

Introductory Note: The following passage is adapted from an essay by Stephen Jay Gould, who teaches biology, geology, and the history of science at Harvard University.

Some Close Encounters of a Mental Kind

Certainty is both a blessing and a danger. Certainty provides warmth, solace, security—an anchor in the unambiguously factual events of personal observation and experience. But certainty is also a great danger, given the notorious fallibility—and unrivaled power—of the human mind. How often have we killed on vast scales for the "certainties" of nationhood and religion; how often have we condemned the innocent because the most prestigious form of supposed certainty—eyewitness testimony—bears all the flaws of our ordinary fallibility.

Primates are visual animals par excellence, and we therefore grant special status to personal observation—to being there and seeing directly. But all sights must be registered in the brain and stored somehow in its intricate memory. And the human mind is both the greatest marvel of nature and the most perverse of all tricksters.

Eyewitness accounts do not deserve their conventional status as ultimate arbiters, even when testimony of direct observation can be marshaled in abundance. In her sobering book *Eyewitness Testimony* (Harvard University Press, 1979), Elizabeth Loftus debunks, largely in a legal context, the notion that visual observation confers some special claim for veracity. She identifies three levels of potential error in supposedly direct and objective vision: misperception of the event itself, and the two great tricksters of passage through memory before later disgorgement—retention and retrieval.

In one experiment, for example, Loftus showed 40 students a 3-minute videotape of a classroom lecture disrupted by 8 demonstrators (a relevant subject for a study from the early 1970s!). She gave the students a questionnaire and asked half of them: "Was the leader of the 19 demonstrators . . . a male?"; and the other half, "Was the leader of the 4 demonstrators . . . a male?" One week later in a follow-up questionnaire she asked all the students: "How many demonstrators did you see entering the classroom?" Those who had previously received the question about 19 demonstrators reported seeing an average of 8.9 people: those told of 4 demonstrators claimed an average of 6.4. All had actually seen 8, but compromised later judgement between their actual observation and the largely subliminal power of suggestion in the first questionnaire.

Thus we are easily fooled on all fronts of both eye and mind: seeing, storing, and recalling. The eye tricks us badly enough; the mind is infinitely more perverse. What remedy can we possibly have but constant humility, and eternal vigilance and scrutiny?

At the age of fifteen I made a western trip by automobile with my family: I have especially vivid memories of an observation at Devil's Tower, Wyoming (the volcanic plug made most famous as a landing site for aliens in *Close Encounters of the Third Kind*). We approach from the east. My father tells us to look out for the tower from tens of miles away for

he has read in a guidebook that it rises, with an awesome near-verticality, from the dead-flat Great Plains—and that pioneer families used the tower as a landmark and beacon on their westward trek. We see the tower, first as a tiny projection almost square in outline, at the horizon. It gets larger as we approach, assuming its distinctive form and finally revealing its structure as a conjoined mat of hexagonal basalt columns. I have never forgotten the two features that inspired my rapt attention: the maximal rise of verticality from flatness, forming a perpendicular junction; and the steady increase in size from a bump on the horizon to a looming, almost fearful giant of a rock pile.

Now I know, I absolutely know that I saw this visual drama, as described. The picture in my mind of that distinctive profile, growing in size, is as strong as any memory I possess. I see the tower as a little dot in the distance, as a mid-sized monument, as a full field of view.

In 1987, I revisited Devil's Tower with my family—the only return since my first close encounter thirty years before. I planned the trip to approach from the east, so that they would see the awesome effect—and I told them my story, of course.

In the context of this essay, what follows will be anticlimactic in its predictability, however acute my personal embarrassment. The terrain around Devil's Tower is mountainous; the monument cannot be seen from more than a few miles away in any direction. I bought a booklet on pioneer trails westward, and none passed anywhere near Devils Tower. We enjoyed our visit, but I felt like a perfect fool. Later, I checked my old logbook for that high-school trip. The monument that rises from the plain, the beacon of the pioneers, is Scotts Bluff, Nebraska—not nearly so impressive a pile of stone as Devil's Tower.

And yet I still see Devil's Tower in my mind when I think of that growing dot on the horizon. I see it as clearly and as surely as ever, although I now know that the memory is false.

Of course we must treat the human mind with respect—for nature has fashioned no more admirable instrument. But we must also struggle to stand back and to scrutinize our own mental certainties. This last line poses an obvious paradox, if not an outright contradiction—and I have no resolution to offer. Yes, step back and scrutinize your own mind. But with what?

ESSAY TOPIC

How does Gould attempt to shake our belief in the credibility of what we see or remember seeing? To what extent does his essay convince you to doubt what people perceive and remember? To develop your essay you should discuss specific examples from your own experience, your observation of others, and your reading—including “Some Close Encounters of a Mental Kind” itself.