

Chapter 5

Beware how I write

I think the key ideas in PCT are fairly simple. The interlacings of those simple ideas, however, can become complex. Furthermore, some of the ideas sharply contradict ideas widely accepted in our culture; one contradiction with the culture, for example, is PCT's core idea that whatever we do, we do by controlling perceptions. Accordingly, I will sometimes fail to say something in a way that enables you to grasp my meaning, because you and I differ in how we have learned to combine ideas and in the aspects of our culture we have come to cherish. Worse than that, you may come upon something that I wrote when I was mixed up in my thinking and did not catch before publication. I do take great care not to let my manuscript be wounded by erroneous statements, and several of my friends will have read through the manuscript looking for faults of whatever kind, but every book I have written got past the author, editorial readers, and editors with some embarrassing blemish.

If it were possible, scientists would prefer to communicate entirely through experimentation. They would invite one another to come and witness their experiments, letting the lessons learned bloom behind the eyes of their guests without any verbal interference from the host. You can see how impractical that would be. Scientists would have to use words to issue the invitations, and the invited scientists would then ask, "What's it about? How long will it take? Who is going to pay my expenses?" Scientists therefore write articles and books not only to tell one another about their experiments, but also to persuade one another that the others ought to *want* to know about the experiments and even join in the experimentation. (This is one of those books.)

The writing becomes part of the scientific enterprise. It is the way that scientists try to join hands in building a science which, in turn, can be offered

to the members of the embedding culture as a way of understanding and coping with the world. The writing, therefore, should be done with the same care with which the experimentation is done. But joining hands and understanding the world do not stop with the writing. The joining and the understanding cannot begin until after the reading. The reading too, therefore, should be done with care.

Details and nuances can be important.

For example, my very first sentence in Chapter 1 was, "People have always been fascinated by the actions of others." That sentence is unsound. How many people have been fascinated? Everybody? If not, which people? Have they been fascinated by *all* the actions of others? If not, by what fraction of actions or by what sort? I like to be precise, but I let that wobbly sentence stand.

If I had let my desire to be precise rule my writing, I would have written a sentence without those ambiguities. But there I was at the first sentence of the first chapter, wanting to invite your attention to the things I thought you would be in the mood to find fascinating if you had picked up this book; namely, other people. I wanted a short sentence followed by some other short sentences, none of them steering your attention to logical niceties and syntactical precision, but instead keeping your focus on people and their doings. More than anything else, I wanted to make it easy for you to imagine some of the many ways in which we observe the doings of other people. So I gave up precision in favor of a quick and easy focus on human doings, leaving more precise statements to come later.

I hope you will at least occasionally scrutinize my sentences to see whether you find them believable. When you do not find me believable, ask yourself whether I might have let myself be vague so as to get on with the story. But if you don't think that is the case, then write something in the margin like,

“Some! Not everybody, you idiot!” When you came in the previous paragraph to my phrase “. . . steering your attention. . .,” you might have thought, “He can’t steer my attention. I steer my own attention. Runkel can offer something for my attention, but I myself choose whether to give it.” If you did say that to yourself, I can only agree with you. And you will every now and then, I fear, find sentences like that in this book.

Look out even for single words. You may discover (though I hope not) that I am using some word in a nonstandard manner. As the years go by, I still discover now and then that I am using a word for a meaning of which my dictionary is ignorant. Usually I convert to the dictionary’s belief, but sometimes I backslide. So look out for the possibility that I have picked the wrong word.

Other authors do it, too. In an article in a psychological journal, the author said that a great many studies on a particular topic had been done, and “Sawyer reviewed a plethora of those studies.” I think the author meant only that Sawyer reviewed a large portion of the studies; but according to the dictionaries, the sentence meant that Sawyer reviewed more articles than he really cared to. Dictionaries say that *plethora* is used to mean not merely a lot, but an excess or superabundance.

Positive and *negative* can be ambiguous. Most people most of the time nowadays, it seems to me, use those words to mean simply good and bad. But they can be used in other meanings. Dictionaries use half a column to list them all. *Positive*, for example, is often used to mean being confident of one’s opinion, being in no doubt. In reviewing a book, the reviewer may write, “My opinion of this book is a positive one.” Does she mean that she likes the book? Or does she mean that she is in no doubt about her opinion, though she is refraining from saying whether she likes it?

Some words that bear upon theorizing recur in this book. While I am on the topic of word usage, let me tell you the meanings I have in mind for some in this family of words: assumption, axiom, conjecture, guess, hypothesis, postulate, premise, presumption, presupposition, principle, theorem, theory, thesis. A guess, hypothesis, or theorem is (as I interpret my dictionaries) a statement formed for the purpose of putting it to the test. Looking for evidence for the statement clarifies not only that statement but also a connected, larger body of assertions. An assumption, axiom, postulate, or presupposition is an assertion

taken to be correct or true without question while investigating other (even though connected) matters. An author may want you to accept certain assumptions as axiomatic just while you read his book, or he may expect you to accept the assumptions that are widespread in a discipline or school of thought. Some authors, especially mathematicians, will try to set forth their axioms explicitly for you at the outset. Without help from an author, assumptions often lie implied, unseen. Finally, a theory contains both assumptions and hypotheses. I have tried to stick close to what my dictionaries tell me about these words, though I lean somewhat toward the usages of writers on scientific theory and mathematics. You will no doubt find other authors using some of these words (especially “assumption”) in other ways.

Now and then writers hurry too fast past their sentences. The following appeared in *Science News* in 1998: “. . . women who had gained 22 pounds or more since age 18 ran an increased risk of dying.” Every woman will die, no matter how few pounds she gains. I suppose the author meant that the women who gained 22 pounds or more would die *sooner*, on the average, than those who gained fewer. Here is another hurried sentence: “Some of the meteorites have been in the ice for more than a million years, possibly longer.”

But usages of words and hurried sentences will be much smaller dangers than the dangers of implied assumptions.

ASSUMPTIONS

Writing is always shaped to a considerable extent by the author’s beliefs about how the world works, about how things function—by what Powers calls our “system concepts.” If we believe that unexpected events can come about by chance, we write to a friend, “If I’m lucky, I’ll get there on Tuesday.” If we believe that although we can be surprised by events, nothing happens except at the will of God, we write, “I will arrive, God willing, on Tuesday.” If you believe that persons who break laws have sinned, and that when they are put in prison with little to do, they will reflect on their sins and become penitent and therefore resolve not to break a law again, then you will chisel the word “Penitentiary” over the door of the prison. If you believe that subjecting lawbreakers to a restrictive and coercive discipline of obedience will

cause them to maintain that mood of obedience after they leave the prison, and if you believe that teaching them a manual skill will enable them to make a legal living after getting out of prison, the two “treatments” together reforming or correcting their behavior, you will chisel “Reformatory” or “Department of Corrections” over the door.

If you believe that the acts of a person are caused largely by events in the person’s environment, you will write, “The new incentives instituted by management resulted in a 15 percent increase in production,” and you might even believe that not just some, but all the workers on that production line were influenced in that direction by those incentives. You will write, “The prick of the pin caused her to jerk her hand away,” a sentence William McDougall would not have written, as you can tell from the quotation from him that I put at the beginning of Chapter 4. You will write, “Classical conditioning reinforcement strengthens a response,” even though that explanation seems to fit only nonhuman animals deprived of food and imprisoned in an environment (such as a Skinner box) offering severely restricted opportunities for controlling vital perceptions such as hunger and nourishment. If you are B. F. Skinner, you will write (as he did on page 35 of his 1953 book):

The external variables of which behavior is a function provide for what may be called a causal or functional analysis. We undertake to predict and control the behavior of the individual organism. This is our “dependent variable”—the effect for which we are to find the cause. Our “independent variables”—the causes of behavior—are the external conditions of which behavior is a function. Relations between the two—the “cause-and-effect relationships” in behavior—are the laws of a science. A synthesis of these laws expressed in quantitative terms yields a comprehensive picture of the organism as a behaving system.

If you believe that the acts of a person are caused largely by the kind of person he or she is, you will write, “We need a strong leader at the head of this company,” and you will urge the new leader to recruit a better class of worker. To recruit those workers, you may advocate using screening tests of manual dexterity, obedience, honesty, intelligence, or some other desirable quality. You will write, “Vote for Jones—a man of probity and experience.” You might write an article in a magazine explaining that a

particular politician’s leadership was demonstrated by the fact that the public debt was reduced during that politician’s incumbency, and you might even believe that the public debt would *not* have decreased if some other politician had been in office. To improve the social order, you will urge measures to change the inner qualities of people—perhaps their morality, practical knowledge, patriotism, or team spirit. You may believe those inner changes can be brought about by the shining examples of morality and citizenship to be encountered at church or school. Or you may believe that those inner qualities are given at birth and are unchangeable or are too slowly changeable. In that case, you may advocate improving society by killing off the undesirable people, a procedure put into practice in our own time by Hitler, Stalin, Pol Pot, and others.

Most people appeal to both those sources of action, even if alternately. People who want a strong president often believe he or she will have strong influence on leaders of Congress, executive departments, the military branches, and industry. In other words, they believe the president will act from his or her inner qualities, but that the members of Congress and the others will act because of being skillfully or forcefully prodded by the president. Persons with that combination of belief rarely, it seems to me, wonder who prods the president (or king or other top boss). Once in a while I have heard the speculation that a president is influenced by some “power behind the throne” such as a wife, and in the days when actual thrones were numerous, the ruler usually claimed to be guided by God; rulers still occasionally make that claim today.

I do not want to leave the impression with you that assumptions are bad. They cannot be avoided. To learn something, you must assume that you already know something. To learn how far it is from Chicago to Omaha, you must assume that there are such places as Chicago and Omaha. You must act as if those places exist while you are hunting for the information about distance. If you find no trace of those places under those or other names, you may then relinquish your assumption. But you will never find out the distance between them unless you assume that they do exist.

The trick is to find assumptions that match fact. We make trouble for ourselves when we assume that the world is flat, that a fever is always bad, that tobacco is good for us, or that nothing moves until pushed by something else.