II

Arguments by Example

Arguments by Example offer one or more specific example in support of a generalization.

> Women in earlier time were married very young. Juliet in Shakespeare's *Romeo and Juliet* was not even fourteen. In the Middle Ages thirteen was the normal age of marriage for a Jewish girl. And during the Roman Empire many Roman women were married while thirteen or younger.

This argument generalizes from three examples –Juliet, Jewish women in the Middle Ages, and Roman women during the Roman Empire- to *many* or *most* women in earlier times. To see the form of this argument most clearly, we can list the premises separately, with the conclusion on the "bottom line":

> Juliet in Shakespeare's Play was not even fourteen.
>
> Jewish women during the Middle Ages were normally married at thirteen.
>
> Many Roman women during the Roman Empire were married while thirteen or younger.
>
> Therefore, many women in earlier times were married very young.

I will often write short arguments in this way when it is important to see exactly how they work.

When do premises like these adequately support a generalization?

One requirement, of course, is that the examples be accurate. Remember rule 3; an argument must start from reliable premises! If Juliet *wasn't* around fourteen, or if most Roman or Jewish women *weren't* married at thirteen or younger, then the argument is much weaker, and if none of the premises can be supported, there is no argument at all. To check an argument's examples, or to find good examples for your own arguments, you may need to do some research.

But suppose that the examples *are* accurate. Generalizing from them is still a tricky business. Chapter II offers a short checklist for assessing arguments by example –both your own and others'.

(8) Is there more than one example?

A single example can sometimes be use for the sake of *illustration*. The example of Juliet alone might illustrate early marriage. But a single example offers next to no *support* for a generalization. It may be an atypical case, the "exception that proves the rule." More than one example is needed.

NO:

The right of women to vote was won only after a struggle.

Therefore, all women's rights are won only after struggles.

YES:

The right of women to vote was won only after a struggle.

The right of women to attend colleges and universities was won only after a struggle.

The right of women to equal employment opportunity is being won only with a struggle.

Therefore, all women's rights are won only after struggles.

In generalization about a relatively small set of things, the best argument considers all, or nearly all, the examples. A generalization about all American presidents since World War II should consider each of them in turn. Likewise, the argument that women' s rights have always required struggles should consider all, or most, important rights.

Generalization about larger sets of things require picking out a "sample." We certainly cannot list all women in earlier times who married young; instead, our argument must offer a few women as examples of the rest. How many examples are required depends partly on their representativeness, a point that section 9 takes up. It also depends partly on the size of the set being generalized about. Large sets usually require more examples. The claim that your town is full of remarkable people requires more evidence than the claim that, say your *friends* are remarkable people. Depending on how many friends you have, even just two or three examples might be enough to establish that your friends are remarkable people, but unless your town is very, very small, many more examples are required to show that your town is full of remarkable people.

(9) Are the examples representative?

Even a large number of examples may *misrepresent* the set being generalized about. A large number of examples of Roman women alone, for example, might establish very little about women generally, since Roman women are not necessarily representative of women in other parts of the world. The argument needs to consider women from other parts of the world as well.

Everyone in my neighborhood favors McGraw for president. Therefore McGraw is sure to win.

This argument is weak because single neighborhood seldom represents the voting population as a whole. A well-to-do neighborhood may favor a candidate who is unpopular with everyone else. Student wards in university towns regularly are carried by candidates who do poorly elsewhere. Also, we seldom have good evidence even about neighborhood views. The set of people who put signs in their yards and stickers on their cars (and whose lawns are visible from busy road or who drive regularly and/or park their cars in noticeable locations) may well misrepresent the neighborhood as a whole.

A *good* argument that "McGraw is sure to win" requires a representative sample of the entire voting population. It is not easy to construct such a sample. Public-opinion polls, for instance, construct their sample very carefully. They learned the hard way. In 1936 the *Literary Digest*

conducted the first large-scale public opinion poll, predicting the outcome of the Presidential contest between Roosevelt and Landon. Names were taken, as they are now, from telephone listings, and also from automobile registration lists. The number of people polled was certainly not too small: more than two million "ballots" were counted. The poll predicted a wide victory for Landon. Roosevelt, however, won easily. In retrospect it is easy to see what went wrong. In 1936 only a select portion of the population owned telephones and automobiles. The sample was sharply biased toward wealthy and urban voters, more of whom supported Landon.[4]

Polls have improved since then. Nonetheless, there are worries about the representativeness of their samples, particularly when the samples are fairly small. Nearly everyone now has a telephone, to be sue, but some people have more than one; many others have unlisted numbers; some numbers represent a whole household of voters and others only one; some people are less likely to be home to answer the phone; an so on. Even carefully selected samples, then, may be unrepresentative. Many of the best polls, for instance, badly miscalled the 1980 Presidential election.

The representativeness of any given sample, then, is always somewhat uncertain. Anticipate this danger! Look for samples that represent the whole population being generalized about. Do not only survey your friends or your neighborhood, do not accept someone else's argument if it is based on such a survey. A survey of student attitudes, for instance, shouldn't limit the sample to, say, students coming out of movies on Friday night. A random sampling of student names from the student directory is required, and even this may not produce an entirely representative sample, because some students may be too busy, or too uninterested, or too offended, to respond.

Do some research. Juliet, for example, is just one woman. Is she representative even of women in her time and place? Use your library! In Shakespeare's play, for example, Juliet's mother says to her:

> Think of marriage now; younger than you,
> Here in Verona, ladies of esteem,
> Are made already mothers. By my count,
> I was your mother much upon these years
> That you are now a maid…(I, iii, 69073)

This passage suggests that Juliet's marriage at fourteen is not exceptional; in fact, at fourteen, she seems to be a little on the old side.

When making your own argument, do not rely only on examples that come "off the top of your head." The sorts of examples you are likely to think of at a moment's notice are likely to be biased. Again, do some reading, think about the appropriate sample carefully, and keep yourself honest by looking for counterexamples (rule 11).

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[4] Mildred Parten, *Surveys, Polls, and Samples* (New York: Harper and Row, 1950), pp. 25, 290, 393f. Parten shows that lower income people, who were less likely to receive "ballots" than wealthy people, were also less likely to return them.

(10) Background information is crucial

We often need *background information* before we can assess a set of examples.

> **NO:**
> You should use slapdash Services –we already have dozens of completely satisfied customers in your area!

Slapdash may indeed have "dozens" of "completely" satisfied customers in your area –although this sort of claim is often made without any evidence at all- but you also need to consider how many people in your area have *tried* Slapdash. If a thousand people have tried Slapdash, and two dozen are satisfied, then, although there are indeed "dozens" of satisfied customers, Slapdash satisfies only 2.4% of its customers. Try somewhere else.

> **BETTER:**
> You should use slapdash Services –of the forty people in your area who have tried Slapdash, more than two dozens have been completely satisfied.

Here at least you can begin to assess the "dozens" statistic: Slapdash appears to satisfy more than 50% of the time. However, the argument is still unacceptably vague ("more than" two dozen, "completely satisfied…"), and the representativeness of the forty people who have used Slapdash is not clear either. Arguments like these require careful detail, which advertisements seldom offer.

> Or again:
> The "Bermuda Triangle" are off Bermuda is famous as a place where many ships and planes have mysteriously disappeared. There have been several dozen disappearances in the last decade alone.

No doubt. But "several dozen" out of how many ships and planes that *passed through* the area? Several dozen, or several tens of thousands? If only several dozen have disappeared out of (say) 20,000, then the disappearance rate in the Bermuda Triangle may well be normal, or even low – certainly not mysterious.

Consider how often, when buying a car or selecting a school, we are swayed by the reports of a few friends or one or two experiences of our own. Hearing about someone's sister-in-law who had a terrible time with her Volvo is enough to keep many of us from buying a Volvo –even though *Consumer Reports* might indicate that Volvos are generally very reliable cars. We let one vivid example outweigh the careful summary and comparison of thousands of repair records. Richard Nisbett and Lee Ross term this the "person who" argument[5], as in "I know a *person who* smoked three packs of cigarettes a day and lived to be 100" or "I know a *person who* had a Volvo and it was a real lemon." It is nearly always a fallacy. As Nisbett and Ross point out, one car that turns out to be a lemon only changes the frequency-of-repair rates slightly.

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[5] See *Human Inference: Strategies and Shortcomings of Social Judgement* (Englewood Cliffs, NJ: Prentice-Hall, 1980), p. 61. Actually they call it the "man who" argument; I have universalized the language.

To judge an enumeration of examples, then, we often need to consider background *rates*. Correspondingly, when an argument offers rates or percentages, the relevant background information usually must include the *number* of examples. Car thefts on campus may have increased 100%, but if this means that two cars were stolen rather than one, not much has changed. This mistake too is common. Suppose my salary increases only 5% while yours increases 50%. It sounds unfair. If I started out making $50,000, though and you started out making $5,000. Then I am now getting $52,500 and you are getting $7,500, and it's certainly not clear that I have any reason to complain.

One last example. An article arguing that the United States was behind a coup in Brazil claims that

> after the coup, foreign investments quickly poured in… Four years after the coup, foreign capital had seized control of the private sector: 100% of the automobile and tire production, 90% of cement, 80% of the pharmaceutical industry, 60% of the auto parts factories, and more than 50% of the chemical and machinery production.[6]

Impressive numbers. They *begin* to show that foreign investment (notice, not specifically American) dominates certain sectors of the Brazilian economy, although we are not told how important any of these sectors are in the overall picture. But these numbers are *entirely useless* for showing that "foreign investments quickly poured in," for the simple reason that no *pre*-coup figures are offered at all. Without that background information, there is no way of knowing whether foreign capital's control of 80% of the pharmaceutical industry, for instance, represents an increase or decrease. For all we know foreign investments might even have declined!

(11) Are there counterexamples?

Check generalization by asking if there are counterexamples.

> The Peloponnesian War was caused by the Athenians' desire to dominate Greece.
>
> The Napoleonic Wars were caused by Napoleon's desire to dominate Europe.
>
> World War Two was caused by the Fascists' desire to dominate Europe.
>
> Thus, in general, wars are caused by the desire for territorial domination.

Are *all* wars, however caused by the desire for territorial domination? Or is the generalization perhaps too broad? In fact, there are counterexamples. Revolutions, for example, have quite different causes. So do civil wars.

If you think of counterexamples to a generalization that you want to defend, revise your generalization. If the above argument were yours, for instance, you might change the conclusion to "Wars *between independent states* are caused by the desire for territorial domination." Even this may overgeneralize, but it is at least a more defensible conclusion than the original.

Other times you may want to dispute the supposed counterexample. World War I, someone may object, seems to have been caused not by the desire for territorial domination, but by a network of mutual defense pact and other political intrigues, by the restlessness of the European upper classes, by the nationalist unrest in Eastern Europe, and so on. In the face of this example,

[6] "The Secret War in Brazil," *The Progressive*, August 1977.

you might of course give up your claim entirely, or weaken it still further. Another response, however is to argue that the supposed counterexample actually does conform to the generalization. After all (you might argue), the desires of the European powers to dominate Europe were the *motives* for the mutual defense pacts and other intrigues which finally set off the war. And might not nationalist unrest too be caused by unjust domination presently in place? Here, in effect, you try to reinterpret the *counter*example as another *example*. The initial challenge to your conclusion becomes another piece of evidence for it. You may or may not change the phrasing of your conclusion: in any case yourself now understand your claim better, and you are prepared to answer an important objection.

Also try to think of counter examples when you are assessing someone else's arguments. Ask whether their conclusions might have to be revised and limited, whether perhaps those conclusions might have to be given up entirely, or whether a supposed counterexample might be reinterpreted as another example. The same rules apply to anyone else's arguments as apply to yours. The only difference is that you have a chance to correct your overgeneralizations yourself.