FREE WILL VERSUS DETERMINISM

Are you reading this chapter out of choice or compulsion? By *compulsion* I don't mean your instructor's direction, "Read Chapter 2 for tomorrow." That is a kind of gentle (and benevolent) pressure, but it is not compulsion. Compulsion is a force you are virtually powerless to resist. Some psychologists would argue that you have no free will and so you are not reading through choice but through compulsion.

"Wait a minute," you say. "I know I have free will because right at this minute there's a party in my friend's room, and I had to struggle with my conscience to read this chapter instead of going there." The psychologists smile patiently and say, "Sorry, that struggle was an illusion. There's no choice—just a stimulus–response bond. You've been conditioned to behave in a certain way, and so you behave that way."

"Oh, yeah?" you respond. "Then watch this." You slam shut the book and head for the door. They yawn and say, "Quite unconvincing. All that your dramatic action shows is that you've been conditioned to be stubborn in the face of a disagreeable idea."

At this point, your fists are clenched and you're beginning to grind your teeth. That's a normal reaction. And a lot of scholars and intellectuals—yes, and a lot of other psychologists—react similarly. Many of them have wisely given up arguing with the strict determinists. They realize that it's as impossible to win with someone whose rule is "Anything you say will prove my point" as it is to play cards with someone who stacks the deck.

This is not to say that reasonable people reject the idea of conditioning. On the contrary, they reject only the extreme notion that *all* human action is governed by conditioning. They take the moderate view that though we are all influenced by our surroundings and background—sometimes very strongly—we usually retain a significant measure of free will. Reasonable people would say that it is possible you are reading this chapter because of some compulsion but more likely that you are doing so because you *chose* to read rather than to attend the party. What role has conditioning had in your choice? They would say it increases or decreases the probability of one choice over another. A student who has acquired the habit of putting responsible action before self-indulgence would be more likely to do so in any particular situation.

It is important for you to accept this more moderate view for a number of reasons. First, you can discuss moral issues meaningfully only if you affirm that people have some control over their behavior and to that extent are responsible for it. (There is little point in discussing which of two actions is preferable if no one has the ability to choose between them.) In addition, you can profitably discuss social issues like nuclear disarmament, prison reform, or the treatment of the elderly only if you affirm that individuals or whole societies can change their policies and priorities. Most important, you can become motivated to approach problems creatively and critically only if you affirm that you have control over what you say and do, only if you believe that careful thinking can make a difference.

WHAT IS TRUTH?

We live in an age that has made the true–false test not only the basis of educational achievement but also the staple of one of our most durable (if lamentable) forms of entertainment: the game show. For this reason, it is ironic that so much confusion exists about truth. Even otherwise intelligent people can be heard saying things such as "Everyone makes his or her own truth," "One person's truth is another person's error," "Truth is relative," and "Truth is constantly changing." All of these ideas undermine thinking.

If everyone makes his or her own truth, then no person's idea can be better than another's. All must be equal. And if all ideas are equal, what is the point in researching any subject? Why dig into the ground for answers to archaeological questions? Why probe the causes of tension in the Middle East? Why search for a cancer cure? Why explore the galaxy? These activities make sense only if some answers are better than others, if truth is something separate from, and unaffected by, individual perspectives.

Consider, for instance, this interesting, though hardly momentous question: What are the most popular street names in the United States? If the truth here is relative, any answer is as good as any other. One person says, "Maple," another, "Roosevelt," still another, "Grove," and so on. Many people would say, "Broadway" or "Main." (After deciding on your answer, check page 273.)[1] If every answer were equally correct, few people would be interested in the question. Yet progress depends on the curiosity and interest of people, the drive to find the *right* answer, the desire to know the truth.

Truth is *what is so* about something, the reality of the matter, as distinguished from what people wish were so, believe to be so, or assert to be so. From another perspective, in the words of Harvard philosopher Israel Scheffler, truth is the view "which is fated to be ultimately agreed to by all who investigate."[2] The word *ultimately* is important. Investigation may produce a wrong answer for years, even for centuries. *The Man with the Golden Helmet*, a well-known and often-reproduced seventeenth-century painting, was long considered the work of Rembrandt. Only in recent years was it established to be the work of an unknown contemporary of Rembrandt.[3] Though generations of art experts proclaimed the work to be Rembrandt's, the truth remained unaltered.

At various times and places, some very strange ideas were widely accepted as true—for example, the idea that a horsehair turns into a snake when placed in water. (Even Shakespeare believed this one.)[4] The reason people were deceived is obvious to anyone who has observed how refraction of light in water makes any object appear to be moving.

Similarly, many people believed erroneously that small flies, moths, and bees are babies of larger ones.[5] And the history of medicine includes an interesting and often bizarre collection of folk cures—for example, curing a headache by putting a bowl on the head, cutting the hair around the bowl, and then burning the hair; curing an earache by having someone spit tobacco juice in the affected ear; curing pneumonia by cutting a live chicken in two and placing it over the person's lungs; and curing weak vision by piercing the ears.[6]

We laugh at these ideas today, and rightly so. But it is important to realize that our laughter underlines the fact that people do not *create* truth. If they did, how would scientists ever test theories? The very creation of a theory would be documentation of its validity, and every theory would thus be equally acceptable. This, of course, is nonsense. We know from everyday experience that some theories prove accurate and others inaccurate. The test of a theory's validity must lie outside the theory itself.

But if people do not create their own truth, what do they do? They reach out to apprehend it and construct expressions that they hope represent it faithfully. Sometimes they succeed, and sometimes they fail. Novelist H. G. Wells summed up the challenge and the difficulty of the task in a simple metaphor: "The forceps of our minds are clumsy forceps and crush the truth a little in taking hold of it."[7]

Does the truth ever change? No. It may sometimes seem to, but on closer inspection it will be found not to have. Some years ago, for example, a previously unknown species of fish was accidentally found deep in the Pacific Ocean.[8] We might think that the discovery of the fish changed the truth about its existence. But think of just how foolish that idea is. It asks us to believe that there was no such fish swimming in the water and that someone in a deep-diving machine "looked" it into existence. How much more reasonable it is to believe that the fish existed but we didn't know that it did—in other words, that the truth of the matter was the same before and after the discovery, and only our knowledge of it changed.

Consider another very different example: the case of the authorship of the first book of the Bible, the book of Genesis. For centuries, Christians and Jews alike believed that the book had a single author. In time, this view was challenged and eventually replaced by the belief that as many as five authors contributed to Genesis. Then the results of a five-year linguistic analysis of Genesis were published, stating that there is an 82 percent probability of single authorship, as originally thought.[9] Has the truth about the authorship of Genesis changed? No. Only our belief has changed. Perhaps one day we will have final and conclusive proof, or perhaps, like an unsolved crime, the matter will never be resolved. In any case, the truth will not be changed by our knowledge or by our ignorance.

One easy way to spare yourself any further confusion about truth is to reserve the word *truth* for the final answer to an issue. Get in the habit of using the words *belief*, *theory*, and *present understanding* more often. This will have the added benefit of making you more willing to revise your views when new evidence appears and casts doubt on them.

WHAT IS KNOWING?

Here's a brief quiz. Don't read ahead until you have completed it.

1. Who said, "I only regret that I have but one life to give for my country"?
2. What was the agreed-upon signal that Paul Revere was to be given from the church tower if the British were coming?

It is obvious that situations in which we believe we know but really *don't* know pose an obstacle to effective thinking. Why should anyone go to the trouble to investigate a matter or listen to opposing testimony if one believes one knows already? It is important, therefore, to understand the dynamics of knowing: how we come to know and what kinds of knowledge are most trustworthy.

WAYS OF KNOWING*

We can obtain authentic knowledge in any one of three ways: personal experience, observation, and report from others. The first is the most reliable, but as we will see, even that one is far from perfect.

Experience

We do not just receive experiences and store them, hermetically sealed, in our minds. We compare them with previous experiences; classify, interpret, and evaluate them; and make assumptions about them. All these processes may occur quite unconsciously, without our being aware of them. And any flaw in them makes our experiences seem different from the reality we encountered.

Consider this situation. Agnes has grown up in a religious family. She went to a parochial school and celebrated all the feasts of her church, including Christmas. She knows that Christmas is a Christian feast, and throughout her lifetime, it has always been a sacred time. From her knowledge, she unconsciously creates the idea that it has always been so, throughout the history of Christianity. In time, this vague idea becomes a certainty in her mind. She can even imagine herself hearing it expressed in a classroom. Yes, she *knows* that Christmas has always been a major Christian feast.

Alas, she is wrong. In fact, in seventeenth-century England the Puritans forbade the celebration of Christmas. They felt it was a pagan custom. Similarly, it was banned in colonial New England. Christmas was not made a legal holiday in Massachusetts until 1856.

Here is another, even more common, example. All of us have experienced childhood as a stage in our development. Most of us have never conceived of anyone *not* experiencing childhood, so it is easy for us to believe with certainty that childhood always existed. Yet research shows this idea to be false. Historian J. H. Plumb writes:

> The world that we think proper to children—fairy stories, games, toys, special books for learning, even the idea of childhood itself—is a European invention of the past four hundred years. The very words we use for young males—boy, *garçon, Knabe*—were until the seventeenth century used indiscriminately to mean a male in a dependent position and could refer to men of thirty, forty, or fifty. There was no special word for a young male between the age of seven and sixteen; the word "child" expressed kinship, not an age state.[12]

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*Our concern here is with the most commonly discussed kind of knowing: *knowing that*. Its focus is information. Another, equally important kind of knowing is *knowing how*. Its focus is procedures and strategies. The measure of knowing how, or know-how, is not the possession of a body of content but the performance of a skill. The strategies you will learn in later chapters for approaching problems and issues will constitute "know-how."

Because our perceptions are not passively received but are influenced by our emotional states and mental processes, they seldom mirror reality precisely. At times, in fact, they seriously distort reality.

Observation

It is certainly possible to observe accurately, but we often fall short of doing so. We usually see the world through glasses colored by our experiences and beliefs. If we believe that blacks are more athletic than whites, we are likely to "see" a particular black athlete outperforming a white athlete in a basketball game—even if that is not occurring. If we believe that Italians are violent by nature, we are likely to "see" an Italian man making threatening gestures and preparing to strike another person when we observe him in a spirited discussion—even when those gestures are not unfriendly. Exactly how such distortions of observation occur may be explained as follows:

> We are told about the world before we see it. We imagine most things before we experience them. And those preconceptions, unless education has made us acutely aware, govern deeply the whole process of perception. They mark out certain objects as familiar or strange, emphasizing the difference, so that the slightly familiar is seen as very familiar, and the somewhat strange as sharply alien. They are aroused by small signs, which may vary from a true index to a vague analogy. Aroused, they flood fresh vision with older images, and project into the world what has been resurrected in memory.[13]

Report

This source of knowledge covers most of what we are taught by our parents and teachers, what we hear reported in the news, and what we read in books and magazines and on the Internet. Most people who present ideas to us are undoubtedly trying to teach accurately and do not deliberately misinform us; they themselves believe what they tell us. Yet, because they are human and therefore capable of error, it is likely that a fair percentage of what we have been taught is at least partly incorrect.

An interesting example of the extent to which error can creep into news reports was revealed by George Seldes. Here is an original news story, together with the actual facts, as later determined by Seldes:[14]

The Story	The Facts
Belgrade, Oct. 27—A few moments before she should have appeared on the stage at the Lioubliana Theater last night, Mme. Alla Behr, a Slovene actress, was found hanging dead in her dressing room. The reason for the suicide is unknown.	After the first act. Not at the Lioubliana, but the Klägenfurt. Her name, Ella Beer. Not Slovene, but Viennese. Not in her dressing room, but in her hotel. The reason was known.

How could the reporter make such a total botch of the story? It's really not too difficult to imagine. He probably arrived at the scene late, found the area

cordoned off, and got his details from bystanders or police keeping the crowd back—in other words, from people whose only knowledge was the fragments of fact and hearsay that had circulated among them.

Errors are sometimes made from simple carelessness. For example, it was reported in an upstate New York daily newspaper that Thomas Simmons was arrested for striking Carl Peterson on the head. A day or two later, a corrected version was published. It seems Peterson had struck Simmons.[15] All those who read the first version but missed the second "knew" what had happened, but they were wrong.

But what of magazine articles and books? These are researched more carefully than newspaper articles and therefore ought to be more accurate. Edwin L. Clarke explains how they, too, can be flawed:

> It is well known that secondary sources are likely to be written to harmonize with generally accepted beliefs and prejudices. Most popular histories, for instance . . . make heroes more heroic, villains more wicked, battles bloodier, and peaces more glorious than the best primary sources warrant. In short, they tend to present historical events, not as they were, but as the author likes to think of them, or as he believes his public likes or ought to think of them.[16]

THE PROBLEM OF REMEMBERING

Finally, all three ways of knowing (experience, observation, and report) are subject to another problem, one that occurs days, months, or years later: inaccurate remembering. This assertion may seem far-fetched because, in the popular view, memory is an unimpeachable mental recording of events—a videotape, as it were, that does not fade with the passing of time and can be played back on demand. However, this notion is erroneous. As Elizabeth Loftus, a University of Washington experimental psychologist and expert on memory, explains:

> Most theoretical analyses of memory divide the process into three separate stages. First the acquisition stage, in which the perception of the original event is put into the memory system; second, the retention stage, the period of time that passes between the event and the recollection of a particular piece of information; and third, the retrieval stage, in which a person recalls stored information. Contrary to popular belief, facts don't come into our memory and passively reside there untouched and unscathed by future events. Instead, we pick up fragments and features from our environment and these go into memory where they interact with our prior knowledge and expectations—information that is already stored in our memory. Thus experimental psychologists think of memory as being an integrative process—a constructive and creative process—rather than a passive recording process such as a videotape.[17]

In her widely replicated experiments, Loftus has demonstrated that memory is amazingly malleable. For example, after showing videos of events and asking

people to remember what they saw, she can "plant" by subtle suggestion details of people, places, and things that were not present in the original experience. But psychologists' subtle suggestions aren't the only influences on memory. Our own present attitudes can cause us to delete some parts of a memory, condense others, and invent things that were not part of the original experience.[18]

Even eyewitness testimony is subject to this distortion. "It has been found," one report states, "that [eye]witnesses have a tendency both to perceive and to remember things, first, according to their expectations, second, according to their emotional bias, and third, according to their private notions as to what would be the natural or reasonable way for things to happen."[19]

A simple example, of a kind that everyone has experienced at one time or another, will illustrate how easily we can manipulate our memories. Professor Sage is sitting captive at a faculty meeting as a long-winded administrator drones on and on. Seeking escape, he opens a book and begins to read. Suddenly he hears his name spoken: "Dr. Sage, may I have your attention, please?" Caught off guard, he looks up awkwardly, accidentally drops his book, and stammers, "Uh . . . I was listening . . . sort of . . . sorry."

As he is driving home after the meeting, his mind ranges over the responses he could have made to the speaker. In the one he likes best, he rises to his feet dramatically and replies in his most withering tone, "Sir, my attendance at this meeting may be required, but my attention must be *earned*." Several months later, Professor Sage is talking with a friend and recounts the experience as it exists in his memory. Which version does he tell? The one he has come to believe really happened: the imagined one.

This may seem a rather pessimistic view of knowing and remembering, but you shouldn't be discouraged by it. It is not the whole story, only the neglected side. Although knowing accurately and remembering with little or no distortion do not happen automatically, they are still possible if we strive for them.

WHAT ARE OPINIONS?

Opinions are intensely personal, so it is understandable that people have strong feelings about theirs. But many people carry those feelings beyond the boundaries of good sense. They take the valid idea "Everyone has a right to his or her opinion" to the ridiculous extreme of "Everyone's opinion is right." No one can hope to be a good thinker without acquiring a mature understanding of the nature of opinion.

The basic problem with the word *opinion* is that it is too general. It is made to carry a heavier load than it can bear, covering both expressions of taste and expressions of judgment.

Expressions of Taste

Expressions of taste describe internal states and preferences. They say essentially, "I like this" and "I dislike that." For example, one may say, "I find bald men attractive" or "I wouldn't buy any car but a Buick" or "When I look at a painting of a

cow, I want to see something resembling a cow, not a swirl of color" or "Yellow and purple go well together." All these statements are expressions of taste. We may share the preferences or find them deplorably vulgar, but we have no business asking someone to defend these statements. No defense is necessary.

Expressions of Judgment

Expressions of judgment are assertions about the truth of things or about the wisdom of a course of action. Thus, if people say, "Bald men get more colds than hirsute men" or "Buicks are more economical cars than Fords" or "Paintings of cows that are unrecognizable as cows are inferior paintings" or "Yellow and purple combinations are a sign of aesthetic disability," they are not expressing taste (though their taste may be lurking in the background). They are expressing judgment every bit as much as if they had commented on the question of whether the death penalty deters crime or whether the voting age should be raised.

It is not impolite or undemocratic to challenge an expression of judgment. Judgments are only as good as the evidence that supports them. History is filled with examples of judgments based either on insufficient evidence or a narrow interpretation of evidence. In many cases, they did untold harm because people were timid about challenging them.

For centuries, people accepted the idea that the heart rather than the brain is the center of human consciousness. As late as the seventeenth century, people believed that the planets were guided in their orbits by angels. (Even the renowned astronomer Johannes Kepler did not question this belief.)[20] Fossils, which were known to exist long before Charles Darwin's day, were interpreted as relics of plants and animals destroyed by Noah's flood, as creations of Satan to deceive religious people, or as tests of religious faith put in the ground by God.[21]

Similarly, at various times our ancestors believed that disordered behavior was caused by demons and that the most effective cure was either magic, an enema, imprisonment in an asylum, beating, spinning in a rotating machine, or stoning to death.[22] And as late as 1902, books were being written proclaiming that black people were created along with animals to serve Adam, that they possessed minds but not souls, that Adam's temptress was a black servant, and that Cain married a black woman and so mixed the blood of men and beasts.[23]

The fact that human judgment can be not only wrong but also ludicrous is the best reason to base your judgments on sufficient evidence, carefully interpreted, rather than on prejudice, whim, or blind faith. You also need to be quick to reconsider your judgments when new evidence challenges them.

UNDERSTANDING CAUSE AND EFFECT[24]

A clear understanding of cause and effect relationships is crucial to the responsible formation of opinions. Unfortunately, there is a great deal of confusion about such relationships, and this can cause a number of errors. One error is to see cause and effect relationships where there are none. Another is to see only the