4

Finding the Facts

Now that we have looked at some modern tools, let us get on to the main business of analyzing logical fallacies. The greatest fallacy of all lies in not following Galileo by going first to the facts. This mistake, however, is so broad and widespread that it hardly belongs with the thirteen more specialized fallacies to be described in the chapters to come.

Failure to find the facts handicaps nearly all discussions of political and social events. Here is a typical example — a conversation I actually overheard. The scene is a New York restaurant off Fifth Avenue at lunch-time. Juan Perón, the dictator of Argentina, has just been deposed, with headlines in all the morning papers. At the next table a distinguished-looking man with a clipped mustache and a charcoal-gray suit is talking to a younger woman with a long ivory cigarette holder. In confident, clearly audible voices, their dialogue develops like this:

"Well," the woman says, "it all goes to show you can't get away with it forever."

"Right," the man says, "and it goes to show you can't buck the Church there or anywhere else."

The woman waves her holder to emphasize her next point. "You can't trust those Latin Americans anyway. They're so emotional; look at the way they drive!"

"Another thing," the man says, "is the labor situation. If Perón hadn't given the unions all that power he might have hung on longer — they always double-cross you."

"As for that Eva Perón," the woman says, "she was a model or something. He actually tried to make her vice-president!"

"Yes," the man says, "comic opera politics. They call themselves democracies down there, but it's just one dictator after another."

The conversation, you will note, begins with big, thumping generalizations, salted with popular prejudices against foreigners. Such stray facts as the couple happen to mention are of the shakiest character. Neither the man nor the woman appears to know anything definite about Eva Perón, the labor unions, the Army, the position of the Church, the economic crisis in Argentina. But both, judging by their voices, believe that they must keep up with the world, and both — like most of us who try to think at all — cannot tolerate an explanatory vacuum. The headlines about the fall of Perón — any big news story — must be explained now, at once, conclusively and emphatically! So they throw into the explanatory vacuum some of the prejudices, homilies, clichés, folk sayings readily available in their minds.

The people at the next table we may be sure have better minds than that. Let us reconstruct the conversation with the idea of facts first:

"So Perón is out," the man says.

"Yes, I wonder why." The woman looks really curious.

The man sips his martini. "Complicated," he says. "I haven't followed it any too carefully, but I'm told the export market for Argentine beef and wheat is in bad shape. Lately Perón seems to have developed serious delusions of grandeur, lost contact with reality. He's been defying the Army, the big landowners, the Church. Looks like too much for anyone to take on. The *Times* has a good man in B.A.[1] and his dispatches

[1] William Tell's note: Buenos Aires.

ought to help fit the pieces together. I wish we had my friend Carleton Beals here at this table; he's an expert on Latin American politics."

"Why shouldn't Argentina have real democratic government?" the woman asks. "Wasn't *La Presna* a great liberal newspaper until Perón suppressed it?"

"That's true," the man says. "Perhaps we can do something now to help Argentina back in the groove. She could be a kind of democratic anchor for the hemisphere in the South."

Such a conversation at the next table would surprise us, but it does not require a pair of giant intellects. It requires a different approach, a search for what is dependably known, a caution against sweeping generalizations, an eye on one's prejudices, and the ability to say "I don't know."

FACTS CONQUER A MOUNTAIN

The first ascent of the Matterhorn in 1865 was more the result of skilful reasoning than of physical agility and endurance. Edward Whymper had assaulted "that awful mountain" seven times on its southwest ridge, where the venture seemed less hopeless than from other points. His party, like every previous climbing party, was always turned back. Once he fell headlong down a snow gully and barely escaped with his life. A serious difficulty was that the rock strata of the southwest ridge sloped downward toward the climber, making footholds precarious.

Whymper cast about for other possible routes. From the Riffelberg above Zermatt, the Matterhorn sends a great rock fang into the sky. The east face from there looks almost perpendicular for thousands of feet, and no guide or observer ever dreamed of an assault from that direction. Whymper, however, noted two facts: *first*, patches of snow lay on the east face throughout the summer, meaning that it was deep. Snow does not cling to perpendicular surfaces; 40 degrees is about its

limit. *Second*, the snow etched strata lines in rough parallels that showed the rocks tilted upward, toward the right-hand side of the face.

Therefore, Whymper concluded, the east face could not be as steep as it looked, and if a climber got on its right-hand side, he would find a rock structure like a staircase, instead of one like a coal chute. These deductions of course had to be checked. So he tramped around the base of the Matterhorn to the chalets of Staffel, where the east face with its ridge could be seen in profile. Sure enough, the fang leaned backward, giving a climbing angle of 40 degrees, instead of 90 degrees!

So, defying the massed opinion of the guides and observers, the verdicts of "utterly impossible," and even the evidence of the eye itself from Zermatt, up went Whymper on the east face, like a squirrel up a tree. The Matterhorn was conquered![2]

At the other end of the scale is a U.P.[3] story, covering the 1955 convention of the Daughters of the American Revolution. A resolution was proposed demanding that the United Nations should "cease immediately and completely" from interfering in American affairs. A delegate from Washington spoke against the resolution and said: "Let us observe before we condemn, and send observers to the U.N. to see if rumors of concealed world federalist pressure are true."

Up rose a delegate from Missouri in vigorous support of the resolution. Sending observers to find the facts, said she, would reflect on the dignity of our great organization. "Forget about observing. Let's go after them with clubs and what-have-you like our forefathers!"

WHAT IS A FACT?

A cartoon in *The New Yorker* shows a lady — a very determined-looking lady — in a jury box. She is saying: "I don't listen to the evidence; I like to make up my own mind."

[2] Tragedy came in the descent that same day when the rope broke. But that is another story.

[3] William Tell's note: United Press, more recently known as "United Press International."

Straight thinkers go first to the facts. Good, but what is a fact? Any department of philosophy worth its salt can spend a couple of semesters on this one. Let us make an end run around the philosophers and pick up a definition from the scientists:

> A fact is an event in space-time which remains the same from different viewpoints — or, more technically, is invariant under a transformation of axes. In ordinary discussion a fact is invariant as seen by competent observers.

The event should be located, if possible, with dates and places, to make it easier to verify. Here are a few different kinds of facts:

1. Material objects or creatures at given places and dates: the maple in my garden in the autumn of 1956; a man named Arthur Gates who last year lived at 214 Main Street; the third broken column from the Temple of the Warriors at Chichen Itza as it lay on the ground before restoration. Also collections of people or objects: all children in the public schools of Los Angeles in September, 1940; all trailer trucks in operation in the U.S. on April 1, 1955. (Count them.)

2. Happenings at given places and dates: Truman elected President November, 1948; Steamer *Titanic* sinks in North Atlantic, April, 1912; Elizabeth Williams fell on the sidewalk on Thursday last and broke her ankle; an eclipse of the sun was visible in the U.S. in January, 1925; Matterhorn climbed July, 1865. These happenings must be verified at the time by competent witnesses and are usually recorded in some permanent way.

3. Processes verified by observation or experiment: water freezes at 32 degrees Fahrenheit; an injection of adrenalin makes the blood clot more rapidly; etc., etc.

Facts like these are not usually subjects for argument. All competent observers agree too that the moon has almost no atmosphere; that Lee surrendered at Appomattox Court House

in April, 1865; that an injection of Salk vaccine diminishes the probability of your child's contracting poliomyelitis; that one part of fluorine to a million parts of drinking water reduces tooth decay. It is impractical, if not impossible, for one individual to round up by first-hand observation all the facts bearing on a big issue — say Perón in Argentina. It is often hard to round them up on even a small issue. As the world becomes more complicated, we must rely on second-hand sources to an increasing degree. Are the sources trustworthy? Have they objective authority behind them? Are the findings up-to-date, or are they clichés worn smooth by repetition?

Reasonable men learn to pick up their sources for ideas with at least as much care as they pick their food and clothing. They consult good reference books and often compare them; they choose news services and reporters who follow no party line, reporting the unpleasant news as well as the pleasant, without slant or ideology. On March 13, 1956, the New York Times published a magnificent special supplement on the progress of desegregation in the South. Ten top journalists had been assigned to travel through the region and interview citizens and leaders of both races. Said the Times editorially: "These reporters were not sent out to pass judgment on the merits of the case; they were sent out to find and report the facts." This approach makes us trust the conclusions of the survey, a survey which you or I could never make alone.

THIRTEEN FALLACIES

Plato, when he rebuked the Sophists, may have founded the art of detecting logical fallacies. The classicists during the succeeding centuries carried on. They worked out many technical fallacies in the mechanics of the syllogism and also, to their credit, a number applicable to ordinary discussion.

My major concern in this book is with the fallacies in

ordinary thinking and discussion to which all of us are prone. I am not so much worried about breaking the rules of the syllogism as about why a given line of reasoning leads into a blind alley. What detour has confused us? How can we get back on the highroad?

After a good deal of study, I have selected thirteen fallacies, or types of false reasoning, to examine in the next thirteen chapters. Some have Latin names, some not. All are common — I have stumbled over every one of them in the past. In each, the reason which follows the term because, fails, under analysis, to make sense. Either the facts are inadequate, or the logic is bad, or both. Here they are in bare outline:

1. *Over-generalizing.* Jumping to conclusions from one or two cases.

2. *"Thin entering wedge."* A special type of over-generalizing involving prediction. If this is done, then that — usually dire — will follow.

3. *Getting personal.* Forsaking the issue to attack the character of its defender.

4. *"You're another."* My point may be bad but yours is just as bad, so that makes it quits.

5. *Cause and effect.* If event B comes *after* event A, then it is assumed to be the result of A.

6. *False analogies. This* situation, it is argued, is exactly like *that* situation — but it isn't.

7. *Wise men can be wrong.* Clinching an argument by an appeal to authority.

8. *"Figures prove."* A subclass of the above, especially popular in America today.

9. *Appeal to the crowd.* Distorting an issue with mass prejudices.

10. *Arguing in circles.* Using a conclusion to prove itself.

11. *"Self-evident truths."* Trying to win an argument by saying "everybody knows" it must be true.

12. *Black or white.* Forcing an issue with many aspects into just two sides, and so neglecting important shades of gray.

13. *Guilt by association.* Making a spurious identification between two dissimilar persons or events.

These thirteen by no means exhaust the list. The Appendix contains a reasonably complete list of the classic fallacies. Classic scholars include *appeal to pity*, *appeal to fear*, and others, which I have omitted as not distinctive enough.

Two classic fallacies, *appeal to ignorance*, and *multiple questions* I will explain in a paragraph or two when we come to the courtroom chapter. They did not seem to demand chapters for themselves in a study of this limited scope.

Big-time propagandists and special pleaders employ all thirteen fallacies when it suits their book, but also use special blockbusters, like the "Big Lie." In developing the thirteen I have had innocent violations more in mind than calculated doubletalk. In all-out propaganda there is no real argument in the Socratic sense. The propagandist has decided the issue in advance and allows no objective discussion. This is it, and his job is to use every psychological trick to force your agreement.

The classicists may have thought that each fallacy they identified and named was entirely different from all the others, that there was no overlapping or interference. No modern student of semantics would assume this. The fallacies listed are different enough to rate different names, but out in the workaday world where we argue and debate, they are constantly straying into one another's territory. Shall we give up the classifications because there is some overlapping? Not at all. The alternative is wading into a vast, yeasty stew of bad arguments, with very little to hold on to.

We badly need the thirteen classes and shall now proceed to use them.