WHAT ARGUMENTS ARE

The word “*argument*“ may suggest quarrels or squabbles. That is what a

child means when she reports that her parents are having an argument.

Arguments of that sort often include abuse, name-calling, and yelling. That

is not what this book is about. The goal here is not to teach you to yell

louder, to be more abusive, or to beat your opponents into submission.

Our topic is the kind of argument defined by Monty Python in their justly

famous “Argument Clinic.” In this skit, a client enters a clinic and pays for

an argument. In the first room, however, all he gets is abuse, which is not

argument. When he finally finds the right room to get an argument, the person

who is supposed to give him an argument simply denies whatever the

client says, so the client complains that mere denial is different from argument,

because “an argument is a connected series of statements to establish

a definite proposition.” This definition is almost correct. As we will see, the

purpose of an argument need not always be to “establish” its conclusion,

both because some conclusions were established in advance and because

many reasons are inconclusive. Nonetheless, Monty Python’s definition

needs to be modified only a little in order to arrive at an adequate definition:

*An argument is a connected series of sentences, statements, or propositions*

*(called “premises”) that are intended to give reasons of some kind for a sentence,*

*statement, or proposition (called the “conclusion”).*

This definition does not pretend to be precise, but it does tell us what

arguments are made of (sentences, statements, or propositions) and what

their purpose is (to give reasons).

Another virtue of this definition is that it is flexible enough to cover the

wide variety of arguments that people actually give. Different arguments

are intended to give reasons of very different sorts. These reasons might be

justificatory reasons to believe or to disbelieve some claim. They might, instead,

be explanatory reasons why something happened. They might even

be practical reasons to do some act. Because reasons come in so many kinds,

arguments are useful in a great variety of situations in daily life. Trying to

determine why your computer crashed, why your friend acted the way she

did, and whether it will rain tomorrow as well as trying to decide which

political candidate to vote for, which play to use at a crucial point in a football

game, where to go to college, and whether to support or oppose capital

punishment—all involve weighing and evaluating reasons.

It is inaccurate, therefore, to think of arguments as serving only one

single simple purpose. People often assume that you always use every

argument to make other people believe what you believe and what they did

not believe before hearing or reading the argument. Actually, however,

some arguments are used for that purpose, but others are not. To fully understand

arguments in all their glory, then, we need to distinguish different

uses of argument. In particular, we will focus on two exemplary purposes:

justification and explanation.

JUSTIFICATIONS

One of the most prominent uses of arguments is to justify a disputed claim. For

example, if I claim that September 11, 2001, was a Tuesday, and you deny this

or simply express some doubt, then we might look for a calendar. But suppose

we don’t have a calendar for 2001. Luckily, we do find a calendar for 2002.

Now I can justify my claim to you by presenting this argument: The calendar

shows that September 11 was on Wednesday in 2002; 2002 was not a leap year,

since 2002 is not divisible by four; nonleap years have 365 days, which is 1

more day than 52 weeks; so September 11 must have been on Tuesday in 2001.

You should now be convinced.

What have I done? My utterance of this argument has the *effect* of changing

your mind by getting you to believe a conclusion that you did not

believe before. Of course, I might also be able to change your mind by hypnotizing

you. But normally I do not want to use hypnosis. I also do not want

to change your mind by manufacturing a fake calendar for 2002 with the

wrong dates. Such tricks would not satisfy my goals fully. This shows that

changing your mind is not all that I am trying to accomplish. What else do I

want? My additional aim is to show you that you *should* change your mind,

and why. I want to give you a *good reason* to change your mind. I want my

argument not only to make you believe my conclusion but also to make you

*justified* in believing my conclusion.

The above example is typical of one kind of justification, but there are

other patterns. Suppose that I share your doubts about which day of the

week it was on September 11, 2001. Then I might use the same argument to

justify my belief as well as yours. Indeed, you don’t even need to be present.

If I am all alone, and I just want to figure out which day of the week it was

on September 11, 2001, then I might think in terms of this same argument.

Here the goal is not to convince anybody else, but the argument is still used

to find a good reason to believe the conclusion.

In cases like these, we can say that the argument is used for *impersonal*

*normative justification.* The justification is normative because the goal is to

find a reason that is a good reason. It is impersonal because what is sought

is a reason that is or should be accepted as a good reason by everyone capable

of grasping this argument, regardless of who they are. The purpose

is to show that there *is* a reason to believe the conclusion, regardless of

who *has* a reason to believe it. Other arguments, in contrast, are aimed at

specific people, and the goal is to show that those particular people are

committed to the conclusion or have a reason to believe the conclusion.

Such individualized uses of arguments seek what can be called *personal*

*justification.*

There should be nothing surprising about different people having different

reasons. I might climb a mountain to appreciate the view at the top,

whereas you climb it to get exercise, and your friend climbs it to be able to

talk to you while you climb it. Different people can have different reasons

for the same action. Similarly, different people can have different reasons to

believe the same conclusion. Suppose that someone is murdered in the ballroom

with a revolver. I might have good reason to believe that Miss Peacock

did not commit the murder, because I saw her in the library at the time the

murder was committed. You might not trust me when I tell you that I saw

her, but you still might have good reason to believe that she is innocent, because

you believe that Colonel Mustard did it alone. Even if I doubt that

Colonel Mustard did it, we still each have our own reasons to agree that

Miss Peacock is innocent.

When different people with different beliefs are involved, we need to

ask who is supposed to accept the reason that is given in an argument.

A speaker might give an argument to show a listener that the speaker has a

reason to believe something, even though the speaker knows that the audience

does not and need not accept that reason. Suppose that you are an atheist,

but I am an evangelical Christian, and you ask me why I believe that

Jesus rose from the dead. I might respond that the Bible says that Jesus rose

from the dead, and what the Bible says must be true, so Jesus rose from the

dead. This argument tells you what *my* reasons are for believing what I

believe, even if *you* do not accept those reasons. My argument can be used

to show you that I have reasons and what my reasons are, regardless of

whether you believe that my reasons are good ones and also regardless of

whether my reasons really are good ones.

The reverse can also happen. A speaker might give an argument to show

a listener that the listener has a reason to believe something, even though

the speaker does not accept that reason. Suppose that you often throw loud

parties late into the night close to my bedroom. I want to convince you to

stop or at least quiet down. Fortunately, you think that every citizen ought

to obey the law. I disagree, for I am an anarchist bent on undermining all

governments and laws. Still, I want to get a good night’s sleep before the

protest tomorrow, so I might argue that it is illegal to make that much noise

so late, and you ought to obey the law, so you ought to stop throwing such

loud parties. This argument can show you that *you* are committed to its

conclusion, even if *I* believe that its premises are false.

Of course, whether I succeed in showing my audience that they have a

reason to believe my conclusion depends on who my audience is. My

argument won’t work against loud neighbors who don’t care about the law.

Consequently, we need to know who the audience is and what they believe

in order to be able to show them what reason they have to believe a

conclusion.

In all of these cases, arguments are used to show that someone has a

reason to believe the conclusion of the argument. That is why all of these

uses can be seen as providing different kinds of justification. The differences

become crucial when we try to evaluate such arguments. If my goal is to

show you that you have a reason to believe something, then I can be

criticized for using a premise that you reject. Your beliefs are no basis for

criticism, however, if all I want is to show my own reasons for believing the

conclusion. Thus, to evaluate an argument properly, we often need to determine

not only whether the argument is being used to justify a belief but also

which kind of justification is sought and who the audience is.

**Exercise 1**

Write the best brief argument you can to justify each of the following claims to

someone who does not believe them.

1. Nine is not a prime number.

2. Seven is a prime number.

3. A molecule of water has three atoms in it.

4. Water is not made up of carbon.

5. The U.S. president lives in Washington.

6. The Earth is not flat.

7. Humans have walked on the moon.

8. Most bicycles have two wheels.

**Discussion Question**

When, if ever, is it legitimate to try to convince someone else to believe something

on the basis of a premise that you yourself reject? Consider a variety of cases.

EXPLANATIONS

A different but equally important use of arguments is to provide explanations.

Explanations answer questions about how or why something happened. We

explain how a mongoose got out of his cage by pointing to a hole he dug

under the fence. We explain why Smith was acquitted by saying that he got

off on a technicality. The purpose of explanations is not to prove that something

happened, but to make sense of things.

An example will bring out the difference between justification and explanation.

One person claims that a school’s flagpole is thirty-five feet tall, and

someone else asks her to justify this claim. In response, she might produce a

receipt from the Allegiance Flagpole Company acknowledging payment for a

flagpole thirty-five feet in height. Alternatively, she may put a stick straight

up into the ground, measure the stick’s length and its shadow’s length, then

measure the length of the flagpole’s shadow, and calculate the length of the

flagpole. Neither of these justifications, however, will answer a different question:

*Why* is the flagpole thirty-five feet tall? This new question could be

answered in all sorts of ways, depending on context: The school could not

afford a taller one. It struck the committee as about the right height for the

location. That was the only size flagpole in stock. There is a state law limiting

flagpoles to thirty-five feet. And so on. These answers help us understand

why the flagpole is thirty-five feet tall. They explain its height.

Sometimes simply filling in the details of a story provides an explanation.

For example, we can explain how a two-year-old girl foiled a bank robbery

by saying that the robber tripped over her while fleeing from the bank. Here

we have made sense out of an unusual event by putting it in the context of a

plausible *narrative.* It is unusual for a two-year-old girl to foil a bank robbery,

but there is nothing unusual about a person tripping over a child when running

recklessly at full speed in a crowded area.

Although the narrative is probably the most common form of explanation

in everyday life, we also often use arguments to give explanations. We can

explain a certain event by deriving it from established principles and accepted

facts. This argument then has the following form:

(1) General principles or laws

(2) A statement of initial conditions

(3) A statement of the phenomenon to be explained

The symbol “ ” is pronounced “therefore” and indicates that the premises

above the line are supposed to give a reason for the conclusion below theline. By “initial conditions” we mean those facts in the context that, together

with appropriate general principles and laws, allow us to derive the result

that the event to be explained occurs.

This sounds quite abstract, but an example should clarify the basic idea.

Suppose we put an ice cube into a glass and then fill the glass with water to

the brim. The ice will stick out above the surface of the water. What will

happen when the ice cube melts? Will the water overflow? Will it remain at

the same level? Will it go down? Here we are asking for a *prediction,* and it

will, of course, make sense to ask a person to *justify* whatever prediction he

or she makes. Stumped by this question, we let the ice cube melt to see what

happens. We observe that the water level remains unchanged. After a few

experiments, we convince ourselves that this result always occurs. We now

have a new question: *Why* does this occur? Now we want an explanation of

this phenomenon. The explanation turns upon the law of buoyancy, which

says that an object in water is buoyed up by a force equal to the weight of

the water it displaces. This law implies that, if we put an object in water, it

will continue to sink until it displaces a volume of water whose weight is

equal to its own weight (or else the object hits the bottom of the container).

With this in mind, go back to the original problem. An ice cube is itself

simply water in a solid state. Thus, when it melts, it will exactly fill in the

volume of water it displaced, so the water level will remain unchanged.

We can now see how this explanation conforms to the argumentative

pattern mentioned above:

(1) General principles or laws (Primarily the law of buoyancy)

(2) Initial conditions (An ice cube in a glass of water filled to the brim)

(3) Phenomenon explained (The level of the water remaining

unchanged after the ice cube melts)

This explanation is fairly good. People with only a slight understanding of

science can follow it and see why the water level remains unchanged. We

should also notice that it is not a *complete* explanation, because certain things

are simply taken for granted—for example, that things do not change

weight when they pass from a solid to a liquid state. To put the explanation

into perfect argumentative form, this assumption and many others would

have to be stated explicitly. This is never done in everyday life and is only

rarely done in the most exact sciences.

Is this explanation any good? Explanations are satisfactory if they remove

bewilderment or surprise by telling us *how* or *why* something happened in a

way that is relevant to the concerns of a particular context. Our example

does seem to accomplish that much. However, it might seem that even the

best explanations are not very useful because they take so much for granted.

In explaining why the water level remains the same when the ice cube melts,

we cited the law of buoyancy. Now, why should that law be true? What explains

*it*? To explain the law of buoyancy, we would have to derive it from

other laws that are more general and, perhaps, more intelligible. In fact, this

has been done. Archimedes simultaneously proved and explained the law of buoyancy by deriving it from the laws of the lever. How about the laws of

the lever? Can they be proved and explained by deriving them from still

higher and more comprehensive laws? Perhaps. Yet reasons give out, and

sooner or later explanation (like justification) comes to an end. It is the task

of science and all rational inquiry to move that boundary further and further

back. But even when there is more to explain, that does not show that a partial

explanation is totally useless. As we have seen, explanations can be useful

even when they are incomplete, and even though they are not used to

justify any disputed claim. Explanation is, thus, a separate use of arguments.

**Exercise 2**

Houses in Indonesia sometimes have their electrical outlets in the middle of

the wall rather than at floor level. Why? A beginning of an explanation is that

flooding is a danger in the Netherlands. Citing this fact does not help much,

however, unless one remembers that Indonesia was formerly a Dutch colony.

We can understand why the Dutch might put their electrical outlets above

floor level in the Netherlands. It is safer in a country where flooding is a danger.

Is flooding, then, a similar danger in Indonesia? Apparently not; so why

did the Dutch continue this practice in Indonesia? The answer is that colonial

settlers tend to preserve their home customs, practices, and styles. The Dutch

continued to build Dutch-style houses with the electrical outlets where (for

them) they are normally placed—that is, in the middle of the wall rather than

at floor level. Restate this explanation in the form of an argument (that is, specify

its premises and conclusion).

**Exercise 3**

Write a brief argument to explain each of the following. Indicate what facts

and what general principles are employed in your explanations. (Do not forget

those principles that may seem too obvious to mention.)

1. Why a lighter-than-air balloon rises.

2. Why there is an infield fly rule in baseball.

3. Why there is an international date line.

4. Why there are more psychoanalysts in New York City than in any other

city or, for that matter, in most countries in the world.

5. Why average temperatures tend to be higher closer to the equator.

6. Why there are usually more college freshmen who plan to go to medical

school than there are seniors who still plan to go to medical school.

7. Why almost no textbooks are more than eighteen inches high.

8. Why most cars have four tires (instead of more or fewer).

9. Why paintings by Van Gogh cost so much.

10. Why wages go up when unemployment goes down.

**Discussion Question**

It is sometimes said that science tells us *how* things happen but does not tell us

*why* they happen. In what ways is this contention right, and in what ways is it

wrong?