

# 1000-Word PHILOSOPHY

AN INTRODUCTORY ANTHOLOGY

[1000wordphilosophy.com/2018/12/08/possibility-and-necessity-an-introduction-to-modality](http://1000wordphilosophy.com/2018/12/08/possibility-and-necessity-an-introduction-to-modality)

## **Possibility and Necessity: An Introduction to Modality**

Author: Andre Leo Rusavuk

Category: Metaphysics

Word count: 991

We frequently say things like, ‘This seems possible,’ ‘That can’t be done,’ ‘This must happen,’ ‘She might be able to . . .,’ ‘This is necessary for . . .’ and so on.<sup>[1]</sup>

Claims like these are *modal* claims. They involve the modal concepts of *actuality*, *possibility*, and *necessity*. Modality concerns the *mode* or *way* in which a claim is true or false, and *how* something exists or does not exist.

This essay explains basic modal concepts, illustrates some different *kinds* of possibility and necessity, and briefly explains how we try to identify whether a modal claim is true or false.

### **1. Modal Concepts**

Modal concepts apply to *claims* and *beings*, at least.<sup>[2]</sup> Here are some basic definitions concerning claims, beliefs or sentences:

- a claim is *possibly true* if it could be true; it’s *possibly false* if it could be false;
- a claim is *necessarily true* if it must be true and cannot be false; it’s *necessarily false* if it must be false and cannot be true;<sup>[3]</sup>
- a claim is *contingently true* if it is actually true, but could have been false; true, but not necessarily true.

Concerning beings, people and things:

- a *being* is a possible being if it (he, she) *could* exist: a being is *impossible* if it couldn’t exist;
- a *necessary* being *must* exist: a *necessarily non-existent* being cannot exist;

- *contingent* beings, like us, actually exist, but could have failed to exist: they are neither necessary nor impossible beings.

### **2. Kinds of Possibility & Necessity**

There are many *kinds* or *types* of possibility and necessity. To understand a modal claim, we must identify what kind is meant.<sup>[4]</sup> Consider these claims:

- It’s *possible* for Mary to jump to the moon.
- *Necessarily*, Plato is either alive or not alive.
- It’s *impossible* that something begin to exist but not have a cause.

#### **A. Logical Possibility & Necessity**

(1) might seem false, since nobody can jump to the moon, right? But (1) is true *if logical* possibility is what’s meant. Jumping to the moon is *logically possible*: that’s not a contradiction and so made impossible by the laws of logic. It’s logically possible that mythical creatures exist, for someone to bench-press a locomotive, and for a dog to speak French.

The claim “Plato is both alive and not alive,” however, is contradictory and so a logical impossibility. Logical truths like “if  $A > B$  and  $B > C$ , then  $A > C$ ” and “ $A$  is identical to  $A$ ” are logical necessities.

#### **B. Physical (or Natural) Possibility & Necessity**

It is *logically* possible for Mary to jump to the moon. Is it *physically* possible? No. Something is *physically possible* if it the physical laws of nature would allow it to happen. Mary’s jumping to the moon is physically impossible: the physical laws of nature won’t allow it. Cars driving twice their current top speed are physically possible: going twice the speed of light is physically impossible.

A claim is a physical necessity if it must be true, given our physical laws: e.g., it is *physically* necessary that unsupported objects fall to the ground. This, however, is not logically necessary: there is no logical contradiction in floating, unsupported objects. Logical possibility and necessity entail, but are not entailed by, physical possibility and necessity.

#### **C. Metaphysical Possibility & Necessity**

Metaphysical possibility and necessity are the most controversial, and hardest to define, kind of modality. These are possibilities and necessities defined *not* by logic or the actual physical world, but, rather, reality itself.

Claim (3) then might be understood that it is *metaphysically* impossible for something to begin to exist and yet be uncaused. The claim “something began to exist but is uncaused” is not self-contradictory, so it is not a logical impossibility. And it does not seem to be a mere physical impossibility, only impossible in a world with physical laws like ours. (3) seems to be a metaphysical impossibility, since nothing can begin to exist and remain uncaused in *any* circumstance.

Some *physical* impossibilities are *metaphysically* possible: e.g., the laws of nature allowing for moving faster than light.

Some metaphysically necessary truths include truths of mathematics ( $2+2=4$ ) and analytic truths or definitions (“all bachelors are unmarried males”): these must be true, but not because of logic or the physical world.

Some philosophers see metaphysical modality as concerned with what things *are*, in their natures or essences; so, water *is*  $H_2O$ , *necessarily*: in no possible circumstances is water *not* composed of  $H_2O$ .<sup>[5]</sup> In the same way, necessarily, if an object has a shape, then it *must* have a size: this is in the nature or essence of shapes.

#### **D. Other Modalities**

There are still other *kinds* of necessity and possibility, e.g.:

- a belief is *epistemically* possible if, for all we know, it could be true: “There might be life on Mars!”
- it is *morally* impossible for good parents to abuse their children “for fun”: moral laws and good parents’ character make this impossible;
- it could be *psychologically* impossible for someone intentionally to eat a cockroach, given her aversion to bugs;
- something is *technologically* possible if technology might someday allow for it: e.g., medical treatments from Star Trek or from Wakanda, or robotic soldiers in the military;
- something is *legally* necessary if the law of the land requires it: e.g., wearing a seat belt.<sup>[6]</sup>

#### **3. Knowing What’s Possible & Necessary**

How can we tell whether something is possible or necessary?<sup>[7]</sup>

First, we must clarify what *kind* of possibility or necessity is meant by the claim: logical, physical, metaphysical, legal, or something else?

Next, we try to *imagine* whether what is said can or must be true, given the relevant laws that govern that type of modality, e.g., the laws of logic, the physical laws, and so on.<sup>[8]</sup>

This method, too-briefly described, is controversial, but it is a starting point.

#### **4. Conclusion**

Claims about what *can*, *cannot*, and *must be* are pervasive to many areas of thinking. We now better understand what they mean and how to try to tell whether they are true or false.

#### **Notes**

[1] Modality is present in daily thinking and scientific theorizing and is *pervasive* to philosophy. For examples, ethical reasoning presumes that there are different *possible* actions we could do and some that we *must* do: consequentialists typically state their theory in modal terms, that we *must* perform the best *possible* action (see Introduction to Consequentialism by Shane Gronholz). The free will debate results from tensions between thinking that, given the past, we *must* act in certain ways and thinking that there are many *possible* choices we *could* make, and there is the related issue of whether it must be *possible* that you do other than what you actually do in order to be morally responsible for your actions (see Alternate Possibilities and Moral Responsibility by Rebecca Renninger and Free Will and Moral Responsibility by Chelsea Haramia). A common idea of God is that of a being who *must* have certain attributes (see Attributes of God by Bailie Peterson); ontological arguments for God’s existence involve claims that reflection on the concept of God shows that such a being *must* exist or *necessarily* exists (see The Ontological Argument for the Existence of God by Andrew Chapman); some arguments from evil, however, claim it is *impossible* that God exists, given the amount and types of evils in the world (see The Problem of Evil by Thomas Metcalf). Epistemologists ask if it is *possible* that you have false beliefs about what seem to be even the clearest and obvious matters (see Descartes’ “I think, therefore I am” by Charles Miceli). Metaphysicians ask what changes *could* occur to you, yet you continue to exist, and is *necessary* for your continued existence

(see Origin Essentialism by Chad Vance). Indeed, some might argue that modal claims are *necessary* for a topic to be philosophical: it is *not possible* that a topic be philosophical yet there are no modal claims closely related to the topic.

[2] Modal concepts also apply to *events* or things that happen, e.g., that *you could win a prize*. Since events can be understood in terms of the *claims* or *propositions* that represent those events, the claim “you could win a prize” is a possible truth, or is possibly true.

[3] Possibility and necessity are related. Something is possible *if* its failing to occur is *not necessary*; if something is *necessary*, its *failure* to occur is *not possible*. Divers (2002), 3-4, provides a nice summary: “Possibility rules out impossibility and requires (exclusively) contingency or necessity. Impossibility rules out possibility, rules out necessity and rules out contingency. Necessity requires possibility, rules out impossibility and rules out contingency. Contingency requires possibility, rules out impossibility and rules out necessity.”

[4] For further discussion, see Kment, Boris, “Varieties of Modality”, *The Stanford Encyclopedia of Philosophy* (Spring 2017 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/spr2017/entries/modality-varieties/>>.

[5] For a good overview of the issues surrounding metaphysical modality, see Ross P. Cameron, “What’s Metaphysical About Metaphysical Necessity?” *Philosophy and Phenomenological Research*, Vol. 79, 1, (July 2009): 1-16.

[6] Many examples of modality in this essay were given to illustrate the ways in which those claims could be true or false: this is known as *alethic* modality, which concerns the truth and falsity of a claim. Other types of modality are *non-alethic*, meaning the modal word does not indicate a concern about the truth or falsity of the claim, but something else. For example, one non-alethic interpretation of “Claim p is possible” is an *epistemic* one, which deals not with the truth or falsity of the claim but with whether anything the speaker knows suggests or entails that the claim is false. So, “Claim p is *possible*” might mean “Nothing I know entails that claim p is false” or “Nothing I know makes it such that we should not believe p.”

[7] For further discussion, see *Modal Epistemology: Knowledge of Possibility & Necessity* by Bob Fischer and Vaidya, Anand. “The Epistemology of Modality.” *The Stanford Encyclopedia of Philosophy*, (ed.) Edward N. Zalta. URL: <https://plato.stanford.edu/entries/modality-epistemology>

[8] One fruitful philosophical concept to aid our imagination is called *possible worlds*, or ways the world could have been. So, in some possible worlds, e.g., pigs fly, water freezes at 50 degrees Fahrenheit, and grass is orange. Here we consider imaginary “worlds” determined by different laws, e.g., logically-possible worlds, physically-possible worlds, and so on. “Possibly true” then means *true in at least one possible world*, “necessarily true” means *true in all possible worlds*, and “contingently true” means *true in the actual world but not all worlds*. For a brief, further discussion of possible worlds, see *Quantum Mechanics and Philosophy III: Implications* by Thomas Metcalf.

### References

Cameron, Ross P. “What’s Metaphysical About Metaphysical Necessity?” *Philosophy and Phenomenological Research*, Vol.79, 1, (July 2009): 1-16.

Divers, John. *Possible Worlds*. Routledge, 2002.

Kment, Boris, “Varieties of Modality”, *The Stanford Encyclopedia of Philosophy* (Spring 2017 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/spr2017/entries/modality-varieties/>>.

Vaidya, Anand. “The Epistemology of Modality.” *The Stanford Encyclopedia of Philosophy*, (ed.) Edward N. Zalta. URL = <https://plato.stanford.edu/entries/modality-epistemology>

### For Further Reading

Parent, Ted. “Modal Metaphysics,” *Internet Encyclopedia of Philosophy*, J. Feiser & B. Dowden (eds.). <http://www.iep.utm.edu/mod-meta/>.

Conee, Earl, and Theodore Sider. *Riddles of Existence: A Guided Tour of Metaphysics*: New Edition. Oxford University Press, 2014.

### Related Essays

*Modal Epistemology: Knowledge of Possibility & Necessity* by Bob Fischer

Quantum Mechanics and Philosophy III:  
Implications by Thomas Metcalf

Introduction to Consequentialism by Shane Gronholz

Alternate Possibilities and Moral Responsibility by  
Rebecca Renninger

Free Will and Moral Responsibility by Chelsea  
Haramia

Attributes of God by Bailie Peterson

The Ontological Argument for the Existence of God by  
Andrew Chapman

The Problem of Evil by Thomas Metcalf

Descartes' "I think, therefore I am" by Charles Miceli

Origin Essentialism by Chad Vance

### ***Acknowledgments***

I would like to thank the editors and reviewers—  
especially Nathan Nobis, Bailie Peterson and Devon  
Belcher—for their helpful comments which greatly  
improved this essay.

### ***About the Author***

Andre Leo Rusavuk graduated from the University of  
Birmingham (UK) with a PhD in Philosophy where he  
wrote his dissertation on luck and perfect being  
theism. He teaches at a private classical education  
high school in North Carolina where he introduces  
students to the fascinating world of philosophy. (And  
yes, his students call him Dr. Dre!)  
[philpeople.org/profiles/andre-rusavuk](http://philpeople.org/profiles/andre-rusavuk)

FOLLOW 1000-WORD PHILOSOPHY  
ON FACEBOOK AND TWITTER AND SUBSCRIBE TO  
RECEIVE EMAIL NOTICE OF NEW ESSAYS AT THE  
BOTTOM OF [1000WORDPHILOSOPHY.COM](http://1000WORDPHILOSOPHY.COM)