

# Kant's antinomies

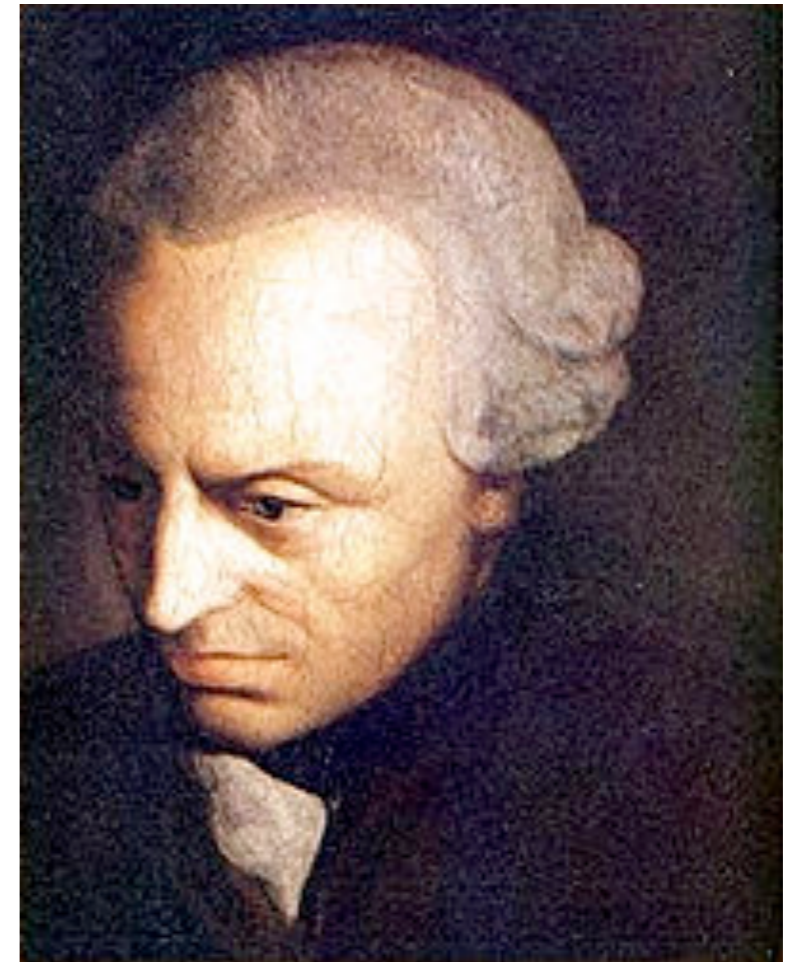
Today we turn to the work of one of the most important, and also most difficult, philosophers: Immanuel Kant.

Kant was born in 1724 in Prussia, and his philosophical work has exerted a major influence on virtually every area of the subject.

His life seems to have been fairly uneventful, even by the standards of philosophers. A popular story about Kant is that his routine in Königsberg, his home town, was so regular that people in the town set their watches by his daily walk.

The aspect of Kant's philosophy which we'll be focusing on today is his doctrine of **transcendental idealism**.

This view can be introduced via an intuitive distinction between those parts of reality which exist independently of the mind, and those parts of reality which seem to owe their existence to their being involved in certain mental acts.



Consider, for example, a toothache, and think about the particular sensation of pain that it involves. Could that sensation exist without being felt by some mind?

If not, and if it depends for its existence on being felt by some mind, then we can say that (using Kant's terminology) the pain is a **mere appearance** or **merely phenomenal**.

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It is perhaps not very surprising that pains are phenomenal, in this sense. But we can also argue that other, more intuitively “objective” aspects of reality are phenomenal.

Consider, for example, colors. Psychological tests provide very strong evidence that vision varies across age, race, and sex, so that, typically, things will look to have a slightly different color to two different people if they differ in age, race, or sex. So imagine that we have three people looking at a paint swatch, and that the patch looks as follows to each of them:



We can further suppose that each of our subjects has normal color vision, in the sense that he passes all tests for ordinary color vision. (Ordinary perceivers’ color sensations seem to differ much more than the difference between these three.)

Does it make sense to say that one of these three people gets it right, and that the other two do not?

Many people think not. But if not, it seems that colors, like pains, are phenomenal. After all, the paint swatch can’t have all three of these colors; so it must have none. Of course, the paint swatch will have certain physical properties which are relevant to color perception — for example, it will be disposed to reflect different percentages of light of different wavelengths. But it will not have a color, if by “color” we mean the things with respect to which the visual systems of Persons 1, 2, and 3 disagree. So, on this view, colors must be like pains: an aspect or part of our conscious experience which would not exist if there were no minds having those conscious experiences.

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These quick examples are just meant to give you some handle on what it means to say that something is phenomenal, or mere appearance. Kant puts it like this:

“Appearances do not exist in themselves but only relatively to the subject in which, so far as it has senses, they inhere.”

Kant’s word for something which is not phenomenal, and instead is something whose existence does **not** depend on being felt or perceived by some mind, is **noumena**. He also calls noumena **things in themselves**, which, by contrast with phenomena,

“.. exist independently of us and our sensibility.”

Using this terminology, we can then ask: which seeming aspects of reality are noumenal, and which are merely phenomenal?

We’ve already seen that plausible arguments can be given that pains and colors are mere appearances. But Kant’s view was much more radical than that. His view was that

“everything intuited in space or time, and therefore all objects of any experience possible to us, are nothing but appearances, that is, mere representations ... This doctrine I entitle transcendental idealism.”

On the simplest interpretation of Kant’s words, he is saying that everything in space and time — and hence presumably also space and time themselves — are the way we argued that pains and colors are. They are mere appearances, dependent on being perceived and represented by minds for their existence.

I say that this is the simplest interpretation of Kant’s words, but almost everything about the interpretation of Kant on this topic is controversial. The interpretation I rely on here is defended and discussed in van Cleve’s *Problems from Kant*, which is also an excellent source for the problems we’ll be discussing today.

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Transcendental idealism strikes many as a radical view. Kant employed several different strategies in defending it; the one we'll focus on today is his attempt to show that the assumption that things existing in space and time are noumena, i.e. things in themselves, leads to absurdity.

In his *Critique of Pure Reason*, Kant tried to show this by arguing that if things in space were things in themselves, one of two contrary propositions — a Thesis, and an Antithesis — would have to be true; but that in fact neither the thesis nor the antithesis can be true.

He gave four arguments of this sort; we will discuss his second. Here are the Thesis and Antithesis:

*Thesis*

Every composite substance in the world is made up of simple parts, and nothing anywhere exists save the simple or what is composed of the simple.

*Antithesis*

No composite thing in the world is made up of simple parts, and there nowhere exists in the world anything simple.

The topic of each is the question of whether matter is ultimately made up of simple parts - parts which themselves have no proper parts. The Thesis says that it is; and the Antithesis says that there are no simples. It certainly seems as though one or the other of these claims must be true; Kant's aim is to argue that **both** are false. We will first examine his arguments for this conclusion, and then ask how this conclusion might be used to argue for Kant's transcendental idealism.

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First, let's consider Kant's argument against the Thesis: that there are simple things, and that composite things are composed out of these simples.

### *Proof*

Assume that a composite thing (as substance) is made up of simple parts. Since all external relation, and therefore all composition of substances, is possible only in space, a space must be made up of as many parts as are contained in the composite which occupies it. Space, however, is not made up of simple parts, but of spaces. Every part of the composite must therefore occupy a space. But the absolutely first parts of every composite are simple. The simple therefore occupies a space. Now since everything real, which occupies a space, contains in itself a manifold of constituents external to one another, and is therefore composite; and since a real composite is not made up of accidents (for accidents could not exist outside one another, in the absence of substance) but of substances, it follows that the simple would be a composite of substances — which is self-contradictory.

First, let's consider Kant's argument against the Thesis: that there are simple things, and that composite things are composed out of these simples.

Kant's argument takes the following form: he assumes the thesis for purposes of argument, and tries to show that it implies a contradiction. This, if successful, is enough to show that the thesis is false.

We can divide his argument into three stages.

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We can divide his argument into three stages.

In the first stage, Kant points out that since composition is something that happens in space, every part of every composite thing must take up space:

**Every part of every composite thing occupies space.**

In the second stage, Kant points out that if there are simples, then they must be the basic parts of composite things:

**The basic parts of every composite are simple.**

from which it follows that

**Simples occupy space.**

The problem is that it seems that, as Kant says, everything which occupies a space must “contain in itself a manifold of constituents” - i.e., have parts:

**Everything which occupies space has parts.**

Which leads to an absurdity:

Every simple has parts.

As mentioned earlier, one can think of this argument as assuming the thesis and showing that it can be used to derive a false conclusion, as follows.

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But the absolutely first parts of every composite are simple.

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Now since everything real, which occupies a space, contains in itself a manifold of constituents external to one another, and is therefore composite; and since a real composite is not made up of accidents (for accidents could not exist outside one another, in the absence of substance) but of substances, it follows that the simple would be a composite of substances — which is self-contradictory.

1. Everything is either simple or composed of simples. (Thesis)
  2. Every part of every composite thing occupies space.
  3. The basic parts of every composite are simple. (1)
  4. Simples occupy space. (2,3)
  5. Everything which occupies space has parts.
- 
- C. Every simple has parts. (4,5)

There are only two independent premises which the defender of the Thesis can challenge: 2 and 5.

To reject 2 is to say that there are simples which make up composites, but that they do not occupy any amount of space. Is this plausible?

How about 5's claim that everything which occupies space has parts? Is it true that (to put things somewhat metaphorically) every space has a left and a right half?

One might defend premise 5 by pointing out that everything which occupies space must have a length in, say, meters, but that every length can be subdivided into two.

This is Kant's argument that the Thesis must be false. Let's turn now to Kant's proof that the Antithesis must also be false.

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### *Proof*

Let us assume that composite substances are not made up of simple parts. If all composition be then removed in thought, no composite part, and (since we admit no simple parts) also no simple part, that is to say, nothing at all, will remain, and accordingly no substance will be given. Either, therefore, it is impossible to remove in thought all composition, or after its removal there must remain something which exists without composition, that is, the simple. In the former case the composite would not be made up of substances; composition, as applied to substances, is only an accidental relation in independence of which they must still persist as self-subsistent beings. Since this contradicts our supposition, there remains only the original supposition, that a composite of substances in the world is made up of simple parts.

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As with his argument against the Thesis, Kant begins by stating the claim to be disproven, and tries to show that this leads to absurdity:

**Composites are not composed of simples.**

i.e., composites are infinitely divisible.

If this were true, Kant says, then if we were to **completely decompose a composite** - i.e., separate the composite into its parts, and its parts into parts, until we have separated every composite thing into its parts - nothing would remain. No simples could remain, since given the Antithesis there are no simples. And no composites could remain, since in a complete decomposition every composite is decomposed.

**If we were to completely decompose a composite, nothing would remain.**

But, Kant thinks, this is impossible ("and accordingly no substance will be given"); it is impossible to destroy a composite simply by completely decomposing it:

**It is impossible for complete decomposition to destroy a composite.**

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2. If we were to completely decompose a composite, nothing would remain. (1)
3. It is impossible for complete decomposition to destroy a composite.

But if (3) is true, then one of two things must be true: (i) it must be impossible to completely decompose a composite, or (ii) after a complete decomposition of a composite something must remain:

Either it must be impossible to completely decompose a composite, or after a complete decomposition of a composite something must remain.

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4. Either it must be impossible to completely decompose a composite, or after a complete decomposition of a composite something must remain. (3)

But the second of these possibilities is already ruled out by premise (2). Hence the first possibility must be true:

C. It is impossible to completely decompose a composite. (2,4)

But Kant thinks that this conclusion is absurd: complete decomposition is always possible. (This is part of what he means when he says that "in the former case the composite would not be made of substances.")

Hence we have derived an absurd result from the Antithesis and it, like the Thesis, must be false.

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Hence we have derived an absurd result from the Antithesis and it, like the Thesis, must be false.

One might object to this argument that the conclusion is not really absurd; why not think that complete decomposition is impossible, and hence that the Antithesis is, for all we have shown, true?

However, upon reflection this is not such an easy position to maintain. Why should we think that complete decomposition is impossible? One might be tempted to argue as follows:

If there are no simples, then composites are infinitely divisible. Hence complete decomposition would involve infinitely many tasks. But infinite tasks are impossible to carry out.

Why might reliance on this argument be worrying?

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At this stage, we clearly have a paradox: it seems very much that either the Thesis or the Antithesis must be true; but we have arguments that both are false.

One might, of course, respond to this paradox by trying to resist either of Kant's proofs. But Kant's aim is persuade us that a third way out is preferable.

This third way out is Kant's transcendental idealism. What we need to understand is **how** this could be a way out of the paradox.

To do this, let's pause for a second to think about the form of the paradox presented by Kant's antinomy. Kant has argued that neither the Antithesis nor the Thesis is true. But this by itself is no paradox; the paradox arises from these claims **plus** the fact that it really seems that one or the other of these claims must be true.

Hence, it seems, we can lay out the paradox at hand as follows:

1. Either the Antithesis or the Thesis must be true.
2. The Antithesis is not true.
3. The Thesis is not true.

—————  
C. Either the Antithesis or the Thesis must be both true and not true.

The argument is valid, and the conclusion is definitely false. So one of the premises must be false. Kant has already defended (2) and (3) — his idea is that we must therefore reject (1), and that this commits us to transcendental idealism.

But how could transcendental idealism make room for (1) to be false? Here some analogies might help.

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But how could transcendental idealism make room for (1) to be false? Here some analogies might help.

Suppose that I am visiting a barnyard in Indiana, and come across the following beast:



This is a speckled hen so, naturally, I visually represent the hen as speckled.

But now consider my visual image of the hen. Exactly how many speckles does my visual experience represent the hen as having?

This is a difficult question to answer. One wants to say something like this: the visual image includes some speckles, but there is no determinate number of speckles that the image includes. After all, human vision is not so precise that it can, at a glance, represent a hen as having some exact number of speckles — say, 84.

But suppose that we said a similar thing **about the hen**, rather than about my visual image: that the hen has some speckles, but there's no determine number of speckles that it has. This seems not to make any sense. Whatever is true of my visual image, it can't be the case that the hen has some speckles, even though there is no number of speckles that it has.

If this does not convince you, consider a visual image of a big crowd:

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If this does not convince you, consider a visual image of a big crowd:



If we consider your visual image of the crowd from this vantage point, we want to say something similar to what we said about the hen: your visual experience represents there being lots of people in the stadium, but there is no exact number of people that your visual experience represents as present.

But we clearly cannot say this about the stadium itself: if there are a bunch of people in the stadium, then there must be some precise number of people that are in the stadium.

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The key question is: why are we inclined to treat the stadium differently than a visual image of the stadium?

It is not easy to know how exactly to answer this question, but it is at least tempting to say something like the following:

Look, a visual image is a **mere appearance**; it does not have any existence apart from the relevant visual experience. Mere appearances, or representations, of this sort don't have to be completely determinate, and usually they are not. They can "leave certain things open" in a way that reality can't be "open" or "indeterminate."

In this respect they are just like other representations, like novels. There doesn't have to be a fact of the matter whether Sherlock Holmes preferred spaghetti to linguini, does there?

But remember that the central claim of Kant's transcendental idealism is that things in space are also mere appearances, or mere representations. If transcendental idealism is true, we might be inclined to say something about the question of infinite divisibility similar to what we want to say about visual images.

We might say: every experience of something extended in space represents it as having parts, and hence as divisible. But does that experience represent it as infinitely divisible, or as having, ultimately, simple parts? The answer would be: neither. This is something left open by our representations, just like the exact number of speckles on the hen or people in the stadium.

The difference is that if transcendental idealism is true, there is no thing in itself, no noumena existing independently of our representations, which is extended in space and really must be infinitely divisible or not. After all, as Kant says:

"everything intuited in space or time, and therefore all objects of any experience possible to us, are nothing but appearances, that is, mere representations ... This doctrine I entitle transcendental idealism."

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As I mentioned earlier, Kant provided several other arguments of this sort for transcendental idealism: arguments which tried to show that each of two contrary propositions about space and time were false, and that transcendental idealism alone could explain how this could be. I want to turn now to a different sort of defense of transcendental idealism that Kant gave.

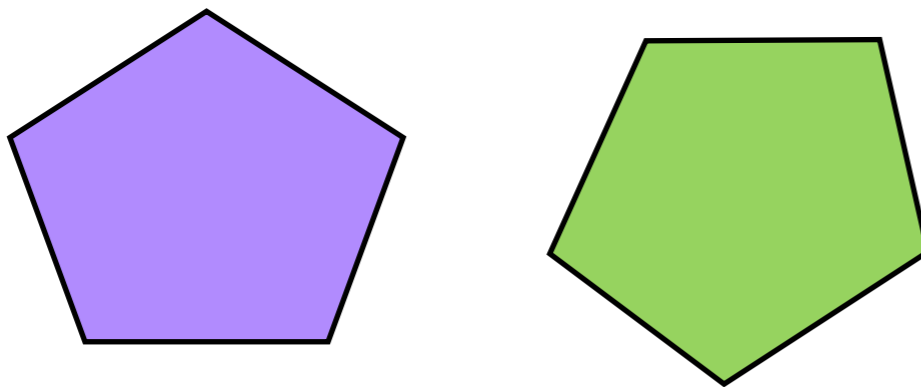
This defense focuses on the existence of pairs of figures which are called **incongruent counterparts**.

Here is what Kant says:

If two things are quite equal in all respects as much as can be ascertained by all means possible, quantitatively and qualitatively, it must follow that the one can in all cases and under all circumstances replace the other, and this substitution would not occasion the least recognizable difference.

That is, if two things are **counterparts** - if they are internally just the same in every respect - then they must be also be **congruent** - it must be possible for one to be able to replace the other, in the sense that it could be moved so as to occupy just the same space as the other thing.

This sounds extremely plausible. Consider, for example, a pair of shapes:



How can we tell whether these are internally just the same — i.e., whether their sides are the same length, and each angle is equal to the corresponding angle of the other figure?

We can move them to test for their congruence.

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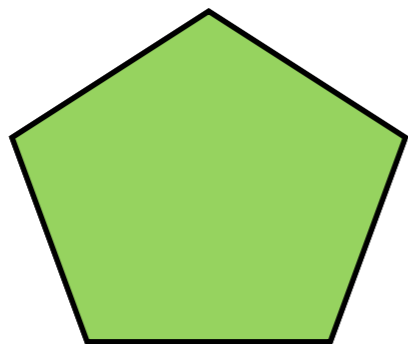
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How can we tell whether these are internally just the same — i.e., whether their sides are the same length, and each angle is equal to the corresponding angle of the other figure?

We can move them to test for their congruence.

It seems as though this should hold for any shape at all. It is thus surprising that this principle turns out to be false: there are examples of incongruent counterparts.

What can be more similar in every respect and in every part more alike to my hand and to my ear than their images in a mirror? And yet I cannot put such a hand as is seen in the mirror in the place of its original; for if this is a right hand, that in the mirror is a left one, and the image or reflection of the right ear is a left one, which never can serve as a substitute for the other. There are in this case no internal differences which our understanding could determine by thinking alone. Yet the differences are internal as the senses teach, for, notwithstanding their complete equality and similarity, the left hand cannot be enclosed in the same bounds as the right one (they are not congruent); the glove of one hand cannot be used for the other.

Kant points out here that two hands, one left and one right, are incongruent counterparts. They are internally just alike, but are not congruent.

In what sense are two hands internally alike? In just the same way in which our two figures were internally just alike: the angles between the fingers are the same in each case, as are the lengths of each finger, the width of the knuckles, etc.

But then how can we be sure that a pair of hands is really incongruent? Experiment: try putting your left glove on your right hand.

Kant's aim is to argue from the fact that hands are incongruent counterparts to the conclusion that hands are not things in themselves. Of course, what goes for hands will presumably also go for other spatial objects; so if Kant can reach his intended conclusion, this would go a long way toward establishing the truth of transcendental idealism.

Why does Kant think that the fact that hands are incongruent counterparts shows that they cannot be things in themselves? Here is what he says:

Why does Kant think that the fact that hands are incongruent counterparts shows that they cannot be things in themselves? Here is what he says:

What is the solution? These objects are not representations of things as they are in themselves, and as some pure understanding would cognize them, but sensuous intuitions, that is, appearances, whose possibility rests upon the relation of certain things unknown in themselves to something else, viz., to our sensibility. Space is the form of the external intuition of this sensibility, and the internal determination of any space is possible only by the determination of its external relation to the whole of space, of which it is a part (in other words, by its relation to external sense). That is to say, the part is possible only through the whole, which is never the case with things in themselves as objects of the mere understanding, but can well be the case with mere appearances. Hence the difference between similar and equal things which are not congruent (for instance, helices winding in opposite ways) cannot be made intelligible by any concept, but only by the relation to the right and the left hands, which immediately refers to intuition.

Here Kant seems to be arguing in something like the following way:

1. The two hands are incongruent.
2. The two hands differ with respect to the space they occupy. (1)
3. The two hands are internally alike.
4. The two hands differ only in their relations to something outside of themselves. (3)
5. The only thing with respect to which the hands could differ in their relations are experiences of them.
6. The only thing with respect to which the hands could differ at all are experiences. (4,5)

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C. Two things can differ with respect to the space they occupy even if they only differ in their relations to experience. (2,6)

Here Kant seems to be arguing in something like the following way:

1. The two hands are incongruent.
  2. The two hands differ with respect to the space they occupy. (1)
  3. The two hands are internally alike.
  4. The two hands differ only in their relations to something outside of themselves. (3)
  5. The only thing with respect to which the hands could differ in their relations are experiences of them.
  6. The only thing with respect to which the hands could differ at all are experiences. (4,5)
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- C. Two things can differ with respect to the space they occupy even if they only differ in their relations to experience. (2,6)

If this argument is sound, then it looks like we are pretty close to transcendental idealism. After all, if the conclusion is true, then it looks like genuine spatial differences are partly explained by experience; and how could this be true unless the facts about the space things occupy are dependent upon experience? This is of course the characteristic claim of the transcendental idealist.

The most promising challenge to this argument focuses on premise (5). Why not say that the differences between left and right hands are to be explained by their relations to other things, but **not** by their relation to experiencing subjects? The differences could, after all, be explained by their relations to other spatial things - like, for example, gloves.

Here is one way to challenge this response: imagine a universe which contains exactly one object: a hand. Wouldn't there have to be a fact of the matter about whether this was a right hand or a left hand? But, if so, the differences between left and right hands can't be explained by relations to other spatial things.

One might instead try to deny premise 5 by saying that the hands differ in their relation to **space itself**, considered as something distinct from the objects which occupy space.

But again think of the universe which contains only one hand. Would a left hand bear any relation to space itself which would not also be borne by a right hand?

Do we have to imagine that the universe would include not only space itself, but also built in **directions**? What would this mean?