FUNDAMENTALS OF

Critical Argumentation

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Several distinct forms of argument are identified in chapter 3 that are not deductive or inductive in nature. These arguments are inherently presumptive and defeasible, and thus they are different in nature from deductive and inductive arguments. Each of the forms of argument described in this chapter is used as a presumptive argument in a dialogue that carries a weight of plausibility. If the respondent accepts the premises, then that gives him a good reason also to accept the conclusion. But it does not mean that the respondent should accept the conclusion uncritically. Matching each form of argument is a set of appropriate critical questions to ask. In a given case, there may be a balance of considerations to take into account. There may be some arguments in favor of the conclusion and some against it. These forms of inference are called argumentation schemes, and they represent many common types of argumentation that are familiar in everyday conversations. They need to be evaluated in a context of dialogue. They are used to shift a burden of proof to one side or the other in a dialogue and need to be evaluated differently at different stages of a dialogue. Only a few of the most important and familiar of these common types of argument are described in chapter 3. Others, such as argument from consequences, are described in chapter 4.

In a critical discussion, many different facts can be relevant to the dispute. For example, in a dispute on tipping, economic data on how tipping affects the economy or sociological data on how tipping affects job satisfaction may be very useful information to support or refute arguments on one or the other side. But citing such information always rests on quoting sources, such as books or articles, which is a form of argument called
1. Appeal to Expert Opinion

‘appeal to expert opinion.’ It is frequently the case in personal, social, and political deliberations that one does not know all the relevant facts, but that even so, for reasons of time, costs, or pressing circumstances, one must make a choice between alternative courses of action. One possibility is to delay making a decision until more information can be collected. Frequently, this decision not to act is the most prudent course of action. But it is not always so, for delaying making a decision, by not taking any action, may itself be a course of action with significant (negative) consequences. What about the option of collecting more information? The more information one has about the alternatives, the situation, and the likely consequences of the available courses of action, the more informed and more practically wise one’s conclusion on how to proceed is likely to be. But instead of trying to collect more information by doing original research, it might be practical to use sources.

There can be all kinds of sources of relevant information that would be helpful in a deliberation. One might have access to an encyclopedia, a dictionary, a manual, a reference book, or a computer data base. Or one may get information from another person who has the facts. For example, if one is deliberating on the best way to get to City Hall in an unfamiliar city, it may be very helpful to ask a passer-by who may be in a position to know this information. You can improve your chances of getting correct information by choosing a source you have reason to think is reliable. But to some extent, you will have to rely on presumption or trust that your source is knowledgeable and honest and is not misinforming you. So you may argue, to yourself or to your companion who is with you, “It looks as if this passer-by knows the streets, and she says that City Hall is over that way; therefore, let’s go ahead and accept the conclusion that City Hall is that way.” Based on that argument, you head in the direction indicated. In this kind of case, you have acted on the basis of position-to-know argumentation.

Where \( a \) is a source of information, the following argumentation scheme represents the form of position-to-know argumentation.

ARGUMENTATION SCHEME FOR ARGUMENT FROM POSITION TO KNOW

<table>
<thead>
<tr>
<th>POSITION TO KNOW PREMISE:</th>
<th>( a ) is in a position to know whether ( A ) is true or false.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSERTION PREMISE:</td>
<td>( a ) asserts that ( A ) is true (false).</td>
</tr>
<tr>
<td>CONCLUSION:</td>
<td>( A ) may plausibly be taken to be true (false).</td>
</tr>
</tbody>
</table>
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The form of argument can be plausible, but it is also defeasible. It can be critically questioned in a dialogue by raising doubts about the truth of either premise or by asking whether a is an honest (trustworthy) source of information. The following critical questions are appropriate for use in questioning a position-to-know argument.

1. Is a in a position to know whether A is true (false)?
2. Is a an honest (trustworthy, reliable) source?
3. Did a assert that A is true (false)?

The second critical question concerns the credibility of the source. For example, a lawyer, when cross-examining a witness in a trial, is allowed (within controlled limits) to raise questions about the character of the witness for honesty. If a witness has been known to lie in previous cases or can be generally shown to have bad judgment or a bad character for veracity, the lawyer is allowed to use or bring these sorts of concerns forward in her cross-examination. By raising such questions, the attorney could call the credibility of the witness into question, thereby influencing the jury to have doubts about the reliability of his testimony.

Much the same considerations apply in arguments outside a courtroom. Position-to-know reasoning is typically used in an information-seeking type of dialogue where one has to depend on a source. It is also frequently used in cases where having a high-quality deliberation dialogue depends on a prior information-seeking dialogue. In many cases of this sort, the use of information is helpful, because the information-seeking dialogue contributes to the goal of the deliberation by making the deliberation better informed. Such a deliberation is improved by additional relevant information because the deliberation is made more practical by better fitting it to the realities of a given situation.

The appeal to expert opinion, sometimes also called ‘argument from expert opinion’, is an important subspecies of position-to-know reasoning. It is based on the assumption that the source is alleged to be in a position to know about a subject because he or she has expert knowledge of that subject. Suppose in the context of the dialogue on tipping from chapter 1, Helen puts forward the following argument.

Dr. Phil says that tipping lowers self-esteem.

Dr. Phil is an expert psychologist, so Helen’s argument is based on an appeal to expert opinion that can be stated as follows.
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**PREMISE:** Dr. Phil says that tipping lowers self-esteem.

**PREMISE:** Dr. Phil is an expert in psychology, a field that has knowledge about self-esteem.

**CONCLUSION:** Tipping lowers self-esteem.

Helen’s argument is a plausible one that rightly carries some weight to support her side in the dialogue on tipping. It is an argument that could be countered by Bob. For example, he might cite another expert in psychology who disagrees with what Dr. Phil says about tipping. Even so, unless Bob criticizes the argument, it does offer a reason in support of the conclusion. Such arguments from expert opinion are common and important as evidence in trials. For example, ballistics experts and DNA experts are often used to give expert testimony as evidence in trials.

**ARGUMENTATION SCHEME FOR APPEAL TO EXPERT OPINION**

**MAJOR PREMISE:** Source $E$ is an expert in subject domain $D$ containing proposition $A$.

**MINOR PREMISE:** $E$ asserts that proposition $A$ (in domain $D$) is true (false).

**CONCLUSION:** $A$ may plausibly be taken to be true (false).

Appeal to expert opinion should, in most typical cases, at any rate, be seen as a plausible but defeasible form of argumentation. It is rarely wise to treat an expert as infallible, and indeed, taking that approach can be quite dangerous, for there is quite a natural tendency to respect experts and to defer to them unquestioningly.¹ For most of us, it is not easy to question the opinion of an expert. It tends to verge on the impolite and thus needs to be done in a diplomatic way. But it needs to be done, in many cases, because experts are often wrong. As a practical matter, for example, in matters of health and finance, you can do much better if you are prepared to question the advice of an expert in a critical but polite manner. Thus it is vital to see appeal to expert opinion as defeasible, as open to critical questioning.

¹ The respect we have for authority was demonstrated by some famous experiments carried out by the psychologist Stanley Milgram. In these experiments, subjects were asked by an authoritative-looking scientist to administer severe electric shocks to other persons, and they often did so.
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The six basic critical questions matching the appeal to expert opinion are listed below.\(^2\)

1. **Expertise Question.** How credible is \(E\) as an expert source?
2. **Field Question.** Is \(E\) an expert in the field that \(A\) is in?
3. **Opinion Question.** What did \(E\) assert that implies \(A\)?
4. **Trustworthiness Question.** Is \(E\) personally reliable as a source?
5. **Consistency Question.** Is \(A\) consistent with what other experts assert?
6. **Backup Evidence Question.** Is \(E\)’s assertion based on evidence?

The idea behind using critical questions to evaluate appeals to expert opinion is dialectical. The assumption is that the issue to be settled by argumentation in a dialogue hangs on a balance of considerations. One can critically question an appeal to expert opinion by raising doubts about any of the premises. To be a genuine expert in a domain of knowledge or a technical skill, an individual must have the proper credentials and a record of experience. It is not enough, for example, that the person is a popular celebrity. With respect to the second question, one has to look at the exact wording of what the expert said (preferably, as quoted). With respect to the third question, one must be careful, for example, to check whether the expert may be an authority in one field (such as physics), while the proposition he is pronouncing on is in another field (such as religion). The sixth question cites the requirement that an expert should be able to back up her opinion with objective evidence. The two remaining critical questions relate to two other implicit assumptions. The fifth question relates to “maverick” opinions, especially on issues where experts disagree. One can pose the consistency question by comparing \(A\) with other known evidence (and, in particular, with what experts on \(D\) other than \(a\) say). One can pose the trustworthiness question by expressing doubts about whether the expert is personally reliable as a source. For example, one might question whether the expert is biased, for example, whether he has something to gain by making the claim put forward.

Using the appeal to expert opinion as an argument should not be seen as a substitute for getting factual evidence by scientific methods of data collection. It is a method of argument that can be abused. However, in many cases in deliberation and in other types of dialogue, this type of argument, despite its fallibility, can be a valuable way of collecting useful information and advice to solve a problem or make a decision. An example

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\(^2\) This set of critical questions is from Douglas Walton, *Appeal to Expert Opinion* (University Park: Penn State University Press, 1997), p. 223.
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would be a case where a legislative assembly is having a discussion on a bill that would legalize marijuana. One of the arguments relevant to the debate would be the consequences of legalization. A powerful argument against legalization might be the slippery slope argument linking marijuana to increased addiction to harder drugs – a highly negative outcome, perceived as very dangerous. At this point what would very likely happen in the debate is that scientific experts would be brought in to testify on scientific findings concerning the linkages between marijuana use and the use of harder drugs. Experts might be brought in on both sides, and their testimony might conflict. Both sides in the debate could question the scientific experts, and the dialogue might be very helpful in making voting on the bill more informed and intelligent. Obviously, much would depend on how the expert testimony was presented and how it was critically questioned by the participants in the legislative assembly.

Perhaps the most familiar use of expert testimony is in the law, where it is a very important kind of evidence, for example, in criminal trials. A familiar type of expert witness is the ballistics expert or the forensic scientist who provides, for example, evidence on DNA tests of blood or hair found at the scene of a crime. Another familiar type of expert testimony in the criminal trial is that given by the psychiatrist or psychologist who is brought in to make a determination of a defendant’s ‘state of mind’ when a plea of insanity has been made. Frequently, such cases turn into a “battle of the experts,” because both sides are allowed to pay a fee for expert witnesses thought likely to support their side of a case. Such conflicts of expert testimony remind us that arguments based on appeal to expert opinion are inherently subjective and presumptive in nature and are rarely conclusive. Even so, they can be valuable guides to action in a deliberation or valuable sources of informed opinion in a persuasion dialogue. Appeals to expert opinion can, in some cases, be used fallaciously as well, to try to intimidate or silence one’s partner in a dialogue by saying something like, “Well, you’re not an expert, are you?” This tactic can be a fallacy where it is used to try to suppress or block off legitimate critical questioning of what the expert said.3

In summary, then, appeal to expert opinion is a defeasible type of argument that depends on trust in the honesty and competence of the

3 As Locke (1690) put it, when an expert is “established in dignity,” any questioning of what he says by a layman may be put down as “insolence” or showing insufficient respect for authority (Locke’s Essay, as quoted by Charles Hamblin, Fallacies (London: Methuen, 1970), p. 160).
source that is consulted. If you have a choice between evidence based on
the say-so of a source that is in a position to know and objective evidence
based on scientific methods of observation, inquiry, and data collection,
then it is best to give more weight to the objective evidence. But if you
have to act in a deliberation, for practical reasons, and cannot delay any
longer to collect objective information, it may be wiser to go with the say-
so of a qualified expert, or someone who is in a special position to know,
rather than throwing darts or relying on pure guesswork. It is a matter of
striking a balance between qualified trust, or presumption of honesty and
competence, on the one hand, and a skeptical attitude of doubt and critical
questioning, on the other hand. The right balance should be decided by
weighing each case individually, basing your judgment on balancing goals
such as safety against the need to take positive action.

EXERCISE

Analyze the following arguments by identifying the argumentation
scheme involved. Identify the premises and conclusion of the argument.
If there are any questionable aspects of the argument that should be con-
sidered, identify critical questions that should be asked.

(a) Bob is lost in the jungle, in a country he is not familiar with. How-
ever, he knows that Tarzan is very familiar with the terrain in this
area, and he asks Tarzan which is the best way to get to a mountain
he wants to visit. Tarzan replies: “Don’t go across that river. It is full
of hungry crocodiles and dangerous hippos.”

(b) You go to a new dentist to have your teeth cleaned, and he recom-
mends that you have a root canal and to also consider having braces
put on your teeth. He proposes to do both jobs immediately. This
request seems odd to you, because you have had no problems with
your teeth recently,

(c) Herman and Louise are Canadian tourists in Australia. As he is
about to step off the curb, Herman asks: “Who has the right of way,
the pedestrians or the motorists?” Louise replies, “I notice that all
the other pedestrians are giving way to the cars.”

(d) Gilbert and Joanne are having a critical discussion on the issue
of whether HIV-infected surgeons ought to be allowed to operate.
Joanne argues: “Doctor Dave says they ought to be allowed to, and
since this issue is a medical question, I think he should have the
last word! He is an expert.”

(e) In the dialogue on genetically modified foods (chapter 1, section 8)
Sarah cited the Prince of Wales as a source to support her point
of view in the dialogue. She put forward the following argument:
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“Prince Charles said that we need to rediscover a reverence for the natural world, and that science, which lacks a spiritual dimension, should not be used to change nature.” She said, “He knows all about organic agriculture. He even has his own organic garden in Highgrove.”

Dr. Zorba, a cancer specialist, is testifying in court in the case of a man who was bruised by his seat belt when he was rear-ended by another car. The man later contracted testicular cancer. Dr. Zorba testified that, in his opinion, the bruise from the seat belt was a causal factor in the development of the man’s testicular cancer. The physician for the insurance company testified that there is no established medical evidence that bruises or trauma caused by seat belt restraints cause cancer.

The argument from popular opinion, or appeal to popular opinion, as it is commonly called, has the following form. If a large majority (everyone, nearly everyone, etc.) accepts A as true, as shown by a poll, say, this would be evidence that A is generally accepted. Or if A is common knowledge, meaning that it is an assumption that would not normally be disputed, then that is evidence that A is generally accepted. For example, in the contest of the dialogue on tipping, neither party would dispute the statement that the sky is blue or the statement that people often eat food in restaurants. If a statement is generally accepted, then that can be used as a plausible argument in favor of A.

ARGUMENTATION SCHEME FOR APPEAL TO POPULAR OPINION

GENERAL ACCEPTANCE PREMISE: A is generally accepted as true.

PRESUMPTION PREMISE: If A is generally accepted as true, that gives a reason in favor of A.

CONCLUSION: There is a reason in favor of A.

By itself, this type of argument is not very strong, as it is easily shown that the majority is often wrong. Still, it can make a claim plausible by giving a reason in favor of it in a dialogue in which there can be reasons both for and against it. Generally, the argument from popular opinion is weaker than the argument from expert opinion (though experts are often wrong, as well). Argument from popular opinion is best seen as expressing a limit
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on disputativeness. When you are arguing about a controversial issue, and some other proposition is relatively uncontroversial (because it is accepted by nearly everyone or by everyone that is party to the dialogue), then that proposition can be ‘taken for granted’, or accepted tentatively as uncontroversial. Such fine points of agreement help the dialogue go forward.

The following two critical questions match the argumentation scheme for appeal to popular opinion.

1. What evidence, such as a poll or an appeal to common knowledge, supports the claim that $A$ is generally accepted as true?

2. Even if $A$ is generally accepted as true, are there any good reasons for doubting it is true?

Although arguments from popular opinion are not very strong in themselves, they are frequently made stronger by being combined with ‘position to know’ arguments. The following case is an instance of argument from popular opinion, but its strength is reinforced by an implicit argument from position to know. Here is an example.

**PREMISE:** It is generally accepted by those who live in Cedar Rapids that the lake is a good place to swim in the summer.

**CONCLUSION:** The lake in Cedar Rapids is (plausibly) a good place to swim in the summer.

The implicit assumption that makes this appeal to popular opinion plausible is that since the people who live in Cedar Rapids are normally familiar with the area, they may be assumed to be in a position to know whether a particular lake in the area is a good place for swimming in the summer or not. Therefore, if the people who live in Cedar Rapids think that the lake is a good place to swim in the summer, it is a plausible and reasonably safe assumption (in the absence of any evidence to the contrary) that the lake is a good place to swim in the summer. This additional factor forms a chain of argumentation by joining argument from position to know to the appeal to popular opinion. Such a joining is called a bolstering of the appeal to popular opinion, meaning that the conjoined argument increases the plausibility of the appeal to popular opinion. An instance of bolstering can be identified by stating the implicit premise, as in the example below, relating to the argument just above.
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IMPLICIT PREMISE: The people who live in Cedar Rapids are in a position to know whether the lake in Cedar Rapids is a good place to swim in the summer.

Of course, they could be wrong, because of some recent contamination of the lake that nobody knows about, for example. But in the absence of any countervailing developments of this sort, the conclusion that the lake is a good place to swim is a plausible presumption. It is often important to identify the implicit premise that bolsters the plausibility of the appeal to popular opinion, in order to be aware of what makes the argument plausible.

A practical form of the argument from popular opinion is called the argument from popular practice. This form of argument is connected to ‘position to know’ argumentation, because familiarity with a practice is a basis for being in a position to know whether it is generally acceptable or not.

ARGUMENTATION SCHEME FOR ARGUMENT FROM POPULAR PRACTICE

\[ A \text{ is a popular practice among those who are familiar with what is acceptable or not with regard to } A. \]

\[ \text{If } A \text{ is a popular practice among those familiar with what is acceptable or not with regard to } A, \text{ that gives a reason to think that } A \text{ is acceptable.} \]

\[ \text{Therefore, } A \text{ is acceptable in this case.} \]

An example of this type of argumentation is the following case, in which a husband and wife are visiting Holland for the first time and have rented bikes. They have started cycling along on a bicycle path in Holland. He is riding behind her, thinking that riding side-by-side is not allowed. She calls back to him, “Ride beside me, so we can talk.” He replies, “I am not sure it is allowed.” She replies, “Everyone else is doing it.” The argument from popular practice in this example dialogue is made more plausible by the assumption that since the other couples are likely to be from the local area, and not all tourists, they would be likely to know what is generally accepted in practices of riding side-by-side on the bicycle paths. So the argument from popular practice is reinforced by an implicit position to know argument.

In still other cases, the argument from popular opinion is based not on a position to know argument but on an assumption that people have deliberated on a particular policy or practice and have come to accept
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it because they have found it a useful or good thing to do. Consider the following argument concerning the Golden Rule: Do unto others as you would they do unto you. In other words, treat others as you would like to be treated yourself.

**PREMISE:** The Golden Rule is basic to every system of ethics ever devised, and everyone accepts it in some form or other.

**CONCLUSION:** The Golden Rule is an established moral principle that has some weight of practical justification as a sound policy.

Here the assumption is that people have generally accepted the Golden Rule and even codified it in their systems of ethics. Such popular acceptance lends a certain weight of presumption in favor of the Golden Rule as an ethical principle to take seriously. It doesn’t mean that the Golden Rule can’t be questioned or criticized. It means only that the Golden Rule should be taken seriously in a discussion on ethical principles, because people have put some thought into such matters in the past, and their unanimity on accepting the Golden Rule indicates a presumption in its favor.

The two critical questions matching the argument from popular practice are the following.

1. What actions or other indications show that a large majority accepts $A$?
2. Even if a large majority accepts $A$ as true, what grounds might there be for thinking they are justified in accepting $A$?

With respect to the first critical question, it is frequently problematic to determine, by asking a question, what a large majority really accepts as true or as representing their real opinion on a matter. Public opinion polls are often used, but much depends on how the question in the poll is worded. It may be better to go by evidence of how people act, in addition to going by what they say. But the uncertainty of verbal evidence is not the main problem with appeals to popular opinion generally. The main problem resides in the asking of the second critical question.

A typical problem with appeal to popular opinion is that in many instances no serious attempt is made to back up the first premise, by giving a real reason why everyone’s accepting $A$ is a good reason why you (the respondent) should accept $A$. Instead, the argument is used in such a way as to put pressure on the respondent to accept $A$ or to feel left out
2. Argument from Popular Opinion

of the popular group that accepts $A$. For example, consider the following argument.

You ought to buy a sports recreation vehicle, as all members of the environmental off-road cool people now own one of these vehicles.

Instead of giving a reason why you should buy one of these cars, this argument tells the respondent that he will be left out of the “cool people” group if he does not buy one of these vehicles. This argument puts pressure on the respondent by appealing to his desire to be perceived as in some socially esteemed group unless he fails to take the action advocated. Such an argument appeals to his supposed desire to belong to some trendy group.

So arguments from popular opinion are variable. Although they are generally weak arguments, in some instances they can give good reasons to support a conclusion. In such cases, it would be unwise to ignore or reject them. But in other cases, arguments from popular opinion do not give the required support for their conclusion and instead appeal only to a wish for belonging to an esteemed group.

EXERCISE 3.2 Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) A man is steering his sailboat into an unfamiliar harbor, and he has a choice of whether to turn left or right around a large rock. He has observed that all the sailboats entering the harbor before him have gone around to the left. He concludes that he should go around to the left.

(b) If we vote to return the death penalty, we, along with a few states, will be the only jurisdictions in the Western world with a death penalty. Not one country in Europe has a death penalty. Canada doesn’t have it. New Zealand doesn’t have it. Australia doesn’t have it. It is on the books in Belgium, but there hasn’t been an execution in that country since 1945. Therefore we should not vote to return the death penalty.

(c) In the dialogue on genetically modified foods (chapter 1, section 8), Mark supports his point of view by arguing: “People all over the planet have been genetically modifying animals and plants for centuries, nobody has worried about that, and even the scientists have long accepted it.”
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(d) Of course you should use Tartar Control toothpaste. A recent survey showed that 87 percent of people prefer Tartar Control toothpaste over other brands.

(e) I’m sure you will want to vote for my proposal. All highly educated professionals are in favor of it and always see the merit of it immediately.

(f) All the beautiful people who belong to the upper echelons of the rich and famous have Pilotage sunglasses. So you should buy Pilotage sunglasses too.

THREE Argument from Analogy

Argument from analogy is a very commonly used kind of case-based reasoning, where one case is held to be similar to another case in a particular respect. Since the one case is held to have a certain property, then the other case, it is concluded, also has the same property (because the one case is similar to the other). In outline, the argument from analogy has the following form.

ARGUMENTATION SCHEME FOR ARGUMENT FROM ANALOGY

SIMILARITY PREMISE: Generally, case $C_1$ is similar to case $C_2$.

BASE PREMISE: $A$ is true (false) in case $C_1$.

CONCLUSION: $A$ is true (false) in case $C_2$.

This form of argument is defeasible, because any two cases will be similar to each other in certain respects, but dissimilar to each other in other respects. So while one case may be generally similar to another, that does not mean that the two cases will be similar in every respect. If they were similar in every respect, they would be the same case. However, two cases can be generally similar, even though there are quite important differences between them.

In the dispute on tipping, Bob might use the following argument from analogy.

Discontinuing tipping is like taking away an animal’s source of food by destroying its natural habitat. Taking away an animal’s source of food by destroying its natural habitat has the consequence that the animal will painfully die by starvation and disease. So discontinuing tipping will take away the income of people who are struggling
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In this argument, Bob compares two cases: the case of an animal struggling to survive in an endangered habitat and the case of a person struggling to survive in a weakening economy. He cites the bad consequences of destruction of habitat in the one case, and then postulates comparable bad consequences in the other case. Bob is using argument from consequences, but this argument is built onto an argument from analogy, based on a comparison between the two cases. Of course, the two cases are different in certain respects, but by comparing them, Bob puts forward a plausible argument.

There are three critical questions that are appropriate for the use of argument from analogy.

1. Are there differences between $C_1$ and $C_2$ that would tend to undermine the force of the similarity cited?
2. Is $A$ true (false) in $C_1$?
3. Is there some other case $C_3$ that is also similar to $C_1$, but in which $A$ is false (true)?

In the example above, the second critical question is easy to answer, because the base premise of the argument – that taking away an animal’s habitat has these bad consequences – is quite plausible. But asking the first critical question is a better avenue of criticism of the argument from analogy in this case. It could be argued that there is a difference between the two cases. If an animal loses its habitat, there may not be any other place it can go or be transferred where it will have adequate supplies of food available. But in the case of a person who loses tipping income, the additional money collected by charging the customer a higher price, once a tip is no longer required, could be used to provide higher salaries and benefits for the employee. At any rate, the citing of any difference of this kind can be used to raise doubts about the argument from analogy used in the example above.

Asking the third critical question is a very effective response in some cases, but it does not work well in all cases. The reason is that a certain thoughtfulness and cleverness to devise a suitable counter-analogy is

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4 This form of argument as a scheme used by Bob is to argue that an action or policy is bad because it has bad consequences. Argument from consequences is more fully explained in chapter 3, section 5.
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required. But in some cases, use of a counter-analogy can be very effective. The following example is a classic case.

Then President Ronald Reagan, in a speech for congressional funds to aid the Contra rebels in Nicaragua, compared the Contras to the American patriots who fought in the War of Independence. A speaker in Congress opposed to sending aid to the Contras compared the situation in Nicaragua to the war in Vietnam.

In using the argument from analogy, Reagan compared the case of the Contra rebels in Nicaragua to the case of American patriots who fought in the U.S. War of Independence. Since his audience would think the latter case represented a highly worthwhile cause, that was good to support, and that had good consequences, their policy on this case would presumably be one of overwhelming support for action. By the use of argument from analogy, Reagan hoped to transfer this positive attitude for support to the present case of the Contra rebels. But his opponent in Congress was able to counter Reagan’s argument by posing another analogy that is also extremely powerful to the audience. Intervention in Vietnam had extremely bad consequences for the United States and was an experience that nobody would care to repeat. This case stands as a powerful lesson to the effect that intervention in a foreign war can lead to a messy situation that gets worse and worse, once the first steps to get involved in it are taken. Here, then, is a third case, which also appears to be similar to the Nicaragua case in certain respects, but the outcome of intervention was very bad.

In some cases, argument from analogy is used in an extremely aggressive way that packs all kinds of unstated and questionable assumptions into the argument. The following example is taken from a letter to Chatelaine magazine, May 1982. Once the various implicit assumptions in the argument are identified, it can easily be shown that they are highly questionable and that the argument based on them is not justified.

When a murderer is found guilty, he is punished regardless of his reasons for killing. Similarly, anyone partaking in an abortion is guilty of having deprived an individual of her or his right to life.

The implicit conclusion of this argument is the statement that anyone partaking in an abortion should be punished. Why? The argument is

5 This example is from an article on arguments containing unstated assumptions: Douglas Walton and Chris Reed, “Argumentation Schemes and Enthymemes,” Synthese: An International Journal for Epistemology, Logic and Philosophy of Science, to appear.
3. Argument from Analogy

supported by the drawing of an analogy between two cases held to be similar. One is the case of one person murdering another person, a crime punishable by law. The other is the case of someone partaking in an abortion. The argument is that since the one type of case is similar to the other, something that is true of one should also be true of the other. The argument is therefore based on the argumentation scheme for argument from analogy. The argument is based on the assumption that since murderers are punished, regardless of the reason for killing, by analogy, abortion partakers should also be punished. As shown by applying the argumentation scheme for argument from analogy, this argument is based on an implicit premise that the two kinds of cases of murder and abortion are similar. But such an assumption is highly questionable. In law, murder is a crime in which a person is killed. But in law, a fetus is not a person and has no right to life in the way a person does. Of course, this distinction is a legal one, and there is a difference between law and morality. But even so, the assumption that anyone partaking in an abortion is depriving a person of his or her right to life is based on the further assumption that the fetus is a person. While pro-life advocates might accept such an assumption, pro-choice advocates would reject it. They would argue that the two cases of murder and abortion are dissimilar in this respect.

In general, the first critical question for the argument from analogy tends to be the most important one to focus on when evaluating arguments from analogy. If one case is similar to another in a certain respect, then that similarity gives a certain weight of plausibility to the argument from analogy. But if the two cases are dissimilar in some other respect, citing this difference tends to undermine the plausibility of the argument. So arguments from analogy can be stronger or weaker, in different cases.

EXERCISE 3.3

Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) After ingesting one milligram of substance alpha per day for ninety days, white mice developed genetic abnormalities. Since white mice are similar in many ways to humans, it follows that substance alpha probably produces genetic abnormalities in humans.

(b) When an individual is diagnosed as having cancer, every effort is made to kill the cancerous growth, whether by surgery, radiation treatment, or chemotherapy. But murderers and kidnappers are cancerous growths on society. Therefore, when these criminals are
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apprehended and convicted, they should be treated like any other

cancer and eliminated by capital punishment.

(c) When an elected political leader was subjected to extensive crit-

icisms because of rising unemployment and a sagging economy,

some argued that he should resign so that the party could select a

new leader. Others said an election should be called. He replied:

“People don’t change doctors just because they’re sick.”

(d) Smokers should be allowed to smoke only in private where it does

not offend anyone else. Would any smoker walk into a restaurant

and start eating half-chewed food on someone’s plate or drink a

glass of water that previously held someone’s teeth? Probably not,

yet they expect non-smokers to inhale smoke from the recesses of

their lungs. My privilege and right is to choose a clean and healthy

life without interference.

(e) A doctor claimed that physicians should give a medical examina-

tion to every patient every year, using the following argument: “Peo-

ple take their car in for servicing every few months.”

FOUR Argument from Correlation to Cause

Although scientists, particularly in the practical fields such as engineering

and medicine, sometimes make claims about causal relationships, there

is no settled scientific theory of causality (or philosophical theory, for that

matter). It seems that the causal relationship is practical and contextual

in nature. What it means to say that one state of affairs A causes another

state of affairs B is that A is something that can be brought about, and

when it is brought about (or stopped), then B is also brought about (or

stopped). At any rate, whatever causality means, the most important

d kind of evidence that A causes B in any particular case is that there is

a statistical correlation between A and B. For example, if a significant

statistical correlation is found between reduced incidence of heart attacks

and drinking of red wine, the tentative conclusion may be drawn, as a

hypothesis, that drinking red wine is the cause of the reduction in heart

attacks. Recently, in fact, the causal conclusion has been drawn, based on

such statistical findings, that drinking red wine with meals, as the French

do, helps to prevent heart attacks.

As a presumptive form of reasoning, argument from correlation to

cause has the following form.

6 The variables A and B stand for states of affairs that are thought of as being like propositions

because they can be made true (brought about) or made false by actions.
4. Argument from Correlation to Cause

ARGUMENTATION SCHEME FOR ARGUMENT FROM CORRELATION TO CAUSE

**CORRELATION PREMISE:** There is a positive correlation between A and B.

**CONCLUSION:** A causes B.

A correlation is a purely statistical relationship, determined by counting up numbers where one event occurs in a case where another event also occurs. However, as noted above, causality is not a purely statistical relationship (or at least, if it is, it is a very complicated kind of one), so the inference from correlation to causation cannot be evaluated on a purely statistical or numerical basis. It is best seen as a presumptive and defeasible inference, subject to defeat as more data are collected.

One problem with arguments from correlation to cause is that there may not be a real correlation between two events, but only seem to be one. Consider the following example:

Researchers at the Wellesley Central Hospital studied 18 patients with rheumatoid arthritis for more than a year, testing how changes in their symptoms were influenced by changes in the weather, but came up with no correlation between the two. “We hypothesize that this belief results, in part at least, from people’s tendency to perceive patterns where none exist,” Dr. Ronald Redelmeier of Wellesley writes in the abstract of the study published in the latest issue of the U.S. journal *Proceedings of the National Academy of Science*. During his study of 18 arthritis patients at Wellesley, researchers gathered data on symptoms twice a month for 15 months. The patients rated the severity of pain themselves, while doctors evaluated the degree of joint tenderness, mobility and functioning in each patient at each assessment. The researchers also obtained local weather reports for several days around the time of each appointment. They interviewed the patients about their beliefs concerning arthritis pain, and all but two believed the effect of weather was strong. However, when researchers computed the correlations between pain and specific weather components mentioned by each patient, they found no pattern.7

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Argumentation Schemes

In this case there seemed to the arthritis sufferers to be a correlation between arthritis symptoms and weather changes. But Dr. Redelmeier’s study raised doubts about whether such a correlation really exists.

Another problem is that a statistical correlation between two events can simply be a coincidence. A sophisticated statistical study by Steffie Woolhandler and David U. Himmelstein citing figures from 141 countries found that the larger the percent of its gross national product a country spends on weapons, the higher is its infant death rate. Woolhandler and Himmelstein concluded that there is a plausible link between military spending and the infant death rate: “Our findings confirm what many have suspected – that militarism is deleterious to health even in the absence of overt hostilities” (p. 1378). However, critics questioned whether their finding represents anything more than a coincidence. Dr. John Bailar, a statistician at the Harvard School of Public Health, said that the same statistical approach could be used to show a causal link between infant mortality and the consumption of bananas. He questioned whether statistical correlation between two things, in cases like these, is a reason to conclude that one thing causes the other.

Another critical question is whether both things correlated with each other are really caused by some common factor that is causing both of them. The following case is a classic example.

At a conference on the bond between humans and pets in Boston in 1986, researchers reported that pets can lower blood pressure in humans, improve the survival odds of heart patients, and even penetrate the isolation of autistic children. According to a report in Newsweek researchers at the conference reported on the beneficial effects of pet companionship. Studies showed that women who had owned dogs as children scored higher on self-reliance, sociability, and tolerance tests than petless women. Men who had owned a dog “felt a greater sense of personal worth and of belonging and had better social skills.” Children with pets also showed greater empathy.

In this case, there was a genuine correlation between pet ownership and health improvement, but both factors could well be the result of the better

4. Argument from Correlation to Cause

than average social qualities of the people who acquire pets. This factor
may lead to both pet ownership as well as better health. In a case like
this, there may be a genuine correlation between two factors A and B, but
the reason for the correlation is that some third factor C, is causing both
A and B. In such a case, it is not correct to draw the conclusion that A
causes B.

To sum up the lessons of these cases, the three main critical questions
that should be asked, when an argument from correlation to cause is put
forward, are the following.

1. Is there really a correlation between A and B?
2. Is there any reason to think that the correlation is any more than a
   coincidence?
3. Could there be some third factor, C, that is causing both A and B?

As an example of the third critical question, consider the correlation
between drinking red wine every day with a meal and fewer heart attacks
among men over forty. Subsequent studies showed that drinking alcohol
of any sort (in moderation, meaning one or two drinks per day) was associ-
ated with significantly fewer attacks within this group. The latest finding
suggested that it was the alcohol in the red wine that caused the outcome
and that drinking beer or any kind of alcohol would have the same effect.

In short, argument from correlation to cause is a legitimate and correct
type of inference of a presumptive and defeasible type, and it is extremely
useful for practical purposes in guiding action in practical matters. But
in many cases, there is a natural human tendency to leap too quickly to
a causal conclusion once a correlation has apparently been observed. In
such cases, it is better to ask appropriate critical questions before placing
too much weight on an argument from correlation to cause.

Here is a final word of warning. All arguments based on the statistical
claim of a correlation should be questioned regarding how the terms were
defined in the survey. The red wine theory of heart disease prevention
was recently questioned by a group of cardiologists who pointed out that
while most countries require a specific cause of death to be stated, in
France, many fatalities caused by cardiac arrest are officially put down to
September 16, 1994, p. A9.} This way of reporting medical statistics would mean
that the findings reported would lessen the number of heart attacks.
EXERCISE 3.4

Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) A report published in the *Journal of the American Medical Association* found a statistical relationship between typical “male pattern” baldness (spreading outward from the crown of the head) and heart attacks. Men with this type of baldness were found to be 30 to 300 percent more likely to suffer a heart attack than men with little or no hair loss. Researchers hesitated to draw the conclusion that baldness causes heart attacks, and some speculated whether stress or a common hormonal factor might be involved (David Gelman, Carolyn Friday and Shawn D. Lewis, “A Really Bad Hair Day,” *Newsweek*, March 8, 1993, p. 62).

(b) A professor of medicine at the University of Toronto told a committee studying welfare programs in Ontario that children from poor families are twice as likely as children from more affluent families to die in infancy, or in accidents, and two and a half times as likely to die from infectious diseases. He concluded that poverty is an invisible killer that is more deadly than cancer (*The Winnipeg Free Press*, February 8, 1987, p. 10).

FIVE

Argument from Consequences and Slippery Slope

One very common form of argumentation is used where one party in a dialogue says to the other, “This action would not be good, because it could have bad consequences.” For example, suppose you are thinking of taking a certain medication and your doctor says, “You have high blood pressure, and taking this medication raises blood pressure, so in your case there would be a bad side effect of taking it.” This form of argumentation is called *argumentum ad consequentiam*, or argument from consequences (literally, it means ‘argument to consequence’). As a form of argumentation, it cites allegedly foreseeable consequences of a proposed action as the premise, and the conclusion is then inferred that this course of action is or is not recommended. This form of reasoning can be used in a positive or negative way, as an argument to respond to a proposal that has been put forward when two parties are having a dialogue on what to do. In argument from positive consequences, a policy or course of action is supported by citing positive consequences of carrying out this policy.
5. Argument from Consequences and Slippery Slope

or course of action. In argument from negative consequences, a policy or course of action is argued against by citing negative consequences of carrying it out.

Argument from consequences is often used in economic and political deliberations where two parties (or groups) disagree on what is the best course of action to pursue. For example, suppose that two persons, Bob and Helen, disagree on whether tipping is generally a good custom or a good social policy that ought to be continued. Bob might use the following argument.

**PREMISE:** If the practice of tipping were discontinued, unemployment would result.

**PREMISE:** Unemployment is a bad thing.

**CONCLUSION:** It would not be a good idea to discontinue the practice of tipping.

In this instance, Bob has used an argument from negative consequences. By citing negative consequences of a certain policy or course of action, Bob has argued against this policy or course of action.

Argument from consequences can also be used in a positive form, to support a policy or action. For example, Helen might use the following argument.

**PREMISE:** If the practice of tipping were discontinued, service providers would have greater self-esteem.

**PREMISE:** Having greater self-esteem is a good thing.

**CONCLUSION:** The practice of tipping should be discontinued.

In this argument from consequences, Helen has cited positive consequences of a certain policy or course of action as a reason for supporting that policy or course of action as being a good idea. As the last two examples show, positive argument from consequences is often pitted against negative argument from consequences in argumentation.

Such conflicting arguments from consequences are common in political debates weighing up the alleged pros and cons of a course of action that is being contemplated. For example, in March 1995 voters in the province of Quebec were having town hall meetings deliberating on whether to have a referendum giving them a choice to leave Canada and form a separate country or stay as a province in Canada. Some argued that the economic
consequences of separation from Canada would be highly negative for Quebec. Others argued that having a single French-speaking country separate from English-speaking Canada would have positive consequences for French culture in Quebec. In cases of this kind of political deliberation, typically the argument is about the future outcomes or possibilities of some course of action that is unique, at least in many respects, so that the likely consequences must be guessed or conjectured. The future can never be known with certainty, and guessing can be highly conjectural where many complex and changing variables of a real situation are involved. Hence argument from consequences is generally presumptive in nature as a kind of reasoning.

The argumentation scheme for argument from positive consequences is the following.

ARGUMENTATION SCHEME FOR ARGUMENT FROM POSITIVE CONSEQUENCES

PREMISE: If $A$ is brought about, good consequences will plausibly occur.

CONCLUSION: $A$ should be brought about.

The corresponding argumentation scheme for argument from negative consequences is the following.

ARGUMENTATION SCHEME FOR ARGUMENT FROM NEGATIVE CONSEQUENCES

PREMISE: If $A$ is brought about, bad consequences will plausibly occur.

CONCLUSION: $A$ should not be brought about.

There are the same three critical questions matching either of these argumentation schemes, whether it is the positive or negative variant.

1. How strong is the probability or plausibility that these cited consequences will (may, might, must) occur?
2. What evidence, if any, supported the claim that these consequences will (may, might, must) occur if $A$ is brought about?
3. Are there consequences of the opposite value that ought to be taken into account?
5. Argument from Consequences and Slippery Slope

Failure to answer any of these critical questions adequately, when asked by a dialogue partner or critic, casts an argument from consequences into doubt.

A slippery slope argument is a species of negative reasoning from consequences, used where two parties are deliberating together and one warns the other not to take a contemplated action, because it is a first step in a sequence of events that will lead to some horrible outcome. What is distinctive about the slippery slope argument as a special subtype of argument from consequences is that there is said to be a connected sequence of actions, such that once the first action in the series is carried out, a sequence of other actions will follow, so that once the sequence starts there is no stopping it, until (eventually) the horrible outcome comes about. This particularly horrible outcome is the final event in the sequence and represents something that would very definitely go against goals that are important for the participant in the deliberation who is being warned, for example, it might be his personal safety or security.

There are several types of slippery slope arguments, but the general form of the most common type of the slippery slope argument can be characterized by the following argumentation scheme. A slippery slope argument always has this recursive feature, meaning that it applies over and over again in a repeating process. This feature is defined in the recursive premise below.

ARGUMENTATION SCHEME FOR THE SLIPPERY SLOPE ARGUMENT

**FIRST STEP PREMISE:** $A_0$ is up for consideration as a proposal that seems initially like something that should be brought about.

**RECURSIVE PREMISE:** Bringing up $A_0$ would plausibly lead (in the given circumstances, as far as we know) to $A_1$, which would in turn plausibly lead to $A_2$, and so forth, through the sequence $A_2, \ldots, A_n$.

**BAD OUTCOME PREMISE:** $A_n$ is a horrible (disastrous, bad) outcome.

**CONCLUSION:** $A_0$ should not be brought about.

The characteristic idea of the slippery slope argument is that once you take that first action in the sequence, it is like pushing off from the top of an Olympic ski-jump run. Once you have kicked off, turning back becomes harder and harder. At some ill-defined point or gray area, there is no turning back. Once you are into this area, there is only one way to go: faster and faster down the slope until you hit the bottom. So if you don’t want to go careening down the slope out of control and hit the bottom
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(with disastrous consequences of personal injury), the message is that you had better not take that first step at all.

Slippery slope arguments are often used to give reason not to start taking drugs, because once you start taking an addictive substance, it gets harder and harder to stop. At some point that cannot be defined specifically for each individual, you are “hooked,” and the outcome is that your life will be badly damaged or possibly even destroyed. Once a person begins to use drugs, physical dependency can make it very difficult to stop, and the sequence of subsequent outcomes can have all kinds of other bad consequences that eventually result in a painful life of substance dependency and eventually an unpleasant death. In this kind of case, the basis of the slippery slope is a physical addiction and dependency, caused by the body’s reaction to the substance. As you consume more of the substance, you need more to keep up the habit. There are also variants on this argument that cite an alleged sequence leading from one addictive substance to another. Here the linkages are harder to prove, and debates about such arguments are highly controversial. One case of this sort is the argument that the decriminalization of marijuana would be the first step in a sequence that would lead to greater drug use and a progression to the use of harder drugs, such as heroin, and eventually to a society where the use of all kinds of drugs has become common and uncontrollable, with all the social problems attending widespread drug abuse. A variant on this case with an even weaker linkage is the argument used when one person warns another not to start smoking, arguing it may lead to the use of other addictive substances, like marijuana, which in turn may lead to the use of harder drugs.

Slippery slope arguments are frequently used in disputes on ethics and public policy. In the case of Texas v. Johnson (1989) the issue concerned a man who burned an American flag during a political demonstration in Dallas to protest policies of the Reagan administration. The case of whether he should be convicted of “desecrating a venerated object” eventually went to the U.S. Supreme Court, where it was ruled that, in this case, the flag-burning was an “overtly expressive” act and was thus protected under free speech (First Amendment). Justice Brennan used a slippery slope argument as part of the rationale for his decision.

We perceive no basis on which to hold that the principle underlying our decision in Schacht does not apply to this case. To conclude that

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the Government may permit designated symbols to be used to communicate only a limited set of messages would be to enter territory having no discernible or defensible boundaries. Could the Government, on this theory, prohibit the burning of state flags? Of copies of the Presidential seal? Of the Constitution? In evaluating these choices under the First Amendment, how would we decide which symbols were sufficiently special to warrant this unique status? To do so, we would be forced to consult our own political preferences, and impose them on the citizenry, in the very way that the First Amendment forbids us to do so.\textsuperscript{13}

The argument was that once the burning of the flag in a case such as the one above were prohibited by law, it would set a precedent for banning many other kinds of acts, such as burning other objects that represented federal or state governments. To have to enforce all these infringements would be costly, and the value of doing so seems dubious. It would lead to the imposition of political preferences in banning all kinds of expressive acts that would pose conflicts with the First Amendment.

In a Doonesbury cartoon\textsuperscript{14} one character warned another of the perils of banning “physical desecration of the flag” by citing a number of more specific steps in the sequence of a slippery slope.

...“physical desecration” is a tricky business.... For instance, will it be illegal to burn a paper flag? Or to tear up a photo of a flag? How about cutting a cake decorated with a flag? And what about flag clothing? Are you a patriot if you wear a flag T-shirt, but a felon if you wear flag pants? And what does that make Uncle Sam? And what about art – who decides whether a flag painting is a desecration or an homage? Also, what about other national symbols, like the eagle or the Statue of Liberty? Or state flags? Or the confederate flag? All sacred to somebody – should they be protected? Also, since burning is the only sanctioned way of disposing of a worn-out flag, aren’t we really outlawing an idea instead of an act? And, if so, what other ideas do we outlaw?

Here we can see that what propels the sequence of reasoning down the slope is not only the idea of setting a precedent, but also the linguistic difficulty of circumscribing a vague term such as ‘physical desecration’. Once it has been applied to one object, like a flag, it is hard to stop it from also being applied to other objects, like a cake or a T-shirt. This vagueness is the gray area of the slippery slope.

\textsuperscript{13} \textit{Texas v. Johnson}, 1989, 10.

\textsuperscript{14} G. B. Trudeau, August 12, 1989.
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Slippery slope arguments conforming to the premises and conclusion of the argumentation scheme can be reasonable as presumptive arguments in a dialogue, provided all the connected steps in the sequences, linking the first step with the final (horrible) outcome, are adequately filled in and justified. In some cases, however, these links in the reasoning are not supported adequately, and the slope argument is not plausible. In some cases, it is even used unconvincingly as a fear appeal argument. The problem with fear appeal arguments is that they can easily backfire if the fear appeal is too exaggerated and unconvincing. For example, in the cult film *Reefer Madness*, teenagers were warned of the dangers of smoking marijuana, but the evidence was dubious, according to what was known at the time. Hence the argument was an unconvincing fear appeal argument that the audiences found funny. Generally, empirical evidence is needed to back up a slippery slope argument adequately. Since the period when this film was popular, considerable empirical evidence of the negative consequences of taking marijuana has been found. But how strong the link is between taking marijuana and progressing to harder drugs remains a subject of some controversy. Even so, drugs that are addictive are very dangerous for some people to try. So the burden of proof in such cases should be weighted toward caution. If even trying such a drug might be dangerous, urging a person to be cautious by not taking the first step could be a reasonable slippery slope argument.

Generally, in evaluating slippery slope reasoning, it is best to begin by identifying the three premises of the argument. The first-step premise postulates the first step in the sequence. The recursive premise describes the mechanism of the slope— the repeating or propelling factor that drives the sequence along past a point where the sequence can be stopped. The bad outcome premise cites the horrible outcome, supposedly the final event in the sequence. The most important appropriate critical questions for a slippery slope argument concern part 2, the sequence of steps in the argument.

1. What intervening propositions in the sequence linking up $A_0$ with $A_n$ are actually given?
2. What other steps are required to fill in the sequence of events to make it plausible?
3. What are the weakest links in the sequence, where specific critical questions should be asked about whether one event will really lead to another?
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How strong a slippery slope argument needs to be depends on how strong a claim is made in the conclusion — does it say that the horrible outcome may, will, or must occur? The stronger the claim, the stronger the argument needed to back it up. However, since slippery slope arguments are about the future, any of them that have a “must” in the conclusion (or any wording indicating inevitability) should be viewed very skeptically.

One must be very careful to distinguish between instances of arguments from negative consequences and instances of slippery slope arguments because, as indicated above, the slippery slope arguments described above are species of argumentation from negative consequences. What marks out the slippery slope argument as a special type of argument from negative consequences is that the slippery slope argument always has the characteristic recursive premise. This premise describes a sequence of actions where the argument moves forward from one step to the next by some repeating process of mechanism that drives the actions or consequences past the point where the sequence can be stopped. Many instances of argument from consequences do have such a recursive premise stated as part of the argument. If an argument from negative consequences does not have this recursive feature, it should not be classified as a slippery slope argument.

EXERCISE 3.5

Analyze the following dialogues, classifying the argument used by identifying its argumentation scheme. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) Pierre and Mary are arguing about the issue of Quebec separating from the rest of Canada. Pierre maintains that separation would be a good thing, because it would preserve the Francophone cultural heritage. Mary argues that if Quebec separates, there would be massive unemployment, especially in Quebec, where there are many federal government employees.

(b) Bob is about to try to fix his radio by picking up a live wire. Jane warns him, “I wouldn’t do that. You could get a nasty shock!”

(c) Anne and Fred are arguing about the issue of whether scientists should get permission to do laboratory research on human embryos. Fred argues: “We must stop all research with human embryos immediately, because it will lead to more and more experimental research on human fetuses, and eventually, the harvest of human aborted fetuses will become such a resource for treatment of
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diseases like Parkinson’s disease and muscular dystrophy, there will be no turning back.”

d) John and Louise are discussing the issue of whether physician-assisted suicide should be allowed in cases of terminal illness. Louise argues: “Once you allow it in cases of terminal illness, it will lead to euthanasia of the disabled. That will mean that anyone who is regarded as troublesome will be eliminated as ‘unfit’ by the state. Ultimately, the only citizens who will be allowed to live are those who fit the current concept of an ideal healthy person.”

e) In a debate on whether the practice of not allowing prayers in the schools should be continued, some participants worried that different religions might want to have special prayers representing their own religious practices and views. One participant argued that with all the different minority groups, once you accept one kind of religion as legitimate, you are going to have to accept many other kinds of religious groups as having a legitimate right to have prayers or religious services in the classroom. This participant said: “It’s a Pandora’s box. You know that Satanism is a religion too!”

f) Trevor and Mary are arguing about the issue of whether drivers’ licenses should have photographs on them. Trevor argues: “It would be the first step toward a police state!”

Argument from Sign

In many cases of argumentation, data observed in a case are taken as a sign of something that fits a familiar pattern. Drawing an inference from a patient’s symptom taken as a visible sign of a disease or some other known condition is a very common form of reasoning in medical diagnosis. For example, suppose a patient who is feeling ill has yellow skin. Such an observation may be taken by the physician as a sign or indicator that the patient has hepatitis. Of course, such a provisional diagnosis is only a hypothesis. The patient may have some other liver disease or may have a skin disease that does not affect the liver. This form of argumentation is defeasible at the first stages and may lead only to a plausible conclusion in the form of a tentative hypothesis. It may lead to further observations and tests that can be carried out. The hypothesis may be tested, for example, by analyzing a sample of the patient’s blood. Argument from sign is typically a defeasible argument in an investigation that leads to the collection of further evidence. The following classic example illustrates argument from sign.
6. Argument from Sign

Travis and Lisa are walking along a hiking trail in Jasper National Park and they see some imprints on the trail. Travis examines them closely and says he recognizes them as bear tracks, saying, “A bear has been here.” Lisa replies, “How do you know those imprints are bear tracks? They don’t look big enough to be bear tracks.” Travis replies, “They are the tracks of a small bear. In fact, they are the tracks of a small grizzly bear, as we can see by these very long claw imprints.”

In this case, Travis has presented an argument to Lisa. She has expressed doubts that the imprints they saw are bear tracks. Travis has used argument from sign to give her a reason to accept the conclusion that they are bear tracks. Argument from sign is a presumptive type of argument based on a premise that, generally, findings, as observed in a case, are characteristic of some type of object, event, or action. The other premise is that these characteristics or signs are present in the given case. The conclusion is that the particular event or object in question will occur or has occurred in this particular case.

The argumentation scheme for argument from sign is the following, where $A$ and $B$ are taken as these two propositions.

ARGUMENTATION SCHEME FOR ARGUMENT FROM SIGN

**SPECIFIC PREMISE:** $A$ (a finding) is true in this situation.

**GENERAL PREMISE:** $B$ is generally indicated as true when its sign, $A$, is true.

**CONCLUSION:** $B$ is true in this situation.

It is easy to see why argument from sign, in the scheme displayed above, is defeasible. The general premise is not an absolute universal generalization. The one proposition being true generally (but not necessarily) indicates that the other will be true as well. Yellow skin may be sign of liver dysfunction. But there are cases where a patient will have yellow skin but will not have liver dysfunction. The presence of yellow skin coloration is just a preliminary indicator or symptom. It may have evidential value. But the presence of other known factors in a case may rule it out, defeating the initial inference to the conclusion that this patient has liver dysfunction.

Argument from sign proceeds from a finding of some data in the form of a sign or indicator. The sign is some sort of observed finding. A conclusion is then drawn that the sign indicates the presence of something
else that it is connected to. The conclusion drawn can be expressed as a proposition that some event will or has taken place or that some object or factor is present. A finding is known or taken to be a sign of some proposition inferred from it for various reasons. It could be that one type of event is usually causally connected to the other. Or it could be that a finding of the presence of some other factor, because of some identifiable characteristic of that factor, is made apparent in the sign. For example, the presence of dark clouds is a sign of rain because one is commonly associated with the other and because dark clouds can be cited as a cause of rain. For the purposes of the argumentation scheme, the two things that are connected, the finding and the conclusion drawn from it, can be expressed in the form of propositions.

In evaluating argument from sign, the following two critical questions are appropriate.

1. What is the strength of the correlation of the sign with the event signified?
2. Are there other events that would more reliably account for the sign?

Quite often, argument from sign is a weak form of argument that cannot be relied on uncritically. Even so, it is a presumptive form of argument that can sometimes help point an investigation or chain of reasoning to a plausible conclusion.

In some cases, arguments from sign are predictive. For example, dark clouds or high winds might be a sign of a particular kind of weather that will occur in the future, such as a storm. In some cases, arguments from sign are used in a retroductive fashion, as in the bear case where the existence of the bear prints are used to reason backward in time to the conclusion that, in the past, the bear was present at this location. The presence of the bear is used as a basis for explaining the presence of the tracks.15

If we look at argument from sign as a form of defeasible reasoning, we can easily see its presumptive nature. The bear tracks could be taken as a sign of something else, depending on what was observed and where the observations were made. Perhaps someone, using some sort of gadget, cleverly planted the bear tracks there to mislead us or give us the impression that there are bears in this region. But since in Jasper National Park, normally there are bears present, we would take the presence of these bear tracks as a pretty good argument that there was a bear in this

15 Sometimes the kind of argumentation exhibited in the bear tracks example is called inference to the best explanation. The importance of this form of argumentation in scientific discovery was established by the American philosopher Charles S. Peirce.
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region. However, if we were to find bear tracks in a university classroom, we would be much less inclined to leap to the conclusion that there must have been a bear present in this classroom. We would probably expect that these bear prints were the result of some student prank or would try to find some other explanation, because it would not be normal for a bear to be present in a university classroom.

Characteristically, argument from sign provides a basis for making an initial intelligent guess or hypothesis, which leads to a fuller explanation once the fuller context of a case is filled in. For example, in the following case\(^{16}\) two initial signs of footprints and tusk-shaped wounds led to an explanation of several rhinoceros deaths.

When conservationists at South Africa’s Pilanesberg game reserve discovered a series of systematically killed rhinos, they had two clues to the culprits: tusk-shaped wounds on the corpses and elephant footprints in the vicinity. Although an elephant does not normally attack a rhinoceros, the game reserve has a number of unsupervised, adolescent males who would normally be kept in line by bulls. Without adult role models to test themselves against, the animals have become juvenile delinquents.

Here the tusk-shaped wounds and the elephant footprints offered clues on a basis of argument from sign. Two signs suggested that elephants were the killers. But further evidence led to an even more specific hypothesis. The initial hypothesis was thereby confirmed, once the fuller context of lack of supervision of the juveniles by role models was filled in.

In some cases, there is a sequence of signs, each one of which, by itself, gives only a small weight of presumption for a conclusion. But when you put the sequence together, there is an evidence-accumulating argument. This argument uses a chain of reasoning containing several arguments from sign to build up to a much more plausible weight of presumption in favor of the conclusion. In the following tale from *A Study in Scarlet*, Dr. Watson, looking for accommodations in London, has just been introduced to Sherlock Holmes. Holmes used the following sequence of reasoning to arrive at the conclusion that Watson has just returned from Afghanistan:

Here is a gentleman of a medical type, but with the air of a military man. Clearly an army doctor, then. He has just come from the tropics, for his face is dark, and that is not the natural tint of his skin, for his wrists are fair. He has undergone hardship and sickness, as his

haggard face says clearly. His left arm has been injured. He holds it in a stiff and unnatural manner. Where in the tropics could an English army doctor have seen much hardship and got his arm wounded? Clearly in Afghanistan.\footnote{Arthur Conan Doyle, \textit{The Complete Sherlock Holmes}, vol. 1 (New York: Doubleday, 1932), p. 11.}

Holmes made a guess, in this case. It was only a plausible hypothesis. But as the individual instances of argument from sign built up evidence as his sequence of reasoning proceeded, the accumulation of evidence made his conclusion a plausible one to draw (at least, according to the story). The context of the case also played an important role here, because Holmes was aware that there had recently been a war in Afghanistan in which many British men of that era had taken part. Hence the best explanation of all the phenomena that Holmes observed – the tanned skin, the injured arm, and so forth – would be that Watson had been a participant in the Afghanistan campaign. Of course, it was only a hypothesis. But Holmes’s conclusion drawn by argument from sign was a clever bit of reasoning, characteristic of the fictional detective’s careful observations and power of drawing inferences from them.

### Exercise 3.6

Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

1. Barbara had a runny nose, fever, cough, and nasal congestion. On the fifth day, red spots appeared on her body. Therefore, Barbara has the measles (or rubeola).

2. Jane had a runny nose, swollen glands, and a slight fever. On the third day, red spots appeared on her face and neck, and then faded after two days. The physician suspected Jane had German measles (rubella). He gave Jane a blood test that confirmed his diagnosis.

### Argument from Commitment

In argument from commitment, the proponent takes as premise a proposition that the respondent is committed to and uses it to press the
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respondent to concede another proposition that follows by inference from that premise. An example is the following case.18

Bob: Ed, you are a communist, aren’t you?

Ed: Of course. You know that.

Bob: Well, then you should be on the side of the union in this recent labor dispute.

In this case, let’s say, Ed has frequently advocated communism in the past and has often been known, for example, to shout, “Power to the people!” in demonstrations. Also, in this case, when asked, Ed admitted to Bob that he is a communist. So the conclusion may be drawn that Ed is a communist or that he committed to communism, as we might put it. Given this general commitment of Ed’s, Bob draws the plausible conclusion that Ed sides with the union in a particular labor dispute. Of course, Ed might not, but since a communist would normally be strongly in support of the union side in a labor dispute, it can be inferred defeasibly that Ed is on the union side. Of course, if the dialogue went on, and Ed declared that in this particular case he was not with the union, Bob’s conclusion would have to be withdrawn, on the balance of considerations.

Argument from commitment has the following general form, where \( a \) is a participant in a dialogue, and \( A \) and \( B \) are statements, as usual.

ARGUMENTATION SCHEME FOR ARGUMENT FROM COMMITMENT

COMMITMENT EVIDENCE PREMISE: In this case it was shown that \( a \) is committed to proposition \( A \), according to the evidence of what he said or did.

LINKAGE OF COMMITMENTS PREMISE: Generally, when an arguer is committed to \( A \), it can be inferred that he is also committed to \( B \).

CONCLUSION: In this case, \( a \) is committed to \( B \).

There are two critical questions that are appropriate for responding to the use of argument from commitment.

1. What evidence in the case supports the claim that \( a \) is committed to \( A \), and does it include contrary evidence, indicating that \( a \) might not be committed to \( A \)?

2. Is there room for questioning whether there is an exception in this case to the general rule that commitment to $A$ implies commitment to $B$?

In examining the second critical question, one should ask whether proposition $B$, as cited in the linkage of commitments premise, is identical to the proposition $A$ as cited in it. If not, some discussion on what exactly is the nature of the relationship between the two propositions can be helpful.

If the respondent in the dialogue asks either critical question, where the proponent has just used argument from commitment at the last move, then the burden of proof is shifted back to the proponent’s side. Unless the proponent can answer the critical question adequately, the argument from commitment is defeated.

In the example dialogue above, it is pretty clear from the evidence of his words and actions that Ed is committed to communism, so the first critical question can easily be answered. But Ed could possibly reply, using the second critical question, by explaining that in this particular case, he thinks the union is wrong, because their demands are excessive and will bankrupt the company, putting everyone out of work. So it is possible to reply to an argument from commitment by saying that normally you would be committed to a particular policy, but that this particular case is an exceptional one for you. There is the possibility of an exception to the rule. The bringing forward of such evidence in asking the second critical question would defeat the argument.

The second critical question has to do with what the respondent is committed to in the premise, in relation to what he is committed to in the conclusion. In some cases, the same commitment can be involved both in the premise and in the conclusion. For example, consider the following dialogue.

**Bob:** Ed, you are a communist, aren’t you?

**Ed:** Of course. You know I am passionate about that.

**Bob:** Well, then I assume you advocate the communist position, taking the union side in the recent labor dispute.

In this example dialogue, the proposition $A$, Ed’s being a communist, is identical or at least very close to being identical to $B$, in both the premise and the conclusion of the inference. By contrast, in the previous example dialogue, there is much more of a difference in the relationship between
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the two propositions. In examining any case, a careful look at the actual wording of the two propositions is helpful.

One way that argument from commitment can be abused is through the committing of the straw man fallacy of distorting or exaggerating an opponent’s position, in order to make it easier to attack and refute it as implausible. Environmental debates provide classic cases of such arguments, as the following example will indicate.

Stewart and Margo are having a dispute on environmental issues, where Margo has taken a moderate position to the effect that development should be allowed only if it is sustainable and efforts are made not to pollute the environment. Stewart replies, “I see that you are one of those extreme protectionists who think that the earth should be a pristine wilderness where all industrial development is forbidden.”

Much here depends on the prior context of the dialogue, and the particular propositions that Margo has committed herself to accepting as her position. But suppose her commitments are not as extreme as the radical view portrayed by Stewart and that her form of environmentalism is moderate. In such a case, her point of view has been misrepresented by him and made to appear more extreme than it really is. This kind of argumentation is merely a tactic to make it easier to refute her argument. As shown by this case, the second critical question is extremely important. The proposition that the proponent is committed to might not be the same as the proposition attributed to her by the respondent. If there is a difference between the two propositions, there has to be a reason to draw the inference from the one to the other. Thus the use of argument from commitment is sometimes dangerous. It can even be used as a misleading and erroneous move to attack an opponent in a dialogue.

Argument from commitment can be used in an even stronger way to infer that a respondent is inconsistent in his commitments. Suppose that in another case, Ed had actually taken the side of the management in a recent labor dispute. In such a case, Bob might use argument from commitment in a negative fashion to draw the conclusion that Ed’s conduct implies an inconsistency. Consider the following dialogue.

Bob: You are a communist, aren’t you?

Ed: Of course. You know that I have often said so.

Bob: Well, you say you are a communist, but you were against the union side in the recent labor dispute, showing that you are not a communist.
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In this example dialogue, Bob is drawing the conclusion that Ed’s commitments are inconsistent. Or at least he is arguing that they appear to be inconsistent and that the apparent inconsistency raises doubts about whether Ed’s professed commitments are really his commitments after all. Bob says, “Well, you say you are a communist,” suggesting that Ed may not really be a communist at all, because “actions speak louder than words” when it comes to revealing one’s commitments. This kind of attack can be used to make an arguer appear to be illogical or even hypocritical, as is shown in the analysis of various kinds of personal attack arguments in section 9 below.

To reply to this kind of negative use of argument from commitment, as in his response to the third critical question, above, Ed has to offer some kind of account giving his reasons why he did what he did, showing how this case was exceptional. Ed has to go further into the details of the case to restore the consistency of his commitments. This negative use of argument from commitment, called argument from inconsistent commitment, has the following general form.

ARGUMENTATION SCHEME FOR ARGUMENT FROM INCONSISTENT COMMITMENT

INITIAL COMMITMENT PREMISE: \( a \) has claimed or indicated that he is committed to proposition \( A \) (generally or in virtue of what he said in the past).

OPPOSED COMMITMENT PREMISE: Other evidence in this particular case shows that \( a \) is not really committed to \( A \).

CONCLUSION: \( a \)’s commitments are inconsistent.

To reply to the use of an argument from inconsistent commitments, a respondent may need to go further into the details of the case or the nature of his commitment to show why the inconsistency is only apparent and not real. Alternatively, if he admits the inconsistency is real, he must somehow explain how the conflict arose.

The critical questions matching the argument from inconsistent commitments are the following.

1. What is the evidence supposedly showing that \( a \) is committed to \( A \)?
2. What further evidence in the case is alleged to show that \( a \) is not committed to \( A \)?
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3. How does the evidence from 1 and 2 prove that there is a conflict of commitments?

The problem generally with arguments from inconsistent commitments is that an action attributed to someone might suggest that they are not committed to a policy, but how an action is interpreted in a particular situation, as expressing a commitment, is often highly subject to dispute. If I am a professed vegetarian but eat beef on one occasion, does that action mean that I am now committed to a policy of eating beef? Maybe not, because I may just have slipped up on one occasion or been very hungry when no vegetarian food was available. What an action implies, as a commitment, may not be so easy to judge and may require looking at a body of evidence in a given case.

EXERCISE 3.7

Analyze the arguments in the following dialogues by identifying the argumentation scheme of the argument put forward by one party. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

Dialogue (a)
RON: Rose, you are a Catholic, aren’t you?
ROSE: Yes, you know that.
RON: Well, then you must be voting against the Democrats in the next election, because they support abortion on demand.

Dialogue (b)
TINA: You believe in the theory of evolution, don’t you, Tom?
TOM: Well yes, I suppose I do accept that theory.
TINA: So you are one of those godless materialists who rejects equal rights on the grounds that all life should be a struggle where only the fittest should survive.

Dialogue (c)
BRUTUS: You said you were a supporter of free enterprise, right, Barbara?
BARBARA: That’s what I maintained, yes.
BRUTUS: But last week you said you approved of the new policy of tightening controls over emission of industrial pollution in the Bay Area. So you are not really committed to private enterprise at all, in that instance.
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Dialogue (d)

SENATOR S: Back ten years ago, you condemned our policy on the grounds it contributed to inflation.

SENATOR T: Well yes, I did.

SENATOR S: But while your party has been in power, there has been more inflation than ever.

Ad Hominem Arguments

In any of the kinds of conversational frameworks in which people reason with each other, despite the opposition and partisanship characteristic of many kinds of dialogue, there must also be a presumption that in order to achieve collaborative goals, participants must observe rules of polite conversation. Arguers must be able to trust each other, to some extent at least, to be informative and relevant, to take turns politely, and to express their commitments clearly and honestly. Without this kind of collaboration in contributing to a dialogue, argument, of a kind that uses reasoning to fulfill its goals of dialogue interaction, would not be possible. For these reasons, attacking the other party’s honesty or sincerity in argument is a powerful move. Such an argument leads one to the conclusion that such a person lacks credibility as an arguer who can be trusted to play by the rules. This argument is so powerful because it suggests that such a person cannot ever be trusted and that therefore whichever argument they use, it may simply be discounted as worthless. Thus the person attacked cannot meaningfully take part in the dialogue any longer, no matter how many good arguments they seem to have. Because they are so powerful and dangerous, ad hominem arguments have often been treated in the past as fallacious. Their use in negative campaign tactics in political argumentation is notorious. But they can sometimes be reasonable arguments. For example, in legal argumentation in a trial, it can be legitimate for a cross-examining attorney to question the ethical character of a witness. The lawyer may even argue that the witness has lied in the past and use this argument to raise questions about his character for honesty. But before we can evaluate such ad hominem arguments, it is necessary to know what form they take.

The simplest form of the ad hominem, or personal attack, argument is the direct or personal type, often called the abusive ad hominem argument in logic textbooks.
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ARGUMENTATION SCHEME FOR THE DIRECT AD HOMINEM ARGUMENT

CHARACTER ATTACK PREMISE:  a is a person of bad character.
CONCLUSION:  a’s argument should not be accepted.

In this type of argument, a is the proponent of an argument that has been put forward. The premise that is alleged is that a is a person of bad character. What is normally cited is some aspect of a’s character as a person, and often, character for veracity is the focus of the attack. For example, the allegation may be, “He is a liar!” The attack is directed to destroying the person’s credibility, so that his argument is discounted or reduced in plausibility because of the reduction in credibility of the arguer. Thus this type of attack is particularly effective where a person’s argument depends on his presumed honesty or good character for its plausibility.

The critical questions appropriate for the direct ad hominem argument are the following.

1. How well supported by evidence is the allegation made in the character attack premise?
2. Is the issue of character relevant in the type of dialogue in which the argument was used?
3. Is the conclusion of the argument that A should be (absolutely) rejected, even if other evidence to support A has been presented, or is the conclusion merely (the relative claim) that a should be assigned a reduced weight of credibility as a supporter of A, relative to the total body of evidence available?

How these critical questions work can be illustrated by the following case.

Paul Johnson, in his book Intellectuals\(^{19}\) wrote biographical accounts of several famous intellectuals showing the persons in question to be disorderly and unethical in their private lives. Of Karl Marx, Johnson wrote that Marx was lazy in collecting facts, and often dishonest in reporting them (pp. 68–71), and therefore he could not be trusted to use factual evidence in an objective way (p. 69).

To evaluate this use of the direct ad hominem argument, the three critical questions need to be asked. First, was it true that Marx was lazy in collecting facts and often dishonest in reporting them? To answer this question, we have to look at the cases in point cited by Johnson and ask whether the incidents he cites show that Marx was lazy or dishonest. To answer the second critical question, we have to ask what the purpose of Johnson’s book is. The purpose of the book is to attack the credibility of several intellectuals, and intellectuals generally, by showing that they had bad character, as shown by their inability to run their own personal lives in an ethical way. Johnson’s attack on Marx is relevant, then, in the sense that it contributes to this purpose. (A later chapter examines in greater depth the question of what relevance is generally.)

The third critical question can be put as follows. Is the conclusion of Johnson’s argument that Marx’s theory of economics should be absolutely rejected, or is Johnson’s conclusion merely that Marx should be assigned a reduced weight of credibility, as a supporter of his theory, relative to the total body of evidence available? It would seem that the latter is the better interpretation of Johnson’s argument. He is claiming not that Marx’s theory is false or has been absolutely refuted as an economic theory by his ad hominem argument. He is claiming only that Marx is not a credible supporter of his theory. But even this weaker form of argument represents a serious attack on Marx’s advocacy of his theory.

The weakest aspect of Johnson’s ad hominem argument against Marx is on the count of the first question. But generally, his argument used to question Marx’s credibility carries weight as a plausible argument, provided support can be given to Johnson’s claim that Marx was lazy and dishonest in specific instances. If a person has a bad character in certain respects, it is perfectly legitimate for a biographer to argue that he had a bad character, by citing facts to support her thesis.

In many textbooks, the direct ad hominem argument is called ‘abusive’, suggesting that it is a fallacious argument and is always wrong. However, as the example above shows, sometimes direct ad hominem arguments can be reasonable, if they are based on facts that support them and if character is relevant as an issue in the dialogue. Still, it is true that the direct ad hominem argument is little more than ‘mud slinging’ or use of personal attack to try to discredit someone, often merely by innuendo or suggestion, with no facts presented to back up the allegation. Thus, care is needed in dealing with ad hominem arguments.

The circumstantial ad hominem argument is a variant on the direct one based on argument from inconsistent commitment. The allegation of
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inconsistent commitment is used to suggest that the arguer is not sincere in following the conclusion of his own argument. As in the following classic case of the circumstantial ad hominem argument, the allegation can be expressed by the saying, “You don’t practice what you preach.”

Parent: There is strong evidence of a link between smoking and chronic obstructive lung disease. Smoking is also associated with many other serious disorders. Smoking is unhealthy. So you should not smoke.

Child: But you smoke yourself. So much for your argument against smoking!

In this dialogue on smoking, the child’s argument against the parent is an argument from inconsistent commitment, but it is also a circumstantial ad hominem argument. Indeed, the circumstantial ad hominem argument is a special subtype of argument from inconsistent commitment that has the following form.

ARGUMENTATION SCHEME FOR THE CIRCUMSTANTIAL AD HOMINEM ARGUMENT

| ARGUMENT PREMISE: | a advocates argument α, which has proposition A as its conclusion. |
| INCONSISTENT COMMITMENT PREMISE: | a is personally committed to the opposite (negation) of A, as shown by commitments expressed in his or her personal actions or personal circumstances expressing such commitments. |
| CREDIBILITY QUESTIONING PREMISE: | a’s credibility as a sincere person who believes in his own argument has been put into question (by the two premises above). |
| CONCLUSION: | The plausibility of a’s argument α is decreased or destroyed. |

The circumstantial ad hominem argument is a chain of argumentation based on combining argument from inconsistent commitment with the direct ad hominem argument. The first two premises represent an argument from inconsistent commitment. Together they lead to the third premise, the credibility questioning premise, which is the conclusion of the argument from inconsistent commitment. But this conclusion questions the arguer’s character as a sincere person. Thus it functions, in turn, as a premise that leads to the final conclusion of the circumstantial ad hominem argument above. If the arguer a is a person of bad character,
and his argument depends on his good character (because it depends on his credibility), then the plausibility of his argument is weakened or destroyed by the inconsistent commitment found in it.

The thrust of the child’s argument in the smoking case is based on the perception of the parent’s inconsistent commitments, as expressed in combining the argument premise and the inconsistent commitment premise. The parent advocates nonsmoking, but at the same time, she herself smokes. This combination of premises leads to the credibility questioning premise. If the parent is inconsistent in this way, it plausibly follows that the parent’s belief in her own argument is open to doubt. That is, the parent lacks credibility in the child’s eyes. Therefore, the child reasons, the parent’s argument can be rejected.

There are many critical questions appropriate for the circumstantial type of ad hominem argument, but in this case, the following four are the most important ones to consider. Credibility of a participant in dialogue is an important notion in the third premise. An arguer’s credibility is enhanced by showing that she has good character of a kind that makes her a cooperative and trustworthy participant who helps a dialogue. Conversely, an arguer’s credibility can be attacked or destroyed by showing that she has bad character – for example, if she has lied or if she is not sincere in believing what she says. Thus, credibility can enhance the plausibility of an argument or detract from it.

1. Is there a pair of commitments that can be identified, shown by evidence to be commitments of $a$, and taken to show that $a$ is practically inconsistent?

2. Once the practical inconsistency is identified that is the focus of the attack, could it be resolved or explained by further dialogue, thus preserving the consistency of the arguer’s commitments in the dialogue or showing that $a$’s inconsistent commitment does not support the claim that $a$ lacks credibility?

3. Is character an issue in the dialogue, and more specifically, does $a$’s argument depend on his or her credibility?

4. Is the conclusion the weaker claim that $a$’s credibility is open to question or the stronger claim that the conclusion of $a$ is false?

Now let’s see how the scheme applies to the smoking example. With respect to the first critical question, the practical inconsistency is easily identified: The parent claims you should not smoke (as a general practice), but the parent smokes herself. The second critical question is how serious the inconsistency is. In this case, the parent could reply, “Yes, I smoke, but I am trying my best to give it up. Once you start, it is hard to
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stop.” If the dialogue were to be extended in this way, the parent could take some of the sting out of the claim of inconsistency. The third question is whether, as a result of the above considerations, the parent lacks credibility. The answer is, to some extent, yes. But some credibility can be restored by the kind of explanation cited above.

In this case, the most important critical question is the fourth one. The problem with the child’s reaction is that he appears to reject the parent’s conclusion (that smoking is unhealthy) outright, declaring, “So much for your argument against smoking!” This response is an overreaction, because it could quite possibly be that the parent has presented good evidence to support this conclusion. By throwing the whole argument out the window, the child could be making a big mistake. But if the child’s ad hominem argument is only the weaker claim that the parent’s credibility is open to question, on grounds of her being a smoker, then his standpoint could be quite a reasonable one.

EXERCISE 3.8

Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) Bob Smith was once accused of sexual harassment. So it would be a mistake to take the views of this reprehensible pervert seriously. Therefore his theory about the disappearance of dinosaurs from the earth should be rejected.

(b) Child to Parent: Your argument that I should stop stealing candy from the corner store is no good. You told me yourself just a week ago that you too stole candy when you were a kid.

(c) Senator X: High taxes and too many regulations on business are the worst things for the economy, and these things are not under reasonable control at all.

Senator Y: When your party was in power, you drove taxes up to record levels, and introduced many new regulations on business. So you are either illogical or, more likely, a hypocrite who doesn’t believe a word he says.

(d) A sign on a bumper sticker reads, “What’s more ridiculous than an anti-hunter who eats meat?”

(e) Mr. S. denounced investors who take advantage of tax loopholes in the law, arguing that these bad practices ruin the economy for the average person. Mr. T. replied that S. himself had recently taken advantage of a “quick-flip” tax reduction scheme that was technically legal but was really a clever device for tax avoidance.
Argumentation Schemes

Mr. S. replied that you shouldn’t condemn anyone for taking advantage of the law and that what he did was legal. So he, like any citizen, should be able to take advantage of legitimate deductions.

(f) A politician in office charged that government policy is unduly influenced by corporations that give money to the party. Critics pointed out that private companies had donated millions of dollars in contracts and grants to her own leadership campaign. Citing a list of such donations she recently received, they argued that her condemnation of business donations contradicted her own solicitation and acceptance of such funding. Her spokesperson replied that she was only speaking philosophically about an ideal world when she called for a political party system funded only by public money.

Argument from Verbal Classification

Argument from verbal classification concludes that a particular thing has a certain property on the grounds that this thing can be classified under a general category of things that have this property. A simple example is the following argument.

All dolphins are classified as mammals.
Flipper is a dolphin.
Therefore, Flipper is a mammal.

In this case, the classification of dolphins as mammals is determined by the science of biology. To the extent that the classification of all dolphins as mammals is not subject to exceptions or to borderline cases, the inference in this example may be classified as deductively valid.

But arguments from verbal classification often rest on classifications based on word usage in everyday (non-scientific) speech. Consider the following example.

Anyone with net assets of over two billion dollars is wealthy.
Sarah has net assets of over two billion dollars.
Therefore, Sarah is wealthy.

The term ‘wealthy’ is vague in ordinary usage. But it is uncontroversial to classify anyone with net assets of over two billion dollars as wealthy. For such a total of net assets is beyond the gray area where there would be disputes about whether someone would rightly be classified as wealthy.
9. Argument from Verbal Classification

or not. Thus despite the vagueness of the word ‘wealthy,’ the argument from verbal classification in the example above can also be evaluated as being deductively valid.

However, some cases of classifications are more subject to doubt. Suppose the first premise in the example just above was the statement, “Anyone with net assets of over a million dollars is wealthy.” Whether this statement is acceptable depends on the context of its use. In some countries, it would be true to say that anyone with net assets of over a million dollars is “wealthy.” But in Saudi Arabia, for example, this classification would not be accepted as plausible. It not only would leave room for doubt, it would be rejected as a correct account of the way the word ‘wealthy’ is used.

Classification may be set in place by conventions of scientific terminology or by common usage of terms in everyday discourse. But in some cases, it can also be set in place by legal definitions of terms such as ‘murder’ or ‘capital gains.’ In any event, although some terms on which classifications are built are clearly defined in a way that is well established, other terms are highly subject to disputation. In these latter cases especially, it is important to raise critical questions about arguments based on a verbal classification.

The argument from verbal classification has the following general form, where a is an individual entity, x is a variable ranging over such entities, and F is a property.

ARGUMENTATION SCHEME FOR ARGUMENT FROM VERBAL CLASSIFICATION

INDIVIDUAL PREMISE:  a has property F.

CLASSIFICATION PREMISE:  For all x, if x has property F, then x can be classified as having property G.

CONCLUSION:  a has property G.

The critical questions appropriate for the argument from verbal classification are the following.

1.  What evidence is there that a definitely has property F, as opposed to evidence indicating room for doubt on whether it should be so classified?

2.  Is the verbal classification in the classification premise based merely on a stipulative or biased definition that is subject to doubt?
Argumentation Schemes

A stipulative definition is one that is invented, as opposed to representing an established or widely accepting meaning. For example, the term ‘quark’ was introduced in physics to name a special type of subatomic particle. Or in economics, a recession may be stipulatively defined as two quarters of negative growth in GNP. This stipulative definition may not agree completely with the way the term is used in everyday speech, but it could arguably be put forward to represent a technical use of the term in economics as a discipline. These stipulative definitions seem reasonable, in context, but in some cases such definitions are more questionable because they have a value aspect, a kind of bias or spin that makes one’s viewpoint look good or an opposed viewpoint look bad. Such use of emotionally loaded terms often needs to be critically questioned.

An example showing the importance of critically questioning argument from a verbal classification could occur in the case of the dialogue on tipping where Helen might use the following argument to support her viewpoint.

Tipping is elitist.

Therefore, tipping should be discontinued.

This argument from verbal classification is quite dangerous for Bob’s side of the dispute. If Bob accepts the premise that tipping can be classified as an elitist practice, then by argument from verbal classification, Helen’s thesis that tipping should be discontinued directly follows by a structurally correct inference. Unless Bob critically questions this use of argument from verbal classification, he loses the dispute. Bob has two ways to go. He can directly challenge Helen’s premise that tipping is elitist, by asking the first critical question. Or he can pose the second critical question by arguing that even if tipping is elitist to some degree or in certain respects, this kind or degree of elitism is not necessarily a bad thing. In other words, he can question whether a practice ought to be discontinued just because it can be classified as elitist.

Arguments from verbal classification frequently lead to verbal disputes about the real meaning of a term. But they can be quite hard to defend against if the term in question has strong negative connotations of some sort in everyday usage. Once a stigma of this kind is affixed to a thesis, it has a staining effect that is difficult to remove. In the dialogue above, for example, Bob may try to turn the tables by calling Helen’s thesis communistic or using some other term to describe it that is generally
perceived to be pejorative. In some cases, then, it is not hard to see how argument from verbal classification can lead into name calling and ad hominem attacks.

Another important thing about argument from verbal classification is that this type of argument is frequently used in an aggressive way to bring pressure to bear against an opponent by the use of an argument from a verbal classification that is biased to one side of a dialogue. Suppose that two people are having a theological dialogue on the issue of whether God is a trinity or a unity, and the proponent of the trinity thesis argues against the unity defender using the following argument.

Your thesis is heresy.

Therefore, your thesis is wrong.

This use of argument from a verbal classification seems to have the unity defender on the ropes, assuming (as seems plausible perhaps to the disputants) that anything that can be classified as heresy sounds pretty bad and must have something wrong with it. This implication could stem from the negative connotations of the term ‘heresy’ – it sounds like something bad. But it should be questioned, by asking the first critical question above, whether the thesis in question really can be classified as heresy. And even if it can, it should be questioned, by asking the second critical question above, whether all heresy is really all that bad. After all, ‘heresy’ seems to be stipulatively defined as any view that is against church dogma. What needs to be recognized, then, is that ‘heresy’ is a kind of biased term, as used in the theological dialogue above. For any view that departs from the trinity arguer’s view in the dialogue above can be classified as heresy. Heresy is used not only as a derogatory term, or at least it is meant to be, by the proponent of the argument in the dialogue above. Any view opposed to his own (the official church view) is thereby automatically classified as heresy, permitting no opposition to this view in the dialogue. What a respondent needs to do is to challenge the classification of his thesis under this derogatory term by questioning the biased use of this stipulative term.

Disputes about arguments from verbal classification are sometimes portrayed as trivial. But it is important to recognize that such arguments can be extremely powerful and significant, because their consequences can be enormously important. Such arguments can also be disputed at great length and, in some instances, at great cost in the courts. Consider the following example of this sort.
Argumentation Schemes

A private corporation wants to build a new housing development in area X. However, there is a law that if any area is classified as a wetland, no commercial development of any sort can take place on it. Any area that has wildfowl on it and that has over two hundred square meters of water surface during the month of July is classified as a wetland. An environmental group claims that area X meets these criteria and is therefore a wetland.

In this example, the environmental group uses the argument from verbal classification to make their case that area X is a wetland. If they win this case in court, the corporation will not be able to go ahead with their plans for developing area X.

EXERCISE 3.9

Analyze the following arguments by identifying the argumentation scheme involved. Identify the premises and conclusion of the argument. If there are any questionable aspects of the argument that should be considered, identify critical questions that should be asked.

(a) All kangaroos are marsupials. Jumper is a kangaroo. Therefore, Jumper is a marsupial.

(b) Anyone who believes in hiring people strictly on merit is taking an elitist viewpoint. Ben believes in hiring people strictly on merit. Therefore, Ben is an elitist.

(c) At issue in a trial was whether a man who had driven a bicycle while intoxicated had violated the law against drunk driving. The key question was whether a bicycle could be considered a vehicle. The court decided in the negative.

(d) Your argument supports free trade. Therefore, it is a globalist view that supports the big corporations that are against human rights.

Summary

Below are listed all the argumentation schemes covered in this chapter, with the set of critical questions corresponding to each form of argument.

ARGUMENTATION SCHEME FOR ARGUMENT FROM POSITION TO KNOW

POSITION TO KNOW PREMISE:  a is in a position to know whether A is true or false.

ASSERTION PREMISE:  a asserts that A is true (false).

CONCLUSION:  A is true (false).
10. Summary

1. Is a in a position to know whether A is true (false)?
2. Is a an honest (trustworthy, reliable) source?
3. Did a assert that A is true (false)?

ARGUMENTATION SCHEME FOR APPEAL TO EXPERT OPINION

**MAJOR PREMISE:** Source E is an expert in subject domain S containing proposition A.

**MINOR PREMISE:** E asserts that proposition A (in domain D) is true (false).

**CONCLUSION:** A may plausibly be taken to be true (false).

1. *Expertise Question:* How credible is E as an expert source?
2. *Field Question:* Is E an expert in the field that A is in?
3. *Opinion Question:* What did E assert that implies A?
4. *Trustworthiness Question:* Is E personally reliable as a source?
5. *Consistency Question:* Is A consistent with what other experts assert?
6. *Backup Evidence Question:* Is E’s assertion based on evidence?

ARGUMENTATION SCHEME FOR APPEAL TO POPULAR OPINION

**GENERAL ACCEPTANCE PREMISE:** A is generally accepted as true.

**PRESUMPTION PREMISE:** If A is generally accepted as true, there exists a presumption in favor of A.

**CONCLUSION:** There exists a presumption in favor of A.

1. What evidence, such as a poll or an appeal to common knowledge, supports the claim that A is generally accepted as true?
2. Even if A is generally accepted as true, are there any reasons for doubting it is true?

ARGUMENTATION SCHEME FOR ARGUMENT FROM ANALOGY

**SIMILARITY PREMISE:** Generally, case C1 is similar to case C2.

**BASE PREMISE:** A is true (false) in case C1.

**CONCLUSION:** A is true (false) in case C2.

1. Are there differences between C1 and C2 that would tend to undermine the force of the similarity cited?
2. Is A true (false) in C1?
3. Is there some other case C3 that is also similar to C1, but in which A is false (true)?
Argumentation Schemes

ARGUMENTATION SCHEME FOR ARGUMENT FROM CORRELATION TO CAUSE

CORRELATION PREMISE: There is a positive correlation between A and B.
CONCLUSION: A causes B.

1. Is there really a correlation between A and B?
2. Is there any reason to think that the correlation is any more than a coincidence?
3. Could there be some third factor, C, that is causing both A and B?

ARGUMENTATION SCHEME FOR ARGUMENT FROM POSITIVE CONSEQUENCES

PREMISE: If A is brought about, good consequences will plausibly occur.
CONCLUSION: A should be brought about.

ARGUMENTATION SCHEME FOR ARGUMENT FROM NEGATIVE CONSEQUENCES

PREMISE: If A is brought about, bad consequences will plausibly occur.
CONCLUSION: A should not be brought about.

The following three critical questions match the argumentation schemes from either positive or negative consequences.

1. How strong is the probability or plausibility that these cited consequences will (may, might, must) occur?
2. What evidence, if any, supported the claim that these consequences will (may, might, must) occur if A is brought about?
3. Are there consequences of the opposite value that ought to be taken into account?

ARGUMENTATION SCHEME FOR THE SLIPPERY SLOPE ARGUMENT

FIRST STEP PREMISE: A₀ is up for consideration as a proposal that seems initially like something that should be brought about.
RECURSIVE PREMISE: Bringing up A₀ would plausibly lead (in the given circumstances, as far as we know) to A₁, which would in turn plausibly lead to A₂, and so forth, through the sequence A₂, . . ., Aₙ.
BAD OUTCOME PREMISE: Aₙ is a horrible (disastrous, bad) outcome.
CONCLUSION: A₀ should not be brought about.

1. What intervening propositions in the sequence linking up A₀ with Aₙ are actually given?
2. What other steps are required to fill in the sequence of events to make it plausible?
10. Summary

3. What are the weakest links in the sequence, where specific critical questions should be asked about whether one event will really lead to another?

ARGUMENTATION SCHEME FOR ARGUMENT FROM SIGN

SPECIFIC PREMISE:  A (a finding) is true in this situation.
GENERAL PREMISE:  B is generally indicated as true when its sign, A, is true.
CONCLUSION:  B is true in this situation.
   1. What is the strength of the correlation of the sign with the event signified?
   2. Are there other events that would more reliably account for the sign?

ARGUMENTATION SCHEME FOR ARGUMENT FROM COMMITMENT

COMMITMENT EVIDENCE PREMISE:  In this case it was shown that a is committed to proposition A, according to the evidence of what he said or did.
LINKAGE OF COMMITMENTS PREMISE:  Generally, when an arguer is committed to A, it can be inferred that he is also committed to B.
CONCLUSION:  In this case, a is committed to B.
   1. What evidence in the case supports the claim that a is committed to A, and does it include contrary evidence, indicating that a might not be committed to A?
   2. Is there room for questioning whether there is an exception in this case to the general rule that commitment to A implies commitment to B?

ARGUMENTATION SCHEME FOR ARGUMENT FROM INCONSISTENT COMMITMENT

INITIAL COMMITMENT PREMISE:  a has claimed or indicated that he is committed to proposition A (generally or in virtue of what he said in the past).
OPPOSED COMMITMENT PREMISE:  Other evidence in this particular case shows that a is not really committed to A.
CONCLUSION:  a’s commitments are inconsistent.
   1. What is the evidence supposedly showing that a is committed to A?
   2. What further evidence in the case is alleged to show that a is not committed to A?
Argumentation Schemes

3. How does the evidence from 1 and 2 prove that there is a conflict of commitments?

ARGUMENTATION SCHEME FOR THE DIRECT AD HOMINEM ARGUMENT

CHARACTER ATTACK PREMISE: $a$ is a person of bad character.

CONCLUSION: $a$’s argument should not be accepted.

1. How well supported by evidence is the allegation made in the character attack premise?

2. Is the issue of character relevant in the type of dialogue in which the argument was used?

3. Is the conclusion of the argument that $A$ should be (absolutely) rejected, even if other evidence to support $A$ has been presented, or is the conclusion merely (the relative claim) that $a$ should be assigned a reduced weight of credibility as a supporter of $A$, relative to the total body of evidence available?

ARGUMENTATION SCHEME FOR THE CIRCUMSTANTIAL AD HOMINEM ARGUMENT

ARGUMENT PREMISE: $a$ advocates argument $\alpha$, which has proposition $A$ as its conclusion.

INCONSISTENT COMMITMENT PREMISE: $a$ is personally committed to the opposite (negation) of $A$, as shown by commitments expressed in his or her personal actions or personal circumstances expressing such commitments.

CREDIBILITY QUESTIONING PREMISE: $a$’s credibility as a sincere person who believes in his own argument has been put into question (by the two premises above).

CONCLUSION: The plausibility of $a$’s argument $\alpha$ is decreased or destroyed.

1. Is there a pair of commitments that can be identified, shown by evidence to be commitments of $a$ and taken to show that $a$ is practically inconsistent?

2. Once the practical inconsistency is identified that is the focus of the attack, could it be resolved or explained by further dialogue thus preserving the consistency of the arguer’s commitments in the dialogue or showing that $a$’s inconsistent commitment does not support the claim that $a$ lacks credibility?
10. Summary

3. Is character an issue in the dialogue, and more specifically, does α’s argument depend on his or her credibility?

4. Is the conclusion the weaker claim that α’s credibility is open to question or the stronger claim that the conclusion of α is false?

ARGUMENTATION SCHEME FOR ARGUMENT FROM VERBAL CLASSIFICATION

**INDIVIDUAL PREMISE:** α has property F.

**CLASSIFICATION PREMISE:** For all x, if x has property F, then x can be classified as having property G.

**CONCLUSION:** α has property G.

1. What evidence is there that α definitely has property F, as opposed to evidence indicating room for doubt on whether it should be so classified?

2. Is the verbal classification in the classification premise based merely on a stipulative or biased definition that is subject to doubt?