

PART III

SCIENCE

In Chapters 6 through 9, I exhibited some ways that researchers have tested, through actual observations, some assertions made by PCT. I said, too, that you can carry out more precise demonstrations on your own computer by running tutorials, demonstrations and simulations found on the CD inside the back cover of this book, as well as at the publisher's website

<http://www.livingcontrolsystems.com>.

As I went along, I made some remarks about research method and scientific assumptions. Those are important matters for this book, because PCT makes some assumptions about science and research that are very different from those common in traditional academic psychology, and I want to be explicit about them. That is the purpose of the chapters in Part III.

Traditional psychologists test their understanding of human behavior by predicting acts. Examples read something like this: More people among those who answer "yes" to certain questionnaire items will also prefer certain kinds of recreation than among those who answer "no." Or this correlational form: People who score high on a test of Phebephobia will also score high on a test of Pontiphilia, and those low on the one, low on the other. It is no surprise to anyone that only *some* of the people observed turn out to conform to the predictions. Traditional psychologists feel vindicated when the portion who do conform is larger than one would expect from pure chance. That is the reason I refer to that sort of research as nose-counting. In my 1990 book I gave it a more formal label: the Method of Relative Frequencies.

Adherents of PCT do not try to predict particular acts such as scoring high on something. Neither do they count noses. PCTers insist that the correctness of an assertion derived from PCT must be found justified in *every* individual tested. The demonstrations

and experiments described in Chapters 6 through 9, for example, were published even though they were performed with few participants, because the authors (and other PCTers) are ready to discard the theory or revise it radically if *one* person shows up reliably behaving contrary to the PCT prediction.

PCT is tested by modeling (in the manner I described in Chapter 8 under the heading "Models and Theories") and by using The Test for the Controlled Quantity that I described at the end of Chapter 7 under "The Test." The Test is used to examine every sort of question about PCT. It is used to investigate how nerves work together (physiological psychology), how people can see transitions (sensory psychology), how two or more people can interfere with one another's purposes (social psychology and sociology), and so on.

PCT does not claim that all animals have the same number of layers of control (humans probably have the most), and it does not claim that the nervous system of an octopus has the same gross morphology as that of a human, but it does claim that the negative-feedback control loop (Figure 4-1) reigns supreme. Furthermore, the claims of PCT about behavior are pertinent to all sciences (and to all lore, too) that deal with living creatures, because all those sciences make assumptions about the functioning of individuals—ethology, sociology, political science, economics, medicine, and all the rest. It is with that attitude that the chapters in Part III are written.

Chapters 10, 11, and 14 through 17 discuss some assumptions and procedures in regard to which PCT differs from conventional psychological science. Chapters 12 and 13 are reprints of two articles that I think reveal with special clarity the view of science embedded in PCT. I print them here unedited, despite their technicalities, because I want you to see these scientific reports in their pristine beauty.

REVIEW

Here is a nutshell review of what has gone before. If you forget everything else you have read so far, please remember the following as you read the chapters in Part III.

Action springs from the circular causation between internal standards and environmental disturbances to controlled variables.

The relation between nonliving things and the environment is very different from the relation between living things and the environment. Living things initiate action, and they expend much greater energy than the energy received by the sense organs.

The distinctive characteristics of living things are (1) they act with purpose, to control perception, (2) they operate through negative feedback loops, and (3) causation in the loop is circular and simultaneous.

2003-5
Philip J.
Runkel