

Unedited posts from archives of CSG-L (see INTROCSG.NET):

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Subject: Tendencies and biases

[From Bill Powers (940216.0920)] Bill Leach (940215.2057 EST)

> The sort of thing that I am referring to is a bias or tendency that is present independent of environmental circumstances (though within individuals the strength of such bias likely will be influenced by environment and experience).

The concepts of biases and tendencies come from the statistical approach to understanding behavior. The way these ideas arise is through observing that some people show the actual behavior toward which there is said to be a bias or tendency, while other people, often most people, do not. When this sort of spotty observation occurs, there are two ways to interpret it.

One is to say that under specific circumstances which we do not yet understand, a person organized in a particular way will behave in a particular way. A person who is not organized in that way will not show the behavior in question no matter what the circumstances, while one who is organized in that way will always show the behavior when the circumstances are right. The only reason for which we can't predict whether the bias or tendency will be expressed in the susceptible people is that we don't understand what the required circumstances are, or what the particular inner organization is that gives rise to the behavior. When we do understand, we will not speak of biases and tendencies; we will simply predict what will happen.

The other way to interpret the meaning is to say that ALL people share the bias or tendency, but that it is expressed in a visible way only in some of them at a given time. Under this interpretation, the manifestation of the bias or tendency is just a statistical matter. There's no reason why it should be observed on one occasion and not on another -- that's simply a matter of chance, whether the bias or tendency happened to predominate enough, among all other competing biases and tendencies, to be expressed in observable ways.

The second interpretation is the most common one. It allows a scientist to convert an observation that holds true only for some people some of the time into a statement that holds true for all people all of the time. In a group of 100 test subjects, for example, 60 subjects may be found to prefer apple juice to orange juice in a forced-choice test. Replicating this experiment several times with new groups of 100 people, we find that 59, 69, 55, and 58 people prefer apple juice to orange juice. The mean of the observations is 60.2 people per group of 100. Assuming that statistical significance is reached, the conclusion typically drawn is not that 60 percent of people prefer apple juice and 40 prefer orange juice, but that "test subjects prefer apple juice."

Why is this conversion made? I think it is because the experimenter wants to discover something universal about people, but is not willing to admit that the experiment shows that there is nothing universal about this preference. What the experimenter does is to infer a bias or tendency in the test subjects -- in ALL of them -- which happens to be expressed, at any given time, in only 60 percent of them. So he can make a definite statement about what "subjects prefer" even though, in any number of runs of the experiment, 40 percent of them show no such preference and in fact show the opposite preference.

To say that one person prefers apple juice or orange juice is to report an observation: the person selected one or the other. But if a person sometimes selects orange juice and sometimes apple juice, there is actually no valid generalization about that person that can be made, even if that person selects apple juice 60 percent of the time. All that can be said is that the person selects aj 60 percent of the time and oj 40 percent of the time. To go any farther, to say that there is something inside the person called a bias or a tendency toward selecting orange juice, is to invoke a dormitive principle: a cause defined to have the effect that is observed, and lacking any other property. This is how garbage facts are born.

The problem with garbage facts is that they give a false sense of understanding something about individual people. They are useful to manufacturers of fruit juice, who deal with populations only, but as a basis for understanding how people are internally organized they are worthless. More important, the false sense of understanding satisfies the urge to understand, so further questions, such as why a person prefers orange juice on a given occasion, are simply not asked. What's the point of asking why a person prefers orange juice, when we know that people prefer apple juice?

You say:

- > An example that I think might be "safe" to mention is the idea that the human creature is a "social creature." I maintain that there IS an inherent "wiring" that causes humans to be social in nature.

If there is such an inherent wiring, then we should observe that on any measure of sociality, every person will show that characteristic on every occasion, with no exceptions. This is clearly not true. Whatever you use as a measure of socialite, some people will measure positive and some negative, with most showing up in the vague middle ground. Finding that "most" people measure positive means nothing, for if there is a wired-in socialite, the measure must always be positive, in everyone. The only way to deny this conclusion is to start making excuses: well, that tendency or bias is wired in, but in some people whom we can't pick out in advance, under some circumstances which we can't define, individuals may behave oppositely because of conflicting biases and tendencies which we can't name. Or -- nearly as popular -- that tendency is always there in every person, but our measuring instruments are not sensitive enough to pick it up.

It would be more supportable to say that human beings behave in the way we call "social" when they are interacting with other human beings. There are facts about mutual dependency that hold true no matter how people are organized internally; a baby doesn't have to have any social instincts to get hungry and experiment with methods for getting fed (which vary widely according to the parents' experiences and theories of childrearing).

In fact, people sometimes behave socially, sometimes antisocially, and sometime independently of social considerations. Most people (but not all) spend the bulk of their time interacting with others, so naturally the kinds of behavior we see "tend" to be called "social." But in explaining their behavior, invoking "social tendencies" or "biases" or "genes" tells us nothing useful about the individuals. The questions we need to ask about individual organization are at a deeper level. We need to ask what capacities the person must have in order to show the behaviors we observe. Those capacities can't be explained simply by naming them after the consequences we see as social interactions.

The aim of PCT is to make statements about individual organization that are ALWAYS true of EVERY person in ALL circumstances. We can say that ALL behavior is aimed at controlling SOME perception, and elaborate that statement into more specific models applying to specific behaviors. This approach allows us to avoid talking about statistical tendencies or biases, because it entails the proposal of facts which must be universally true if the model is correct. In a tracking experiment, we don't say that some people tend to move the handle oppositely to disturbances on most trials. We say that EVERY person who learns to track ALWAYS does this, not only in every experiment, but at every moment during every experiment. While there is still noise to contend with, we are not talking about 60-40 preferences, but about facts that are 10 standard deviations above the noise, for each tested individual on every trial of a task.

This experience with simple cases encourages us to demand similar properties of any explanation of individual human behavior. Even when we guess wrong, the guess is stated so that it must be matched very closely by observation if it is to be deemed right. That enables us to see very easily where we have guessed wrong. Counterexamples, in PCT, must be taken seriously because they should never happen.

Best, Bill P.