

# A Distinction Without a Difference? The Analytic-Synthetic Distinction and Immanuel Kant's Critique of Metaphysics

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**Abstract:** In this paper I pose and answer the following question: "What would the fall of the Analytic-Synthetic Distinction (ASD) imply for Kant's critique of metaphysics?" I argue that his critique remains strong regardless of the status of the ASD because the only propositions that are of interest to Kant are synthetic propositions, which are not affected by the ASD. Kant's arguments built around synthetic knowledge are thus not dependent upon the ASD in any way. I will also develop the further point that Kant's primary goal is establishing a third epistemological category beyond the *a priori/a posteriori* schema. Finally, I will consider a possible objection that may arise from David Hume's analysis of mathematics.

## 1

One of the classic discussions in the history of philosophy is that surrounding the Analytic-Synthetic Distinction, or ASD. Many philosophers have made use of it in one formulation or another, but perhaps none so famously as did Immanuel Kant. Until Kant, analytic propositions (a class of propositions which carries apodictic certainty) were regularly equated with *a priori* verification, and synthetic propositions (those that give information about the world) were equated with *a posteriori* verification. His claim, that we could have knowledge that was both *a priori* necessary, and could inform us about the sensible world, was a very significant development. Two of Kant's most important works, the *Critique of Pure Reason* (*Critique*), and his *Prolegomena to Any Future Metaphysics* (*Prolegomena*), have become pivotal texts largely because of the arguments for "synthetic, *a priori*" knowledge that they contain.

However, much has happened since Kant's time. Most noteworthy for us is that the ASD has been repeatedly called into question, and no longer holds the prestigious status that it once did.

Rather than being explained in terms of some kind of metaphysical or epistemological truth, analyticity is now often explained away in terms of language semantics (see the Logical Positivists). Multiple, competing explanations of analyticity now exist including predicate containment (Kant), synonymy of terms, and the semantic explanation mentioned above, among others. Whether or not the ASD has in fact fallen is a matter of debate, but the merely tenuous hold it currently has on us requires that we investigate our use of it in philosophy generally, and in Kant specifically. What is of particular interest is that, while the ASD has been eroding over the centuries, the words on the pages of the *Prolegomena* and the *Critique* have not changed; they still mention both analytic and synthetic propositions. Indeed, this classification seems to play a large role in Kant's philosophy. Therefore, in this paper I will pose and answer the following question:

What would the fall of the Analytic-Synthetic Distinction imply for Kant's critique of metaphysics?

I will argue that the fall of the ASD would not undermine Kant's philosophy in any significant way. I contend that Kant's critique of metaphysics is, essentially, an analysis of the sources of *a priori* cognition, and that it does not depend on the ASD. The main reason why Kant remains unaffected by the status of the ASD is that he is simply not interested in the analytic propositions that the ASD is used to identify. Rather, he is interested in synthetic propositions, which fall outside of the class of propositions about which the ASD gives us useful information.

I will begin with a brief, non-exhaustive historical account of the ASD, starting with some of its roots in Gottfried Leibniz and David Hume. The focus will be on the influence that the latter had on Kant's work. Next will be a brief explication of Kant's formulation of the ASD. After these preliminaries, I will present my argument for why his appropriation of the ASD is not genuinely necessary in order for him to achieve his goal of establishing "synthetic *a priori*" knowledge. I will also develop the closely related point that his main aim is to explain the requirements for any possible experience, and that it is this explanation that does the work of criticizing metaphysics, rather than any development related to the ASD. Lastly, I will consider a possible problem for my position. That is: Hume analyzed mathematics differently than Kant did, focusing strictly on the role that the law of contradiction plays in determining the truth or falsehood of mathematical propositions. This analysis could potentially undermine my position because it may imply that mathematics is analytic. If this were the case, Kant's philosophy,

which uses mathematics as its starting point, could in fact be dependent upon the ASD.

## 2

We can find the beginnings of the ASD at least as far back as Leibniz and Hume (Beck 1978). In Leibniz's work, we see a hint of it in his explanations of the "complete concept." According to Leibniz, if one could in some way "gain access" to an entity's complete concept, one could then derive true propositions about that thing through analysis. Just how one would go about accomplishing that has remained problematic, but the connection to Kant's "analytic *a priori*" is clear: knowledge derived from analysis of the complete concept would be "merely explicative" and therefore analytic (*Prolegomena* 16). This is by no means a direct parallel to Kant's own usage of the term "analytic" as referring to classes of propositions rather than "complete concepts," but there is a familial resemblance.

Moving forward in time, we find that although Hume did not use the terms "analytic" and "synthetic" in his writing, we can see in many passages that he was thinking along related lines. The distinction Hume made between "relations of ideas" and "matters of fact" anticipates the ASD. In *An Enquiry Concerning Human Understanding* (*Enquiry*) Hume writes, "Propositions of this kind [Relations of Ideas] are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe" (15). Hume singles out the propositions of mathematics and geometry as paradigmatic examples of this kind of *a priori* analysis. His explanation of how one derives mathematical truths from axiomatic principles is very similar to Kant's description of how one derives analytic truths from definitions. Distinguished from relations of ideas are matters of fact. Matters of fact are statements about sensory experience, and are therefore always *a posteriori*, resembling synthetic propositions. Hume's characterization of human knowledge into these two categories was enough to catch Kant's attention, as Kant himself states in the *Prolegomena* (7).

Although Hume was an inspiration for Kant, it is well known that Kant would develop his own epistemology very differently than Hume did. Hume's legacy, at least from the *Enquiry*, was his analysis of the law of cause and effect. Denying that this law is known *a priori*, and characterizing our "knowledge" of it as mere habit and expectation (*Enquiry* 17) shook philosophy at its foundations. Without an *a priori* law of cause and effect to help us make sense of the world, our knowledge began to seem very shaky indeed. While Kant agreed with his predecessor that we do not learn the law of

cause and effect from the world, he would disagree with Hume that this law was a mere expectation developed through experience. Also, the status of pure mathematics and geometry was another point of departure for Kant, and it was in his characterization and explanation of these two sciences that the ASD began to play a role.

### 3

The formulation of the ASD that Kant used is called “predicate containment.” In this formulation, a statement is classified as analytic when the predicate of the sentence is, or can be, derived from the definition of the sentence subject. In Kant’s words:

But judgments may have any origin whatsoever . . . and yet there is nonetheless a distinction between them according to their content, by dint of which they are either merely *explicative* and add nothing to the content of the cognition, or *ampliative* and augment the given cognition; the first may be called *analytic* judgments, the second *synthetic*.

Analytic judgments say nothing in the predicate except what was actually thought already in the concept of the subject, though not so clearly nor with the same consciousness. (*Prolegomena* 16. author’s emphasis)

What he claims in this passage is that analytic propositions are simply that class of propositions that are derived from definitions. These types of statements do indeed help clarify our ideas, but they do not provide us with any new knowledge. Due to their origin in definitions, it is a very simple matter to determine the truth or falsehood of an analytic statement. All that one has to do is to compare the content of the statement in question with the content of the relevant definition. If the content of the statement can be “found” or “derived” from the content of the definition, then the statement is indeed analytic. If the content of the statement cannot be derived from the definition then the statement is not analytic, regardless of its truth or falsity in regard to the state of things in the world.

Using the predicate containment formulation of the ASD allowed Kant to be specific about which statements he was interested in, but it also left him vulnerable to a number of objections. One of the most serious problems, and one that Kant was aware of, is how to know when the definition we possess is complete. If a justification for the statement, “A is B” cannot be found in the definition of A, how do we know whether the statement is false or the definition is incomplete? In some cases the answer will be clear, but in others it may be very difficult to tell. There are also other problems with this formulation of the ASD, such as the age-old question of how to

differentiate primary qualities from secondary ones, and whether or not a complete definition is possible at all. However, what is most important here is that we understand both Kant's way of formulating the ASD, and that this formulation was problematic from the very outset. With this understanding in mind we can begin to examine any implications for Kant's system that would come about if this rather uncertain formulation were to fail.

4

Until Kant, all synthetic knowledge had been thought to be *a posteriori*, while all analytic knowledge was thought to be *a priori*. In his essay, "Analytic and Synthetic Judgments before Kant," Lewis White Beck writes, "The problem of the *Critique of Pure Reason* is to see how an attribute can be attached synthetically, yet *a priori*, to an object whose concept does not logically entail it by containing it implicitly" (98). That is, how can we understand, in advance of any experience, and with absolute certainty, that an object in the world will have a certain characteristic or set of characteristics? Answering this question requires the establishment of a new epistemological category beyond the familiar *a priori* / *a posteriori* schema.

Kant begins to establish this category by calling to mind our ideas of space and time. He asks us to remove (in thought) every conceivable characteristic that an object could have. Even if you remove color, shape, and indeed the object itself you will still have space and time present to your consciousness, he argues. You might be thinking of empty space and uneventful time, but you will be thinking of space and time nonetheless. To remove either one is to remove the experience entirely. Kant explains:

There is therefore only one way possible for my intuition to precede the actuality of the object and occur as an *a priori* cognition, namely if it contains nothing except the form of sensibility, which in me as subject precedes all actual impressions through which I am affected by objects (*Prolegomena* 34, author's emphasis).

These "forms of sensibility" (space and time) constitute what will become the basis of "synthetic *a priori* knowledge," Kant's new epistemological category. Space and time are the essential mental forms into which all information from the senses is fitted, or filtered, so that it can be sense data at all. Kant's point is that every interaction our senses have with the world must be fitted into some kind of spatial and chronological order if it is to be comprehensible at all. Sense data filtered through space and time gives Raphael; an ordered and systematic representation of the world. Unfiltered sense

data gives Picasso; a world in which even shape and scale are fluid, changeable concepts.

What is the connection to geometry and pure physics? Kant classifies these two branches of knowledge as synthetic *a priori*, giving us not just the concept of this epistemological category, but actual examples of this type of knowledge. "Geometry bases itself on the pure intuition of space. Even arithmetic forms its concepts of numbers through successive addition of units in time . . ." (*Prolegomena* 35). While physics is not mentioned in this quotation, his justification for why both physics and geometry are synthetic is the same: that they give us information about the relations among objects of experience, and that they explain what shape any potential experience will take. He considers them *a priori* for the same reason that Hume did; namely, that they carry necessary truth with them.

We already know the rest of the story. Having thus established that synthetic *a priori* knowledge is possible in mathematics and geometry, Kant is then able to show how such knowledge operates in the concepts of the understanding. Having explained how we make sense of the world through our limited *a priori* "library," he builds his critique of metaphysics on the grounds that we overextend our reason beyond the bounds of possible experience, which is all our "mental library" contains.

But where is the ASD to be found in this? Where are the analytic statements about which Kant made much ado in the beginning of the *Prolegomena*? Interestingly, from this point onward Kant largely turns away from the ASD, and builds his critique of metaphysics on the idea that we "overextend" our reason, applying it beyond the realm of where it is useful. The overextension of reason is the misuse of a mental faculty, which is wholly unrelated to the analyticity or syntheticity of our propositions. One could, of course, object that the ASD is eminently present throughout the rest of Kant's project because he bases so many of his arguments on the classification of synthetic *a priori* propositions, but I disagree. My position is that the "synthetic" statements which Kant makes use of are, in fact, not affected by anything having to do with the ASD. To make this clearer we will have to revisit Kant's formulation of the ASD.

When we look carefully at the Analytic-Synthetic Distinction we find that it classifies propositions in one of two ways. The first is, of course, as analytic. The second is as synthetic, but the term "synthetic" really amounts to saying: "not analytic." It neither tells us anything genuinely special about the statements that it identifies, nor gives us any philosophical insight into them. "Synthetic" is another term for "miscellaneous." The work of the ASD was in pointing out those propositions that would carry *a priori* certainty

with them by virtue of having been derived from a definition. That was its purpose. But, read what Kant had to say in the *Critique* about the analytic statements identified by the ASD:

“We do not, in the present case, want to discover analytical propositions, which may be produced merely by analyzing our conceptions . . . we aim at the discovery of synthetical propositions – such synthetical propositions, moreover, as can be cognized *a priori*.” (403).

What this passage makes very clear is that Kant is not interested at all in analytic statements. After all, why should he be? Understanding that “all bachelors are unmarried” is true by definition (is analytic) does nothing to help us understand the world around us. Even cases of implicit analyticity, where the analytic nature of the proposition is not as readily apparent, are ultimately based in definitions and are oftentimes susceptible to charges of circularity when used in a philosophical system. The arguments for the existence of God that Rene Descartes formulated are a perfect example of this. To define a concept in a specific way (a treacherous venture by itself), and then expect to use that definition as support for an argument is to walk in a circle. Kant knew better than that, and was therefore not interested in analytic propositions. Rather, he was interested in the same kind of knowledge that we all are: synthetic knowledge that we can put to use in everyday life. In short, the ASD was always merely a sideshow to the rest of his project.

## 5

Having shown that the epistemological class of propositions he was interested in is not affected by the status of the ASD, we must now turn to Kant’s critique of metaphysics, his ultimate goal. For the purpose of completeness we now need to reexamine this critique in light of what we have established thus far about synthetic *a priori* cognition.

I believe that Kant made it clear that his real aim was to analyze the sources of synthetic *a priori* knowledge, and identify them as those conditions that are necessary for any possible experience to occur. His conclusion, that all and only all priori knowledge comes from our necessarily human- subjective way of interacting with the world through the forms of space and time, is made clear in the following passage: “The only *a priori* intuition is that of the pure form of phenomena – space and time. . . . But the matter of phenomena, by which *things* are given in space and time, can be presented only in perception, *a posteriori*!” (*Critique* 404, author’s

emphasis). This passage also helps clarify what Kant considers *a posteriori*, that is, the content of sense perception. Given that Kant's conception of the *a posteriori* is reasonably standard, I will pass over it.

What becomes clearer with each page is that Kant is not really defining a new category of knowledge within the ASD. Rather, he is adding a third category to the traditional breakdown of *a priori* vs. *a posteriori*. Before Kant, it was standard to think that all knowledge relating to the world was *a posteriori*, while all knowledge carrying necessity with it was *a priori*. Kant has, so to speak, polished his epistemological magnifying glass to a higher quality than his predecessors, and is able to discern a *third* category that combines some attributes from each of the previously identified ones. This is an elaboration of the *a priori/a posteriori* distinction, not an elaboration or modification of the Analytic-Synthetic Distinction.

The relevance of this development extends beyond Kant. Lacking this fine distinction, even Hume had difficulty with the relationship between mathematics and the world. In section 4 of the *Enquiry*, mathematics is classified as belonging to the "relations of ideas," but the reader comes away with a sense that Hume did not really know what else to make of it. He classifies mathematics in a single paragraph, and then simply moves on without further elaboration (*Enquiry* 15). Descartes, also, was well aware of the privileged and mysterious nature of mathematics. In an interesting anticipation of Kant, he states in *Meditations on First Philosophy* that it is the *mathematical properties* of corporeal objects that he can be most certain of (49). How much this claim influenced Kant remains an open question. But, I digress. . . .

The source of this new kind of *a priori* knowledge is within us, in the "form of [our] sensibility" (*Prolegomena* 34). This analysis of where *a priori* cognition is derived from laid the foundation for the criticism of metaphysics that was to follow. Metaphysics has always been dependent upon *a priori* cognition for its raw material. Indeed, its very nature as *metaphysical* requires that it does not derive significant support from worldly sources. Kant articulates this view most clearly in two passages from the *Prolegomena*:

"First, concerning the *sources* of metaphysical cognition, it already lies in the concept of metaphysics that they cannot be empirical. . . . for the cognition is supposed to be not physical, but metaphysical, i.e., lying beyond experience. . . . It [the source of metaphysical cognition] is therefore cognition *a priori*, or from pure understanding and pure reason" (15, author's emphasis).

"Metaphysical cognition must contain nothing but judgments *a priori*, as required by the distinguishing feature of its sources" (16).

At this point, the critique of metaphysics as an overextension of our “concepts of the understanding,” and an abuse of our reason assembles itself. Quite simply, the only *a priori* knowledge that exists comes from us, and enables us to bring order to our sense data. Kant writes, “All our [*a priori*] knowledge relates, finally, to possible intuitions, for it is these alone that present objects to the mind” (*Critique* 404).

Metaphysics can only form conclusions by using *a priori* knowledge, but the conclusions it forms clearly go beyond the limits of what *a priori* knowledge we have at our disposal. Kant explains this in terms of the concepts that metaphysics forms not having anything in the world to which they refer.

“But when the transcendental conception of reality, or substance, or power is presented to my mind, I find that it does not relate to or indicate either an empirical or pure intuition, but that it indicates merely the synthesis of empirical intuitions, which cannot of course be given *a priori*” (*Critique* 405).

Without any objects of experience to which these metaphysical concepts can refer, they are empty of meaning. But note: the ASD does not make a relevant appearance throughout these subsequent developments in Kant’s doctrine. His critique is based upon the limits of our human-subjective mode of interacting with the world, and the limits of our available store of *a priori* knowledge; not on the ASD.

The only other type of *a priori* cognition that might possibly be of use to metaphysics is the analytic class of statements. However, this is clearly a non-starter, as Kant himself makes clear:

“. . . metaphysics properly has to do with synthetic propositions *a priori*, . . . for which it requires many analyses of its concepts (therefore many analytic judgments), in which analyses, though, the procedure is no different from than that in any other type of cognition when one seeks simply to make its concepts clear through analysis” (*Prolegomena* 22).

What we need to take from this passage is that even though the analytic statements identified by the ASD can be useful to Kant’s system in some way, it is only for the purposes of clarifying and explaining concepts that we ourselves generate. They do not generate new knowledge. As stated above, understanding the epistemological status of statements like “all bachelors are unmarried” does not help us understand the world. It is *non-analytic* statements that are of interest in the project of metaphysics, and the

status of the ASD therefore has no bearing on Kant's critique. We can see that it is his explanation of the requirements for possible experience that is really doing the "philosophical work," not any connection with the ASD.

## 6

There is one more point that needs to be examined before we can consider the question to be fully answered. That is, if there exists a well-supported argument for math being analytic in nature, Kant would have considerable difficulty in forming his critique of metaphysics. This is because his critique begins with the claim that mathematics is synthetic *a priori*, not analytic, from which he goes on to claim that metaphysical propositions are also synthetic *a priori*. If he has indeed classified mathematical knowledge incorrectly, we should naturally doubt his classification of metaphysical knowledge, and his critique of it. Metaphysics might be based on analytic propositions, not synthetic ones, and Kant could have gone completely in the wrong direction. I would also have considerable difficulty in maintaining my position that the ASD is largely irrelevant to Kant's project. This is simply because if math is actually analytic, Kant is then intimately tied with the analytic propositions that the ASD *does* inform us about. The natural place to look for such an analysis of mathematics is, of course, in Hume.

Explicating Hume's views from the *Enquiry* is difficult because in section IV, where he classifies human knowledge, he only mentions mathematics in two places. The first is the following passage:

All the objects of human reason or enquiry may naturally be divided into two kinds, to wit, *Relations of Ideas*, and *Matters of Fact*. Of the first kind are the sciences of Geometry, Algebra, and Arithmetic; and in short, every affirmation, which is either intuitively or demonstratively certain (*Enquiry* 15, author's emphasis).

This passage is a clear claim that mathematics is *a priori*, which is in agreement with Kant. In comparing relations of ideas and matters of fact, Hume also implies that relations of ideas depend upon the principle of contradiction: "The contrary of every matter of fact is still possible; because it can never imply a contradiction" (*Enquiry* 15). Compare this with Kant, who writes in the *Prolegomena* that synthetic *a priori* propositions must be in accordance with the principle of contradiction, although they are not derived from it (17). In examining these two descriptions we find that Kant is clearly elaborating upon Hume in developing the synthetic *a priori* category,

but it is very difficult to see any conflict between them on the status of pure mathematics and geometry. The second passage from Hume makes the relationship between these two philosophers very clear. It states:

Geometry assists us in the application of [the law of motion], by giving us the just dimensions of all the parts and figures; which can enter into any species of machine; but still the discovery of the law itself is owing merely to experience. . . (*Enquiry* 20).

I believe that this passage is crucial, and from it I can comfortably conclude that Kant and Hume agree on the status of geometry. The main point of this passage is clearly to say that the law of motion is not learned *a priori*, but it also implies something else. In this passage Hume is clearly stating that geometry will tell us what form any possible object of experience will take. He states that it will apply universally in giving us the shapes and dimensions of “any” object (or machine, in this passage). This is exactly what Kant claims when he says that mathematics and geometry are derived from investigations of the forms of our sensibility, although he makes this claim in a different way.

What ultimately distinguishes Hume from Kant on the issue of geometry is simply that Hume never took his analysis of mathematics further in order to find out where this type of knowledge comes from. Kant, however, did conduct that analysis, and found the roots of pure mathematics and geometry in the forms of our sensibility: space and time. Kant is building upon the work that Hume did, and making more precise the classification of mathematics (from merely “*a priori*” to “*synthetic a priori*”), but he is not contradicting his predecessor.

As we know, these two philosophers would differ, quite famously, on the status of the law of cause and effect, but it seems clear to me that where geometry was concerned, they agree. Kant does face problems in his formulation of the ASD, his explanation that math is synthetic because “The concept of twelve is in no way already thought because I merely think to myself this unification of seven and five, . . . (*Prolegomena* 18),” and on other minor points. The ASD is itself also a very problematic concept. However, the question of what would happen to Kant’s work if the ASD were found to be an empty distinction is now easily answered by the reply that the ASD is only tangentially relevant to his philosophy. Rather, the impact of his philosophy is in his investigations into the conditions for the possibility of experience, his analysis of geometry and pure natural science as studies of the forms of our sensibility, his insight

that all *a priori* knowledge relates to these forms, and the resulting restrictions he places on metaphysical inquiry.

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