

# The Pocket Guide to Critical Thinking

*Fourth Edition*

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# Preface

Critical thinking is reasoning well. This includes evaluating whether we should be convinced that some claim is true or some argument is good as well as formulating good arguments. Critical thinking is a skill we need every day.

The most important ideas and methods of critical thinking are presented here. But to reason well requires more than knowing definitions and rules and a few examples. It requires judgment. The practice you need for that can come from using these ideas every day while studying, watching television, reading the newspaper, browsing the Web, working at your job, and talking to your friends and family. The new Web Exchange for Critical Thinking at <[www.AdvancedReasoningForum.org](http://www.AdvancedReasoningForum.org)> provides many more examples to think about, which you can contribute to, too.

Because your reasoning can be sharpened, you can understand more, you can avoid being duped. And, we hope, you will reason well with those you love and work with and need to convince, and you will make better decisions. But whether you will do so depends not just on method, not just on the tools of reasoning, but on your goals, your ends. And that depends on virtue.

## **OUTLINE of the BOOK**

### **Claims**

We want to know truths from our reasoning. But to do that we need to know how to recognize whether a sentence could be true or false or is just nonsense, which is what we'll see in chapter 1. In chapter 2 we'll look at how to use definitions to clarify what we're talking about.

### **Arguments**

In chapter 3 we begin the study of reasoning by looking at arguments: attempts to convince someone that a claim is true in virtue of other claims being true. In chapter 4 we'll see criteria for what counts as a good argument. And in chapter 5 we'll see when we're justified in accepting a claim without an argument.

Most arguments we encounter are not complete. That needn't mean they're bad, though, as we'll see in chapter 6 when we set out criteria for repairing arguments. In chapter 7 we'll see how to reply to objections with a counterargument. Sometimes, though, people try to get us to accept a claim by a fancy choice of words rather than reasoning, as we'll see in chapter 8. In chapter 9 we'll see that labeling certain kinds of arguments as fallacies can be a useful shortcut in evaluating arguments.

### **Special Kinds of Claims**

Some kinds of claims require special skills to analyze in arguments. In chapter 10 we'll look at claims that are made from other claims using "or," "not," and "if . . . then . . .". Especially important is learning how to formulate the contradictory of a claim. In chapter 11 we'll look at claims about all or some part of a collection.

Claims that state not what is, but what should be are crucial for reasoning about value and ethics, and we'll look at those in chapter 12.

### **Numbers and Graphs**

We use numbers to measure, summarize, and compare lots of information, and we'll see how to use those in our reasoning in chapter 13.

Graphs allow us to summarize many numerical claims, allowing for easier, visual comparisons, which we'll learn to evaluate in chapter 14.

### **Reasoning about Experience**

Comparisons are at the heart of our understanding of the world, and arguments that depend on those are called analogies, which find how to evaluate in chapter 15.

In chapter 16 we'll see how to reason from our experience to arrive at true claims about a group from knowing about only a part of it.

We spend a lot of our time trying to figure out cause and effect in our lives, and in chapter 17 we'll see how to do that well. In chapter 18 we'll see how to analyze whether there is cause and effect by looking at studies of groups.

Explanations are how we bring order to our experience, and we'll see how to evaluate those in chapter 19.

### **Risk and Making Decisions**

A choice about what to do can be framed as an argument to convince yourself that a particular claim is true. To evaluate such reasoning we need to be able to evaluate the risk as well as any benefit that might come from a choice of action, as we'll see in chapters 20 and 21.

### **Writing Well**

Knowing how to evaluate claims, arguments, cause and effect, and explanations can help us write better. We can judge our own work as we would another's, applying all we've learned here.

# 1 Claims

We want to know what's true. But first we have to recognize if a sentence even could be true or false.

**Claims** A *claim* is a declarative sentence used in such a way that it is either true or false, but not both.

*Example 1* Dogs are mammals.

*Analysis* This is a claim.

*Example 2*  $2 + 2 = 5$

*Analysis* This is a claim, a false claim.

*Example 3* Dick is a student.

*Analysis* This is a claim, even if we don't know if it's true.

*Example 4* How can anyone be so dumb to think cats can reason?

*Analysis* This is not a claim. Questions are not claims.

*Example 5* Never use gasoline to clean a hot stove.

*Analysis* Instructions and commands are not claims.

*Example 6* I wish I could get a job.

*Analysis* Whether this is a claim depends on how it's used. If Maria, who's been trying to get a job for three weeks says this to herself, it's not a claim—we don't say that a wish is true or false. But if Dick's parents are berating him for not getting a job, he might say, "It's not that I'm not trying. I wish I could get a job." Since he could be lying, in that context it's a claim.

## Vagueness

Often what people say is *too vague* to take as a claim: there's no single obvious way to understand the words. Vagueness can create worthless disagreements and mislead.

*Example 7* People who are disabled are just as good as people who aren't.

*Analysis* Lots of people take this to be true and important, but what does it mean? A deaf person is not as good as a hearing person

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at letting people know a smoke alarm is going off. This is too vague for us to agree it's true or false.

*Example 8* "Susan Shank, J.D., has joined Zia Trust Inc. as Senior Trust Officer. Shank has 20 years' experience in the financial services industry including 13 years' experience as a trust officer and seven years' experience as a wealth strategist."

*Albuquerque Journal*, 4/29/10 and the Zia Trust website

*Analysis* "Wealth strategist" looks very impressive. But when asked what it meant, Ms. Shank said, "It can have many meanings, whatever the person wants it to mean." This is vagueness used to convince you she's doing something important.

Still, everything we say is somewhat vague. After all, no two people have identical perceptions, and since the way we understand words depends on our experience, we all understand words a little differently. So it isn't whether a sentence is vague, but whether it's too vague, given the context, for us to be justified in saying it's a claim. It's a mistake, a *drawing the line fallacy*, to argue that if you can't make the difference precise, there's no difference. In an auditorium lit by a single candle some parts are clearly lit and some parts are clearly dark, even if we can't draw a precise line where it stops being light and starts being dark.



*Example 9* Tom: My English composition professor showed up late for class today.

Zoe: What do you mean by late? How do you determine when she showed up? When she walked through the door? When her nose crossed the threshold?

*Analysis* Zoe is asking for more precision than is needed. In ordinary talk what Tom said is clear enough to be a claim.

*Example 10* If a suspect who is totally uncooperative is hit once by a policeman, that's not unnecessary force. Nor twice, if he's resisting. Possibly three times. If he's still resisting, shouldn't the policeman have the right to hit him again? It would be dangerous not to allow that. So, you can't say exactly how many times a policeman has to hit a suspect before it's unnecessary force. So the policeman did not use unnecessary force.

*Analysis* This convinced a jury to acquit the policemen who beat up Rodney King in Los Angeles in the 1990s. But it's just an example of the drawing the line fallacy.

*Example 11* Zoe: Those psychiatrists can't agree whether Wanda is crazy or not. One says she's clinically obsessive, and the other says she just likes to eat a lot. This psychiatry business is bunk.

*Analysis* Just because there are borderline cases doesn't mean there isn't a clear difference between people who are really insane and those who aren't.

## Subjective claims

It's useful to distinguish between claims that are about the world outside us and those about thinking, believing, and feeling.

***Subjective and objective claims*** A claim is *subjective* if whether it's true or whether it's false depends on what someone, or something, or some group thinks, believes, or feels. A claim that's not subjective is *objective*.

*Example 12* All ravens are black.

*Analysis* This is an objective claim.

*Example 13* Dick: My dog Spot is hungry.

*Analysis* This is a subjective claim.

*Example 14* Suzy: It's cold outside.

*Analysis* This is too vague to be an objective claim. But if Suzy means just that it seems cold to her, it's OK as a subjective claim. We aren't and usually can't be more precise about our own feelings.

*Example 15* Lee: Calculus I is a really hard course.

*Analysis* What criteria is Lee using for classifying a course as really hard? If he means that Calculus I is difficult for him, then the

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claim is subjective. If Lee has in mind that about 40% of students fail Calculus I, which is twice as many as in any other course, then the claim is objective. Or Lee might have no criteria in mind, in which case what he's said is too vague to be taken as a claim. *If it's not clear what criteria are being invoked, then the sentence is too vague to be classified as a claim.*

*Example 16* Wanda weighs 215 pounds.

*Analysis* This is an objective claim. Registering a number on a scale is an objective criterion.

*Example 17* Nurse: Dr. E, tell me on a scale of 1 to 10 how much your back hurts.

Dr. E: It's about a 7.

*Analysis* This is a scale, but one that only Dr. E knows. Dr. E's claim is subjective.

*Example 18* Dick: Wanda is fat.

*Analysis* This is a subjective claim. Whether it's true depends on Dick's feeling about what is fat. But what if Wanda is so obese that everyone would consider her fat? It's still subjective, but we ought to note that agreement. A subjective claim is *intersubjective* if (almost) everyone agrees that it's true or (almost) everyone agrees that it's false.

*Example 19* God exists.

*Analysis* Often people think that a lot of disagreement about whether a claim is true means the claim is subjective. But that's a confusion, the *subjectivist fallacy*. Whatever we mean by "God" it's supposed to be something that exists independently of people. So the example is objective: whether it's true or false doesn't depend on what anyone thinks or feels. "God exists" ≠ "I believe that God exists."

*Example 20* There are an even number of stars in the sky.

*Analysis* This claim is objective, but no one knows how to find out whether it's true or false, and it's not likely we'll ever know.

*Example 21* There is enough oil available for extraction by current means to fulfill the world's needs for the next seventeen years at the current rate of use.

*Analysis* This is objective. People disagree about it because there's not enough evidence one way or the other.

*Example 22* Zoe (to Dick): Tom loves Suzy.

Dick: I don't think so.

*Analysis* Dick and Zoe disagree about whether this subjective claim is true, but it's not for lack of evidence. There's plenty; the problem is how to interpret it.

Whether a claim is objective or subjective does not depend on:

- How many people believe it.
- Whether it's true or false.
- Whether anyone can know whether it's true or whether it's false.

To evaluate any claim we have to use our judgment. When we reckon that too much judgment is needed, it's usually because the sentence is too vague to be a claim.

Confusing whether a claim is objective or subjective, though, can lead to pointless disagreements.

*Example 23* Zoe: That tie is hideous.

Dick: What are you talking about? It's great, the new style.

Zoe: You're crazy, it's ugly.

*Analysis* Dick and Zoe are treating a subjective claim as objective. There's no sense in arguing about taste.

*Example 24* Lee: I deserve a higher mark in this course.

Dr. E: No you don't. Here's the record of your exams and papers. Summing them all up, you earned a C.

Lee: That's just your opinion.

*Analysis* Lee is treating an objective claim, "I deserve a higher mark," as if it were subjective. But if it really were subjective, there would be no point in arguing about it with Dr. E any more than arguing about whether Dr. E feels hungry.

## 5 Evaluating Premises

An argument gives us good reason to believe a claim if we have good reason to believe its premises. But what are good reasons to believe the premises? We can't expect an argument for every claim or we'd never get started. We have to take some claims without argument, and we need criteria for when it's OK to do that. But keep in mind:

not believe  $\neq$  believe is false

lack of evidence  $\neq$  evidence it is false

We might have no good evidence that a particular claim is true or that it's false, in which case we should suspend judgment.

### *Three choices we can make about whether to believe a claim*

- Accept the claim as true.
- Reject the claim as false.
- Suspend judgment.

### **Criteria for accepting an unsupported claim**

*Our most reliable source of information about the world is our own experience*

We need to trust our own experience because that's the best we have. Everything else is second-hand. Should you trust your buddy, your spouse, your priest, your professor, the President when what they say contradicts what you know from your own experience? That way lies demagoguery, religious intolerance, and worse. Too often leaders have manipulated the populace: All Muslims want to overthrow the U.S.? But what about my Muslim neighbor who on the City Council? You have to forget your own experience to believe the Big Lie. They repeat it over and over and over again until you begin to believe it, even when your own experience says it isn't so.

Oh, we get the idea. Don't trust the politicians. No. It's a lot closer to home than that. Every rumor, all the gossip you hear, compare it to what *you* know about the person or situation. Don't repeat it. Be thoughtful, not part of the humming crowd.

“Who are you going to believe, me or your own eyes?”

—Chico Marx

But we shouldn't always trust our own experience.

*Example 1* As Sgt. Carlson of the Las Vegas Police Department says, "Eyewitnesses are terrible. You get a gun stuck in your face and you can't remember anything." The police do line-ups, putting a suspect to be identified by a witness among other people who look a bit similar. The police have to be careful not to say anything that may influence the witness, because memory is malleable.

*Example 2* You tell the officer that the car ahead didn't put on its turn signal.

*Analysis* You think that's so, but with the rain and distractions you might have missed it. The state of the world around us can affect our observations and make our personal experience unreliable.

*Example 3* You go to the circus and see a magician cut a lady in half. You saw it, so it has to be true.

*Analysis* You don't believe it, and rightly so because it contradicts too much else you know about the world.

*Example 4* Day after day we see the sun rise in the east and set in the west. So clearly the sun revolves around the earth.

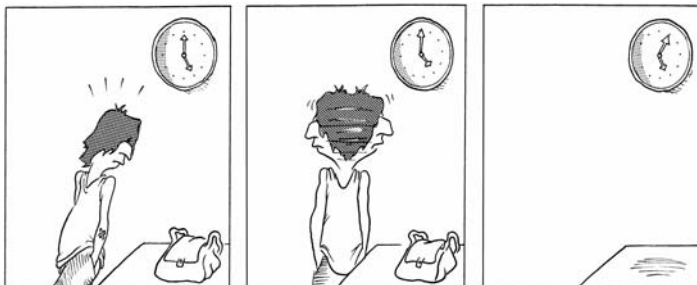
*Analysis* We don't accept our own experience because there's a long story, a theory of how the earth turns and revolves around the sun. A convincing argument has been made for us to reject our own experience, and that argument builds on other experiences of ours.

- We accept a claim if we know it is true from experience.
- We reject a claim if we know it is false from experience.

*Exceptions* We have good reason to doubt our memory.

The claim contradicts what we know from other experiences and there's a good argument against it.

*Example 5* Tom was asked to describe what he sees in the picture.



He wrote: “The guy is in the room and he spots a purse on the table. He looks around pretty shiftily and thinks that he can get away with taking the purse. So he grabs it and goes.”

*Analysis* How does Tom know that the guy thinks he can get away with it? How does Tom know the guy grabbed the purse? Tom didn’t see that. Perhaps the purse belongs to the guy’s girlfriend and he was looking around for her, and then he took it to her. *Personal experience means what we perceive—not what we deduce from that.*

*Example 6* Wanda: Chinese guys are really smart. There are five of them in my calculus class and they’re all getting an A.

*Analysis* It’s not Wanda’s personal experience that all Chinese guys are really smart, but a deduction she’s made from knowing five of them.

*We can accept a claim made by someone we know and trust who knows about this kind of claim*

*Example 7* Zoe tells Dick to stay away from the area around South Third and Westermeyer Avenue. She’s seen people doing drugs there and knows two people who were mugged at that corner.

*Analysis* Dick has good reason to believe Zoe’s claims.

*Example 8* Dick’s mother tells him that he should major in business so he can get ahead in life.

*Analysis* Should Dick believe her? She can tell him about her friends’ children. But what really are the chances of getting a good job with a degree in business? It would be better to check at the local colleges where they keep records on what jobs graduates get. Dick shouldn’t reject her claim; he should suspend judgment until he gets more information.

*We can accept a claim made by a reputable authority we can trust as an expert on this kind of claim and who has no motive to mislead*

*Example 9* Compare:

- The Surgeon General announces that smoking is bad for your health.
- The doctor hired by the tobacco company says there’s no proof that smoking is addictive or causes lung cancer.
- The new Surgeon General says that marijuana should be legal.

*Analysis* The Surgeon General is a reputable physician with expertise in public health. She’s in a position to survey the research

on the subject. We have no reason to suspect her motives. So it's reasonable to believe her.

But is the doctor hired by the tobacco company an expert on smoking-related diseases, or an allergist, or a pediatrician? He has motive to mislead. No reason to accept his claim.

Nor is there any reason to accept what the Surgeon General says about what should be law. Though she's an authority on health, she's not an expert on law and society.

*We can accept a claim put forward in a reputable journal or reference source*

*Example 10* *The New England Journal of Medicine* is regularly quoted in newspapers, and for good reason. Articles in it are reviewed by experts who are asked to evaluate whether the research was done to scientific standards. We have less reason to trust *The National Geographic* because it pays for its own research in order to sell the magazine. What about *Scientific American*? Are the articles there peer-reviewed or commissioned? And anyone can incorporate as the "American Institute for Global Warming Analysis" or any other title you like. A name is not enough to go by.

*We can accept a claim from some usually reliable media that has no obvious motive to mislead, if the person being quoted is named*

It's up to you to decide from experience whether a source is reliable. Don't trust a news report that makes that decision for you by quoting unnamed "usually reliable sources." They're not even as reliable as the person who's quoting them, and anyway they've covered themselves by saying "usually." If there's reliable information there, the reporter should be able to back it up with documents or quotes. Otherwise, it's just rumor, often planted to sway opinion. *There's never good reason to believe a claim from an unnamed source.*

Look also for bias in the media source because of their advertisers. Ask yourself, "Who will benefit from my believing this?"

There are no absolute rules for when to accept, when to reject, and when to suspend judgment about a claim. It's a skill, weighing up these criteria in order of importance.

**Criteria for judging unsupported claims**

<i>Accept</i>	The claim is known from personal experience.
	<i>Exceptions</i> Our memory is not good; there's a good argument against what we thought was our experience; it's not our experience but what we've concluded from it.
<i>Reject</i>	The claim is known to be false from personal experience.
<i>Reject</i>	The claim contradicts other claims we know to be true.
<i>Accept</i>	The claim is made by someone we know and trust who knows about this kind of claim.
<i>Accept</i>	The claim is made by a reputable authority we can trust as an expert about this kind of claim and who has no motive to mislead.
<i>Accept</i>	The claim is made in a reputable journal or reference source.
<i>Accept</i>	The claim is from some media that's usually reliable and has no obvious motive to mislead, if the person being quoted is named.

We don't have criteria for when to suspend judgment. That's the default attitude we adopt whenever we don't have good reason to accept or reject a claim.

Above all, personal experience is your best guide. Don't trust others more than yourself about what you know best.

*Example 11* A Nevada couple letting their SUV's navigation system guide them through the high desert of eastern Oregon got stuck in snow for three days when their GPS unit sent them down a remote forest road.

*Albuquerque Journal, 12/29/09*

*Analysis* How far down a remote snow-packed forest road do you have to go before you trust your own senses over your GPS unit?

## Advertising

Advertisements are meant to convince you of the (often unstated) claim that you should buy the product, or frequent the establishment, or use the service. Sometimes the claims are accurate, sometimes they're not. There's nothing special about them, though. They should be judged by the criteria we've already considered.

*If you think there should be more stringent criteria for evaluating ads, you're not judging other claims carefully enough.*

*Example 12* “Gold is the only asset that’s not somebody else’s liability.” Radio advertisement, Spring 2010

*Analysis* That’s false: when you’ve paid off your car it’s not someone else’s liability.

*Example 13* “We’re Credit Card Relief . . . We’ve been helping people like you for more than a decade. We’re an attorney-driven program.” Radio advertisement, Spring 2010

*Analysis* This isn’t true or false: “attorney-driven program” is meaningless, though it sounds impressive.

*Example 14* “Wendy’s. Our beef is fresh. Never frozen.”

Billboard in Albuquerque, NM

*Analysis* So? Are we supposed to believe that fresh is better?

## **The Internet**

Ask yourself what reason you have to believe something you read on the Internet. Next time you’re ready, mouth agape, to swallow what’s up there on the screen, imagine your friend saying, “No, really, you believed *that*?” Don’t check your brain at the door when you go online.

*Example 15* Tom: Marijuana will help you grow your hair back.

Dr. E: How do you know that?

Tom: I read it on Wikipedia.

*Analysis* Lots of people correcting each others’ mistakes and putting in new ones, with no one saying who wrote it, is nothing we can rely on. Wikipedia is only good for leading you to sources that are reliable.

*Example 16* “Teacher Deb Harris could hardly believe what she was reading to her fourth-grade class.

Whales in Lake Michigan?

But that’s what it said in her ‘Michigan Studies Weekly,’ a newspaper distributed to 462 teachers statewide. Harris called Utah-based Studies Weekly, Inc., which puts out the teaching aid, but she said an editor stood behind the story. ‘I’ve lived here all my life—there are no whales in Lake Michigan,’ Harris recalled telling the editor.

A retraction was later posted on the company's Web site with an explanation that the false information came from a different Internet site intended as a joke. 'We at Studies Weekly want this to be a lesson to you,' the apology said. 'Not all Web sites are true, and you cannot always believe them. When researching, you should always look for a reliable site that has credentials (proof of truthfulness).' Studies Weekly publications have a circulation of 1.2 million readers in third through sixth grades nationwide.

The article read: 'Every spring, the freshwater whales and freshwater dolphins begin the 1300-mile migration from Hudson Bay to the warmer waters of Lake Michigan.' In reality, the closest whales get to Michigan is the salty estuary at the mouth of the St. Lawrence River, which is home to beluga whales." Associated Press, 11/17/2002

*Analysis* Isn't that amazing? Now say why you should believe the Associated Press story.

### Common mistakes in evaluating claims

*Example 17* Tom: All CEOs of computer software companies are rich. Bill Gates is a CEO of a computer software company. So Bill Gates is rich.

Suzy: Gee, that's valid, just like Dr. E said. And Bill Gates is sure rich. So I guess all CEOs of computer software companies are rich.

*Analysis* Suzy's arguing backwards. An argument is supposed to convince that its conclusion is true, not that its premises are true. There are lots of CEOs of small software companies who are working hard just to make a living.

***Arguing backwards*** The fallacy of *arguing backwards* is to reason that because an argument is clearly valid or strong and the conclusion is true, the premises must be true, too.

Sometimes we have good reason to believe a claim because it's put forward by an authority. But it's a mistake to accept a claim when the person isn't an authority on the subject or has a motive to mislead: that's a ***bad appeal to authority***.

*Example 18* Zoe: What do you think of the President's new science funding plan?

Tom: It's awful. It'll cut back funding on military research. They said so on Fox News.

*Analysis* Not everything you hear on Fox News is true.

Though it's OK to suspend judgment on a claim if you don't consider the person who's making it to be a reputable authority, it's never right to say a claim is false because of who said it. That's ***mistaking the person (or group) for the claim.***

*Example 19* Tom: I don't believe the new global warming accord will help the environment. That's just another lie our President said.

Dick: Come on, it's not false just cause he said it. Politicians don't lie all the time.

*Analysis* Tom is mistaking the person for the claim. There's no shortcut for thinking about a claim in order to evaluate whether to accept it.

*Example 20* Tom: There's no water shortage here in New Mexico. That's just one of those things environmentalists say.

*Analysis* Here Tom is mistaking the group for the claim.

An ***appeal to common belief*** is to accept a claim as true because a lot of other people believe it. Typically that's a bad appeal to authority.

*Example 21* Lee: All the guys at my work say that Consolidated Computers is a great investment. So I'm going to buy 500 shares—they can't all be wrong.

*Analysis* Lee is making an appeal to common belief, which is just a bad appeal to authority.

The standard fare of conspiracy theorists is to think that because it's possible, it's true. Just because it could happen, and you don't trust the folks who would benefit if you don't believe it, doesn't make it true. ***Possibility isn't plausibility.***

*Example 22* Tom: Terrorists are attacking us by spreading disease with our money. Dollar bills are passed hand-to-hand more than mail, more than menus, more than a few door handles in an office building. No one gives a second thought if you handle money with gloves in the winter. Do you ever think twice when Achmed hands you your change at the convenience store? Now you know why the flu reached epidemic proportions this year.

Suzy: Yes, yes, that could be true. And it sure explains a lot. I'm going to be real careful taking any money from Muslims now.

*Analysis* Tom's conspiracy theory is just feeding Suzy's prejudices and paranoia. What's possible isn't necessarily plausible.

An interesting story is just that—a story, which might be worth investigating. We need evidence before we believe. Sometimes there really are conspiracies, like when the soldiers and Department of Defense tried to cover up the torture at Abu Ghraib. And with conspiracies, we can be pretty sure evidence will eventually come out.

“Three may keep a secret, if two of them are dead.”

Benjamin Franklin

### Similar mistakes in evaluating arguments

It's a mistake to say an argument is bad because of who said it.

That's *mistaking the person (or group) for the argument*.

*Example 23* Zoe: I went to Professor Zzzzyzx's talk about writing last night. He showed why the best way to start on a novel is to make an outline of the plot.

Suzy: Are you kidding? He could never get his published. And he doesn't even speak English good.

*Analysis* Suzy is mistaking the person for the argument. Professor Zzzzyzx's argument may be good even if Suzy doubts his qualifications to make it.

To *refute* an argument is to show it's bad. When someone points out to us that the person who made an argument doesn't believe one of the premises, we reckon the argument must be bad. But that's a *phony refutation*. Sincerity is not one of the criteria for an argument to be good. Judging by sincerity is mistaking the person for the argument.

*Example 24* Harry: We should stop logging old-growth forests. There are very few of them left in the U.S. They are important watersheds and preserve wildlife. And once cut, we can't recreate them.

Tom: You say we should stop logging old-growth forests? Who are you kidding? You just built a log cabin on the mountain.

*Analysis* Tom's rejection of Harry's argument seems reasonable, since Harry's actions betray the conclusion he's arguing for. But whether they do or not (perhaps the logs came from the land that

Harry's family cleared in a new-growth forest), Tom has not answered Harry's argument. Tom is not justified in ignoring an argument because of what he thinks Harry did.

If Harry responds to Tom by saying that the logs for his home weren't cut from an old-growth forest, he's been suckered. Tom got him to change the subject, and they will be debating an entirely different claim than Harry intended. It's a phony refutation.

*Whether a claim is true or false is not determined by who said it.*

*Whether an argument is good or bad is not determined by who made it.*

"First, realize that it is necessary for an intelligent person to reflect on the words that are spoken, not the person who says them. If the words are true, he will accept them whether he who says them is known as a truth teller or a liar. One can extract gold from a clump of dirt, a beautiful narcissus comes from an ordinary bulb, medication from the venom of a snake."

Abd-el-Kader, Algerian Muslim statesman, 1858

Always ask "Why?"

Always ask "So?"

Take as authority only those whose speech indicates knowledge and awareness, and whose conduct indicates trustworthiness. Rely never on the position of an authority: many fools have been promoted to high place. Human desires, wills, fears can lead to fools prospering. But wisdom will out.

Don't believe because it's comfortable. A great desire for comfort, for no challenge, can lead to the enslavement of the truth and to the enslavement of us all.

If in doubt, suspend judgment. The seeker is wiser than the dogmatist.



## 12 Prescriptive Claims

When we reason, we often want to conclude not only what is, but what ought to be.

***Descriptive and prescriptive claims***

A claim is *descriptive* if it says what is.

A claim is *prescriptive* if it says what should be.

Every claim is either descriptive or prescriptive. Prescriptive claims are sometimes called *normative*, and descriptive ones are sometimes called *positive*.

*Example 1* Drunken drivers kill more people than sober drivers.

*Analysis* This is a descriptive claim.

*Example 2* There should be a law against drunk driving.

*Analysis* This is a prescriptive claim.

*Example 3* Dick: I'm hot.

Zoe: You should take your sweater off.

*Analysis* Dick has made a descriptive claim. Zoe responds with a prescriptive claim.

*Example 4* The government must not legalize marijuana.

*Analysis* This is a prescriptive claim, where "must" indicates a stronger idea of "should."

*Example 5* The government ought to lower interest rates.

*Analysis* This is a prescriptive claim.

The words "good," "better," "best," and "bad," "worse," "worst," and other *value judgments* are prescriptive when they carry with them the unstated assumption: "If it's good (preferable, . . .), then we (you) should do it; if it's bad, we (you) should not do it."

*Example 6* Drinking and driving is bad.

*Analysis* This is prescriptive, carrying with it the unstated assumption that we should not do what is bad.

*A prescriptive claim either asserts a standard—this is what should be, and there’s nothing more fundamental to say than that—or else it assumes another prescriptive claim as standard.*

*Example 7* Omar: Eating dogs is bad.

*Analysis* This is a prescriptive claim, since it carries with it the assumption that we should not eat dogs.

Zoe agreed with Omar when he said this to her. But did she really know what standard Omar had in mind? Certainly Omar’s claim by itself is not the standard but depends on something more fundamental. Perhaps he’s a vegetarian and believes “You should treat all animals humanely, and butchering animals is not humane.” Zoe is likely to disagree, since she really enjoys eating a steak.

Or Omar might believe simply “Dogs taste bad.” Then he has a standard which requires a further prescriptive one, “You shouldn’t eat anything that tastes bad.”

Or perhaps Omar believes “Dogs are carnivores, and we shouldn’t eat carnivores.” That would be a standard which he might support with what he considers a more basic standard, “We should not eat anything forbidden by the standard interpretation of the Koran, and the Koran forbids eating carnivores.”

Or perhaps Omar just agrees with what most Americans think, “Dogs should be treated as companions to people and not as food.”

*Example 8* It’s wrong to kill people.

*Analysis* This is a prescriptive claim. It’s usually taken as a standard, rather than assuming another standard.

*Example 9* Dr. Wibblitz: The university should stop doing dissection experiments on monkeys.

*Analysis* This is a prescriptive claim. Suzy agrees because she thinks that monkeys have souls and we shouldn’t hurt animals with souls. But Lee disagrees, as he believes that AIDS experiments on monkeys are important. Dr. Wibblitz thinks that such experiments are important, too, yet he thinks that they are too expensive because of the new National Science Foundation regulations. Unless they can agree on a standard by which they mean to judge the claim, they cannot resolve their disagreements.

*Debates about prescriptive claims should be about either the standard assumed or whether the claim follows from the standard.*

We cannot deduce a prescriptive claim from only descriptive claims, for a standard of values is needed first.

***Is does not imply ought***

There's no good argument that has a prescriptive conclusion with only descriptive premises.

*Example 10* Smoking destroys people's health. So we ought to raise the tax on cigarettes.

*Analysis* The premise, a descriptive claim, is true. But the conclusion doesn't follow without some prescriptive premise such as "We should tax activities that are destructive of people's health." The issue then is why we should believe that.

*Example 11* The government should raise the tax rate for the upper 1% of all taxpayers.

*Analysis* This is a prescriptive claim. Before we can judge whether to accept it we need to know what standard lies behind that "should"—what does the speaker consider a good method of taxation, and why?

*Example 12* ARF High should require students to wear uniforms in order to minimize gang signs.

*Analysis* This is really two prescriptive claims: "ARF High should require students to wear uniforms" and then a reason why, "We should minimize gang signs (in school)."

*Example 13* "I totally don't support prohibiting smoking in bars—most people who go to bars do smoke and people should be aware that a bar is a place where a lot of people go to have a drink and smoke. There are no youth working or attending bars and I just don't believe you can allow people to go have a beer but not to allow people to have a cigarette—that's a person's God-given right."

Gordy Hicks, City Councilor, Socorro, NM,  
reported in *El Defensor Chieftain*, 7/24/2002

*Analysis* The implicit standard here for why smoking shouldn't be prohibited in bars seems to be that society should not establish sanctions against any activity that doesn't corrupt youth or create harm to others who can't avoid it. The argument is just as good without the appeal to God, so by the Guide to Repairing Arguments we can ignore

that. If it turns out that Hicks really does take the standard to be theological, then the argument he gives isn't adequate.

People who believe that all prescriptive claims are subjective are called *relativists*. They think that all standards—for beauty, morality, and every other value—are relative to what some person or group of people believe. Most people, though, believe that at least some prescriptive claims are objective, such as “You shouldn't torture people.”

Often when you challenge someone to make their standard explicit, they'll say, “I just mean it's wrong (right) to me.” Yet when you press them, it turns out they're not so happy that you disagree. What they really mean is “I have a right to believe that.” Of course they do. But do they have a good *reason* to believe the claim? It's rare that people intend their moral views to be taken as subjective.

*Example 14* “The problem with all these criteria is that the choice among them seems entirely arbitrary. [The author cites various conflicting standards on which to base economic policy.] . . . I suspect though that the choice of a normative criterion is ultimately a matter of taste.”  
Stephen Landsburg, *The Armchair Economist*

*Analysis* This author seems to be a relativist. But he might just be committing the subjectivist fallacy, mistaking lack of agreement for subjectivity.

When a scientist asks us to accept a prescriptive claim, he or she is no longer talking as a scientist but as someone qualified to make value judgments, playing the role of a politician, or philosopher, or priest. *No prescriptive claim follows from any scientific laws or data, for some standard—some value judgment—is required.* It's a bad appeal to authority to accept a prescriptive claim just because a scientist said it.

*Example 15* “The science says you've got to reduce emissions of greenhouse gases. The science says you've got to stabilize concentrations of greenhouse gases in the atmosphere. What may be subject to debate is who is to reduce how much.”

Rajendra K. Pachauri, Chairman,  
UN Intergovernmental Panel on Climate Change

*Analysis* The science says no such thing. Pachauri is speaking as a politician in making these judgments about where resources should be spent given the consequences of global warming, not as a scientist.