

8. Definitions and their Purposes

8.1 Introduction

Exercise: Map and evaluate the following argument.

Boyfriend and Girlfriend

Person C: Are you boyfriend and girlfriend?

Person A: Of course!

Person B: Um... no...?

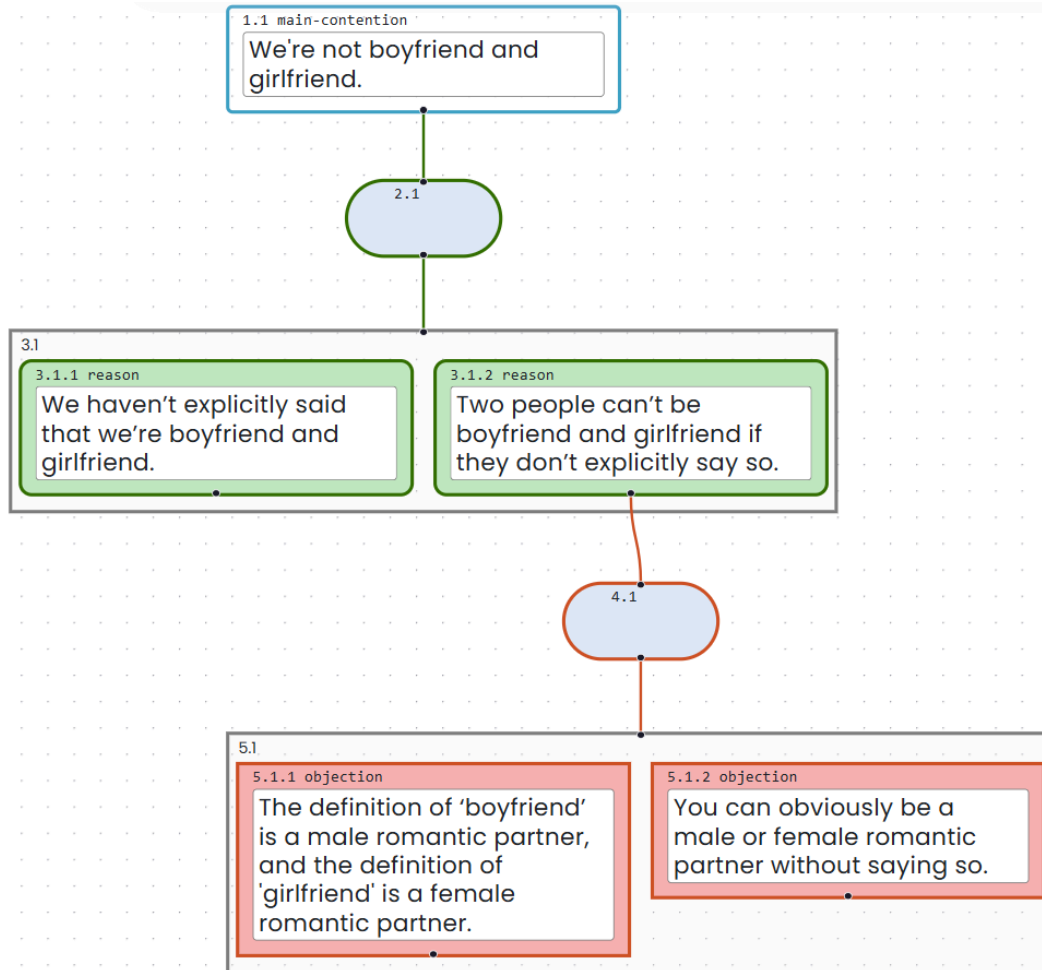
Person A: Excuse me?!?!

Person B: Well, we haven't explicitly *said* that we're boyfriend and girlfriend. And two people can't be boyfriend and girlfriend if they don't explicitly say so.

Person A: That's ridiculous! We don't need to say so. The definition of 'boyfriend' is a male romantic partner, and the definition of 'girlfriend' is a female romantic partner. And you can obviously be a male or female romantic partner without saying so.

Solution:

Map:



Map of Girlfriend Boyfriend

Evaluation: Person A's objection to person B relies on a claim about the definitions of 'boyfriend' and 'girlfriend.' We looked up these terms in the dictionary, and it supported their claims about their definitions. That being said, the dictionary must be used with caution for these kinds of argumentative purposes; it remains plausible to us that some degree of mutual recognized relationship status is necessary for a relationship to be one between boyfriend and girlfriend. Person A's other co-premise, about the possibility of being a romantic partner without saying so, seems reasonable to us, though we're open to counterarguments. Finally, their inference seems strong.

This debate hinges on a definition. Person A's final objection to person B's argument is that it conflicts with the definition of 'boyfriend.' Maybe you've heard something like this before, someone asserting that a claim is true or false "by definition." Definitions clarify words' meanings. And meanings can enter into arguments in other ways, like rejecting a claim on the grounds that it contains a meaningless term. Sometimes, people try to avoid questions or deflect objections with the response, "it depends what you mean by" some key term in the question or objection. Debates about important things like friendship, racism, and democracy sometimes come down to how we define or what we mean by these terms.

This chapter is about the role of definitions in reasoning. While a definition can be a powerful source of reasons or objections, it's important to critically evaluate claims that about what is so "by definition." We'll explore how to properly use and evaluate definitions as premises in arguments, and also how to argue for and against proposed definitions. We'll distinguish between two different kinds of definition—traditional conceptual analysis and ameliorative definition—and explore the kinds of arguments that are appropriate to each.

A note about terminology: we use 'term' and 'concept' roughly interchangeably, and we use 'property' loosely. While a finer-grained analysis of these things and their interconnections may be important for a systematic analysis of thought and truth, the payoff of learning about them, in terms of widely applicable reasoning skills, would be too small to justify the time investment it would require. Learning about and practicing with a few core aspects of definitions will significantly deepen and strengthen our reasoning.

8.2 Traditional Conceptual Analysis

In general, a definition tells us how a word is to be understood. It does this by identifying properties that make the word apply to something and/or that something must have for the word to apply to it. For example, the properties of being a plane figure, having four equally long straight sides, and four right angles define 'square.' A definition that combines these properties tells us what it is to be a square.

Definitions come in different varieties. The first kind we'll explore is:

"Traditional conceptual analysis": stating the actual meaning of a term or, equivalently, the content of a concept (hence the term "conceptual").

If someone puts forward a definition of an English word, and they intend it as traditional conceptual analysis, then we evaluate it according to three main criteria:

- Does it accord with how the term is used?
- Are the properties used to define the term real?
- Is the definition informative? For example, is it non-circular?
- Is the definition clear?

All Lies!

Person A: You told me you'd meet me at the café, but you didn't. So, you lied!

Person B: I didn't lie, I was just wrong.

Person A: That's what a lie is, by definition! A 'lie' literally means a false statement.

Person B: No, it doesn't. If someone believes what they say, and has good reason to do so, but makes an honest mistake, no one would call that a lie.

In this example, person B uses facts about how the word 'lie' is actually used to object to person A's definition of the term. This is what an objection to a traditional conceptual analysis should look like.

However, if person A's definition were of a different kind, then invoking the word's use might not constitute a strong objection. We'll now turn to one of these other kinds of definition.

8.3 Ameliorative Analysis and Explication

In the 20th Century, the term 'planet' referred to Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and, most importantly for our purposes, Pluto. However, when astronomers discovered a new celestial body, they had no generally accepted rule for determining whether it was a planet or not.

This changed in 2006. In that year, the International Astronomical Union (IAU) adopted a new definition of the term 'planet' for objects in our Solar System. The organization's definition was, simplifying a bit, that 'planets' are all and only things with the following properties:

1. Orbits the Sun,
2. More or less round due to its mass, and
3. Gravitationally dominant in its neighborhood of the Solar System.

The IAU probably didn't intend this definition as a traditional conceptual analysis. For, at the time, English speakers called Pluto a planet. So, their definition wouldn't have fit with how the term was used. Furthermore, they argued for their definition, but not by trying to show that it fit with how the term was used. Instead, they argued that their definition would be more scientifically useful than how they had previously used the term.

These considerations suggest to us that the IAU's definition should be interpreted as being of the following kind:

An "ameliorative definition" proposes to change the meaning of a term to make it better contribute to chosen goals ([Haslanger 2005](#)).

So, in an ameliorative definition, we think of language as a tool for accomplishing goals. Many different kinds of goals can drive this kind of analysis. We just saw an example involving scientific goals. Other kinds of goals that might motivate other ameliorative analyses include moral, political, legal, artistic, or even spiritual goals.

Knowing that a definition is ameliorative helps us evaluate it: we evaluate an ameliorative definition based on how well it accomplishes its goals. We might also assess the goals themselves, as worthy or unworthy of pursuit. By contrast, pointing out that the definition conflicts with actual usage will usually be a weak objection. While ameliorative definitions generally seek to preserve *some* of the term's current meaning, they're also generally fine with significant deviations.

Let's see how all this works in the case of the IAU's definition of 'planet.' An ameliorative definition like this one, which pursues scientific goals, has received special attention and has its own name:

"Explicating" an existing term is giving it a new and improved meaning with the goal of making it more suited to science.

Carnap ([1950](#), 6-7) introduced this term and put forward four criteria for evaluating explications:

- **Exactness:** An explication is exact to the extent that it's not vague, is rigorously and clearly stated, and connects its target concept to the broader network of scientific concepts.
- **Fruitfulness for science:** An explication is fruitful to the extent that it lets us express useful laws of nature, that is, general scientific statements.
- **Similarity to the original concept:** An explication should be similar enough to its target concept to replace it in a wide range of contexts. Perfect similarity isn't required.
- **Simplicity:** Simplicity applies to both the sentence stating the explication, and the connections between the explication and other bits of knowledge.

We claimed that the IAU definition of 'planet' was an explication (as opposed to a traditional conceptual analysis). How well does it do on these four criteria?

Exactness: The definition scores "exactness points" for explicitly stating three conditions that are necessary and sufficient for being a planet. (More on necessary and sufficient conditions in the ensuing chapter.) These conditions connect the definition to the broader network of scientific concepts. This is important, as it allows astronomers to systematically classify newly discovered objects in our Solar System as either planets or not. Prior to the definition, there was no generally accepted rule for doing this. With that being said, the new definition isn't perfectly exact. Its conditions use vague phrases like "gravitationally dominant in its neighborhood" and "more or less round."

Fruitfulness: It's hard to find examples of verified natural laws that can be expressed with the new definition but not the old one. However, we can formulate hypotheses that are consistent with all available evidence under the new definition, but that are false under the old definition. This at least gives us a sense of how fruitfulness works. Consider the hypothesis:

Nonsatellite bodies directly orbiting the Sun exhibit a large natural gap in gravitational dominance, with planets on the high end of this gap, and everything else on the other end.

The known Solar System bodies satisfy this hypothesis on the IAU definition of 'planet.' However, if we interpret 'planet' in the older sense, which includes Pluto, this hypothesis would be untrue: Pluto is on the low end of the gravitational dominance gap. So, the IAU definition lets us formulate a new candidate scientific generalization.

Similarity to the original concept: The IAU definition is similar to the older definition. It classifies eight of the nine traditional planets as planets, excluding only Pluto. And some of its conditions, like approximate roundness and orbiting the Sun, accord with how the term is commonly used.

Simplicity: The concept incorporates three conditions into a relatively simple logical form. (Necessary and sufficient conditions, to be precise; more on those in an ensuing chapter.) However, some of these seemingly simple individual conditions conceal complexity. For example, 'gravitational dominance' is shorthand for a more complex phrase.

Given its performance on these four criteria, overall, the IAU definition strikes us as a step forward and as a plausible explication. In other words, we can construct a strong argument, based on these four criteria, for adopting this explication.

It's important to note, though, that, when it comes to explication, success is a matter of degree. So, different people could propose different explications, and it might be impossible to say whose is better overall. What should we do when that happens? One option is to each in the contexts to which it's best suited. We don't need to crown one definition as the One True Explication of a given term.

Exercises: Evaluate person B's objection to person A. That is, say whether it's a good or bad objection and why. Mapping the arguments, including your evaluation, is optional.

1. Person A: I propose that, for purposes of climate research, we define a 'desert' as a region that receives less than 250 millimeters of precipitation per year. This definition would let us use measurable data to classify and compare dry regions.

Person B: That's a terrible definition! Antarctica receives less than 250 millimeters of precipitation per year, but hardly anyone would call Antarctica a desert.

2. Person A: I propose that, for purposes of medical science, we define a 'disease' as any statistically uncommon condition. This definition would be good for identifying conditions that demand treatment.

Person B: Um, let's not define 'disease' that way. Think about it. Left-handedness is a statistically unusual condition. However, classifying it as a disease would be unhelpful for identifying conditions requiring treatment.

3. Person A: When people testify in court, write memoirs, or tell family stories, they often distinguish what they remember from what they learned later. To understand what those claims mean, we need an analysis that captures the actual use of the word 'remember.' I think a person remembers an event just when they have an accurate belief about what happened during it.

Person B: That cannot be what remember ordinarily means. Priya accurately believes that she was born in a hospital because her parents told her so. But Priya does not remember being born.

4. Person A: The best way to understand 'consent' is as anything a person says 'yes' to. This would allow the criminal justice system to determine whether someone's consent has been illegally violated. This is why John gave his dentist his consent to put the diamond grill on his teeth, since he said 'yes' to it.

Person B: That's a bad definition of 'consent.' Someone might utter the word 'yes' because they were drugged or threatened with violence. We wouldn't want to count those as cases of consent. The criminal justice system is in principle as capable of determining whether those kinds of things have occurred as whether someone has said 'yes.' As for John, I don't know whether he said 'yes' freely and of sound mind.

Solutions:

1. Person B's objection has some force, but is far from decisive. Person A has proposed their definition as an ameliorative definition (an explication, specifically). Ameliorative definitions strive for a reasonable degree of similarity to the meaning they're replacing. However, they don't strive for a high degree of similarity, and so, identifying one deviation like this is a relatively weak objection. A

stronger objection would show that the definition doesn't help achieve its goal. In this case, that would be showing that the definition wasn't helpful for scientific research.

2. Person B's objection is a good one. Person A has proposed their definition as an ameliorative definition (an explication, specifically). Person B's objection shows that person A's definition wouldn't contribute to its goal, which is medical research. That's what we want from an objection to an ameliorative definition.
3. Person B's objection is a good one. Person A offered a traditional conceptual analysis of the term 'remember.' Person B showed that people's use of the term conflicts with this analysis. And a traditional conceptual analysis is supposed to accord with how people use the term.
4. Person B's objection is a good one. Person A has proposed their definition as an ameliorative definition. Person B's objection shows that person A's definition wouldn't contribute to its goal, which is for the criminal justice system to be able to determine whether consent has been violated. That's what we want from an objection to an ameliorative definition.

8.4 Terms Left Undefined

Exercise: Evaluate this argument.

Stop Surveilling

Person A: The University should stop surveilling students with facial-recognition cameras. Doing so is a violation of students' privacy rights.

Person B: What does "privacy" even mean?

Person A: Geez, that's a tough question. I don't have a definition at my fingertips.

Person B: Then your claim is meaningless, since if you can't define a term, then your use of it is meaningless.

Solution: There's a big problem with person B's argument: We can't define all of our meaningful terms. Suppose we were to try. Let's say we start with the term 'planet,' since we already have the definition. Now we notice that terms occur in the definition—terms like 'Sun,' 'orbit,' 'gravitational,' and so on. We're trying to define all terms, so we define these as well. But then the same thing happens: there are terms in our definitions of these terms. If we were to try to define every term, this process would either continue forever or else become circular.

The argument we just gave suggests that we can't non-circularly define every meaningful term. Rather, some must be left undefined.

That being said, "I must always leave some terms undefined" is no excuse for failing or refusing to define terms where it would be appropriate to do so. Furthermore, even if we have good reason to leave a term undefined, we might still be able to clarify it by providing illustrations, giving near-synonyms, and more. See also the rules of thumb below.

For example:

Alignment with Presence Power

Your presence is your power. When you are in alignment with the presence of your power, anything is possible ([Bernstein 2024](#)).

We don't understand what 'presence,' 'power,' or 'alignment' mean in this context. These are meaningful words of standard English, but we get the impression the author is using them in a revised, nonstandard sense. A definition or some other form of clarification would help.

We find a related issue in the IAU's definition of 'planet.' In our formulation, the definition uses the phrase 'gravitationally dominant.' Astronomers understand this phrase reasonably well, but not perfectly. The idea is that the gravitationally dominant object controls smaller nearby objects' orbits. However, it would be nice to have a definition of this term that would make clear how to measure it and what degree of dominance is required for planethood. (Astronomers have proposed such definitions.)

To summarize where we're at, sometimes it's okay to leave a term undefined, but sometimes it's not. When is it the one and when is it the other, though? There are probably no exceptionless universal rules for making this decision. But there are some rules of thumb that can help:

- To the extent that the audience or participants in the conversation don't understand the term, it should generally be defined.
- If the term is ambiguous (it has multiple meanings), and it's unclear which meaning is intended, then the intended meaning should be indicated.
- If the term is vague in a way that makes the argument harder to grasp or evaluate, then, if possible, it should be given a more exact definition.
- The more important the term is in its context (for example, the more crucial its role in an argument), the more important it is to define it.
- If it's unclear what would count as evidence for or against claims involving the term, then the term should be given a definition that provides more clarity.

While we should be cautious with accusations of meaninglessness, they're sometimes appropriate. Again, there are no generally agreed-upon exceptionless rules for identifying nonsense, but there are useful rules of thumb. If you suspect a term or claim of being meaningless, ask the following questions about it and the speaker:

- Can the speaker paraphrase their claim using more familiar language?
- Can they give examples? Nonexamples?
- Can they identify features that are relevant to applying the term, even if these aren't full-fledged sufficient conditions?
- Can they say what contentions the claim supports and why? Or, more generally, what difference accepting or rejecting it would make?
- Can they say what kind of possible evidence would, if found, count against the claim?

Failure on any one of these tests doesn't guarantee meaninglessness. Rather, the more of them a term or claim fails, the more justified one's suspicion it's meaningless. Suppose we repeatedly ask the author of the Alignment for Presence Power for information about the current alignment of our presence, and what possibilities this should open up, and that we interpret these answers charitably, but we never get a straight answer. We would then be justified in suspecting the claim of meaninglessness.

Exercises

1. Does the term need a definition?

For each case, decide whether the italicized term should be defined or otherwise clarified in that context. Explain your answer.

1. Jordan says, "The new comedy was *funny*."
2. A university policy says that students may be suspended for "seriously *disruptive* behavior."
3. Priya says, "Let's meet somewhere *near campus*."
4. An emergency plan requires hazardous materials to be moved a "*safe distance*" from occupied buildings.
5. A friend says, "I'm too *tired* to go out tonight."

Suggested solution:

The terms in 1 and 5 can probably be left undefined. Their ordinary meanings are sufficiently clear for the relatively undemanding contexts in which they occur. The other cases give us stronger grounds for requesting clarification. Suspension is a serious consequence, and different interpretations of *disruptive* could lead to inconsistent or unfair decisions. *Near campus* might need clarification before the friends can successfully meet. A safety rule should indicate how a safe distance is determined because people must apply it consistently and mistakes could cause serious harm.

This exercise illustrates that the need for a definition or clarification depends partly on context and stakes.

2. Evaluate the objection

Person A: The professor's attendance policy is unfair. It gives the same penalty to students who miss class because of a medical emergency and students who simply decide not to attend.

Person B: Define *unfair*.

Person A: I can give examples and explain why I think this policy is unfair, but I can't give necessary and sufficient conditions for everything that counts as unfair.

Person B: Then *unfair* is meaningless, so your objection to the policy fails.

Exercise: Evaluate Person B's argument.

Suggested solution:

Person B's argument is weak. Person A's inability to provide necessary and sufficient conditions does not show that *unfair* is meaningless. Person A has identified a relevant feature of the policy: it treats students with importantly different reasons for missing class in the same way. That explanation helps us understand and evaluate the claim, even without a complete definition of *unfair*. Person B could reasonably ask additional questions, but they have not established meaningfulness.

A demand for a general analysis of fairness would be appropriate in the context of a debate about a policy whose fairness derived from opposing understandings of the term.

3. Apply the meaningfulness questions

Consider the following claim:

Wearing this bracelet aligns your personal energy with the universe, allowing your deeper potential to emerge.

Answer each of the following questions as best you can, using what you know of claims like this.

1. Can the claim be paraphrased in more familiar language?
2. What would be a clear example of someone's energy being aligned?
3. What would be a clear nonexample?
4. What features determine whether someone's energy is aligned?
5. What observable difference would alignment make?
6. What possible evidence would count against the claim?

On the basis of your answers, is it reasonable to suspect that the claim is meaningless, merely unclear, or meaningful but unsupported?

Suggested solution:

As stated, the claim gives us no clear application conditions, measurement procedure, consequences, or potential counterevidence. It might be a metaphor for becoming calmer or more focused. If so, it could be clarified in ordinary language. If it is intended as a literal claim about a special kind of metaphysical energy interacting with the universe, then the absence of answers to questions 1-6 gives us reason to suspect that it lacks determinate meaning.

4. Can the unclear claim be rescued?

For each claim, give at least one plausible clarification. Then decide whether the original claim was meaningless or merely unclear.

1. "Social media is toxic."
2. "The campus has lost its soul."
3. "This medication restores balance."
4. "The university needs a stronger community."

5. “The crystal increases spiritual frequency.”

Suggested solution:

The first four can readily be given plausible interpretations. *Toxic* might mean that using social media predictably damages users’ well-being; losing its *soul* might mean abandoning the institution’s central values; restoring *balance* might refer to a measurable biological condition; and a stronger *community* might mean more trusting and supportive relationships. These expressions are unclear or metaphorical, but not obviously meaningless.

The fifth is harder to clarify. If *spiritual frequency* merely means a person’s mood or sense of purpose, the claim can be paraphrased. If it purports to identify a literal frequency, the speaker owes an account of what is oscillating and how its frequency is measured. Continued inability to supply one would support suspicion of meaninglessness.