly the transcendental dialect .]