2.9: Uncovering Implicit Premises

Reasoners often leave parts of their reasoning unstated. Emilio left something unsaid when he argued that "If the stream were poisonous, everything in it would look dead. There are water spiders and plants in the stream. It's no death trap." Emilio meant for Juanita and you to assume that the water spiders and plants in the stream are not dead. He just didn't say so explicitly. It was too obvious.

Implicit premises are the unstated claims or unstated assumptions of the argument. For instance, suppose a biologist argues that there is nothing ethically wrong in the fact that about thirteen animals per day are killed in her laboratory, because the deaths further her scientific research. In this argument, she uses the unstated assumption that, if something done to animals furthers someone's scientific research, then it is not ethically wrong. In this case, by exposing the implicit premise we analysts can get a clearer idea of what sort of reasoning is going on. How did we figure out which assumption she was making? We mentally noted that with this assumption the argument would be deductively valid, and so we used the principle of charity and said this is what she must have been assuming. Of course, we could be wrong. To know for sure what she is assuming, we would have had to ask her.

The researcher also believes that $1 + 1 = 2$, but this is not an implicit premise in her argument because it is not a premise intended to support the conclusion.

Exercise

Here is a small argument. What is the key implicit premise?

This is a members-only court, so you cannot play here.

Answer

You are not a member.
You are not pulling implicit premises out of thin air. You can't just make up any claim and call it a missing premise. It is not missing unless it is needed to make the argument work properly, and also, given what is said explicitly by the author, the premise is some claim the author would be likely to believe. Yes, guesswork is involved, but you are not being wildly arbitrary.

Let's talk about directions. Is New York to the right of Chicago? Or would you say it's to the left? If you think about what you know of U.S. geography, this isn't a difficult question. Chicago is in the interior of the U.S., and New York is on the Atlantic Coast, the East Coast. New York is east of Chicago, but how about right of Chicago? That's not quite the same thing, is it?

Whether New York is to the right depends on what you can safely assume about your perspective. The answer is "Yes, it's to the right" if you can safely assume directions are to be judged by someone above the U.S. and facing north and looking down onto Earth because from that perspective the directions of east and right are the same direction.

But suppose you make a different assumption. If you were standing on the North Pole, you could say New York is left of Chicago. If you were standing inside the Earth at its center, you could say the same, but it would be very odd though to assume that the judgment is to be made from either of these perspectives.

So, the bottom line here is that it's correct to say New York is to the right of Chicago if you make the normal assumptions about perspective, and logical reasoners make the usual assumptions unless there's a good reason not to. Critical thinkers are charitable and not overly picky; they always pay attention to what assumptions are appropriate for the situation. But they aren't so charitable that they overlook significant errors. Some arguments require making an assumption that really is not acceptable, and this is a sign that the argument is faulty or fallacious.¹

Common sense assumptions are almost always safe assumptions. Common sense is the collection of common beliefs shared by nearly every adult in your civilization. Here are some more examples:

- rain is wetter than dust
- you shouldn't stick a knife in your eye
- sons are younger than their fathers
- a week is longer than a minute
- mountains are too heavy to carry in your pocket
- the U.S.A. has a president, not a king.

When an argument relies on an assumption that is part of common sense or common background beliefs or what you can see right in front of you, then the assumption is normally left implicit in the conversation. Why bother stating the obvious?

Here is a definition of “implicit premise.” Look for the word “intended.”

- An implicit premise of an argument is a statement that does not appear explicitly but that is intended by the arguer to be a premise to help make the conclusion follow from the premises.

The phrase intended...to help plays a crucial role in identifying the implicit premise. Notice how you immediately think about the author’s intentions when you hear the following argument:
Tantalum can be melted, too, because all metals can be melted if you raise their temperature enough. Below is a picture of melted tantalum.

Choose the implicit premise from the following list:

a. Some metals melt.
b. Tantalum can be melted if all metals can.
c. Tantalum is not a metal.
d. Tantalum is a metal.
e. All metals melt.

Not everything the arguer believes at the time counts as a premise in the argument, only the beliefs needed to make the conclusion follow—with certainty or with probability. For example, the arguer undoubtedly believes statement (a)—that some metals melt—but the arguer is not assuming this in order to get her conclusion to follow from her premises. Instead, she needs to assume that tantalum is a metal. With this premise, her argument is deductively valid. Without the implicit premise, her argument is deductively invalid. So, the answer is (d), not (a). Here is her deductively valid argument rewritten in standard form, a format that makes it easier to see all at once, with premises above the line and conclusion below the line:

All metals can be melted if you raise their temperature enough.
Tantalum is a metal. (implicit premise)

Tantalum can be melted.

The argument is now more clearly deductively valid, thanks to your detective work at uncovering the author’s intentions about what is being assumed.

Arguments don’t come to us with labels as being deductive or inductive. We who are trying to understand an argument will look to see if the argument meets either standard—being deductively valid or being inductively strong—and we will look for implicit premises that are needed for the argument to meet that standard. For example, do this with the inductive argument in the following concept check.
Exercise \(\PageIndex{1}\)

What is the missing premise in this passage?

Most soft minerals will make a compound with tantalum, so baxalite will, too.

Answer

Implicit premise: Baxalite is a soft mineral.

The most common implicit premises are definitions of words, principles of grammar, rules of semantics, theorems of mathematics, and the commonly held beliefs of our civilization. We might argue that because Dwayne loves Jesus, Jesus is loved by Dwayne. This deductively valid argument depends on a grammatical principle about passive voice transformation that we rarely need to spell out. Everybody who speaks English can follow the inference, even though few of us could actually write down this or the other grammatical and semantical rules of our own language.

There is another important, implicit assumption in the above argument. The word Dwayne names the same person throughout the argument. If we violate this assumption or tentative agreement among speakers, then we are said to be equivocating. Logical reasoners avoid equivocation, but a writer who bothered to explicitly remind us of this fact about the word Dwayne would be cluttering up the argument with too many details.

Many jokes turn on who holds what assumption. In the following joke, Suzanne says essentially that one of Jack’s assumptions is mistaken:

Jack: Get those drugs out of this house; nobody is going to risk my daughter's sanity.
Suzanne: You can't risk what's not there, Jack.

Exercise \(\PageIndex{1}\)

If you understood that joke, then you saw that (pick one):

a. Jack assumed that his daughter is sane.

b. Jack assumed that Suzanne is insane.

c. Suzanne assumed that Jack's daughter is sane.

d. Jack assumed that Suzanne's daughter is insane.

e. Suzanne assumed that Jack is insane.

Answer

Answer (a). Suzanne assumed that Jack’s daughter is insane, but that wasn’t one of your choices; the joke also turned on Jack’s assuming that his daughter is sane, which is choice (a). Both assumptions are needed to make the joke work, however.

---

1 The two words faulty and fallacious say about the same thing

2 This book does not emphasize your knowing the difference between grammar and semantics. “He him ignored” contains a grammar error. The grammatically correct sentence, “He ignored yesterday who is knocking at the door”
tomorrow," contains a semantic error because it violates the meaning of words about time, but it is grammatically OK.