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# Foreword

by William T. Powers

This book is about a method of psychotherapy based in part on a model of human behavior called Perceptual Control Theory, PCT for short, on which I have been working since before most readers of this book were born (about 1953). The basic idea behind PCT is that organisms act to control a world represented to them as perceptions, rather than reacting to stimuli or planning their actions or being conditioned or any of those other ideas that have been proposed since before *I* was born. More can be learned about PCT in references at the back of this book.

## PART ONE

In the early 1950s, at about the same time I began the work that led to PCT, my late friend Kirk Sattley and I became interested in a seemingly irrelevant phenomenon. While one is focused consciously on one train of thought or subject of attention, there often occur thoughts in the background about the foreground thoughts. Kirk and I wondered if this process could be repeated—that is, if the background thought could be brought into the foreground, so that *another* background thought could be found, this time about the new foreground thought. It could. Then, since we were both basically engineering types, we naturally wondered how many times in a row this could be done. With one person helping to keep the process on track while the other reported what came to mind, we found that indeed this could be done several times in a row, and that it did not (often) go around in circles, and that in fact it continued for a rather small number of levels and then seemed to stop, leaving one in an interesting state of mind.

Having a naturally quick mind, I took only about 20 years to see that this phenomenon might have some practical applications, and that it might even have something to do with the theory on which I had, by then, spent a good part of my life. I worked up some demonstrations and tried them out with other people, with quite interesting results. However, that did not make me a clinical psychologist or give me a license to mess about with people's minds, so the Method of Levels or MOL, as I started to call it, never went very far toward real tests. Not, that is, until Timothy Carey, then in Australia, came on the scene.

Tim Carey first learned about PCT and found it useful in his work in schools. Unlike many who read my publications, he actually read the hard parts in detail, demanding explanations, and bemoaning the fact that he could not make the equations in my first book come out right. That was fortunate, because they had mistakes in them which he had found (nobody else had). He modestly assumed he must have misunderstood, but he had not. He applied the same thorough reading to everything, and eventually was exposed to the Method of Levels, which I trotted out occasionally to see if any takers had showed up, and he took it, and he ran with it. He ran himself to a Ph.D. in clinical psychology, and then to a practice in his ancestral territory of Scotland where he put this method to the test of using it exclusively and full-time with clients, and finally to the position of being the primary expert on the nature and use of the Method of Levels.

It is probably important that the Method of Levels has behind it a scientific rationale, in the sense that it would be good to tie a method of therapy to sound knowledge about how the brain works. But for a book on psychotherapy, the scientific rationale is secondary and the practice is primary. This book is based on Tim's very considerable knowledge of how MOL actually works with real people, and it takes this method far beyond the primitive stage to which I had brought it. For example, I had put on many demonstrations of how to do it, lasting perhaps 10 or 15 minutes, with the result that I doubt that I had ever done it with the same person (not counting Sattley) twice. Tim has carried people through multiple sessions over periods of time, and as a consequence has seen how to use it in a serious course of therapeutic sessions. He has changed this approach from a curiosity to a practical method. And he can teach it without demanding that people understand a lot of control theory (though it doesn't hurt...).

PCT should not get in the way of learning how MOL works, just as (in Tim's way of putting it), psychotherapy should not get in the way of people trying to solve their own problems. So now I will do my part by sketching in, without getting into technical details of control theory, the thinking behind the PCT model of behavior. Much of the model remains speculative, but what follows is reasonably defensible.

## PART TWO

The world we control, and control in, is big; we move around in it and do things to the parts of it we can affect. We don't see any levels of organization; we just see a world from wherever we are in it. Part of it we carry around with us, using arms and legs attached to it to move ourselves and to do things to the world, and using internal muscles to make sounds, while peeking out of this movable part through two convenient holes in our heads.

When we look at the world out there, we see a lot of *things*. These things are dark and light, colored, and shaped. Some of them move; some patterns of movement repeat as in walking. Some of the things act in relationship to other things—chasing

and fleeing, dancing, conversing, hugging; some are passive and don't change unless we reach out and push or pull or twist or squeeze. A great many of these patterns speak their names to us when we feel or smell or see them: we see not just Fido, but a whole vast collection with a name: we look at our friend Fido and mentally hear "dog." The world turns into a sea of symbols. We pick up these symbols and turn them around and pick out what they mean, and we string them together into things we write and say, and recognize the strings as descriptions when we read or hear them as sentences (like this one), and we act on the world to make it fit our descriptions of it. We think and reason with these symbols; we state rules and regularities using them. We see principles in them; we see a whole orderly world.

All this happens in the world outside us and partly inside us. But what PCT tells us is that this is not quite the right story. When we feel, smell, hear, and see the world, we are looking inside our brains, not outside them. When we see patterns in the world, the patterns exist as activities in our brains, not in the world. The faint echo of the world is not inside us, but outside us. It is the world outside us that we are trying to grasp in some small partial way through building up a huge complex structure of representations inside us. When we act to make the world conform to the appearances we intend and prefer, we are acting on this complex inner representation. We are acting by altering the world outside, yes, but we know that world only as we have learned to represent it inside ourselves in the form of perceptions. What we are actually doing to the outside world to produce the experiences we want, and what else we are unwittingly doing to it, are unknown to us: we know only what exists and changes in the inner representation. We know only what we perceive.

We can sort the world of experience into classes of perceptions that show some internal order and some relationship to each other. For example, the configuration we call a chair contains smaller configurations and is part of larger ones like a dining room, but each configuration is also made of things that are not configurations. The chair is made of various colors; its edges as we see them are places where one color or brightness changes abruptly into another color or brightness. The small configurations of which the chair configuration is made, things like arms, leg, seat, and back, belong to that particular kind of chair, but the colors and brightnesses could be parts of any object: they are a different class of experience from the class we call configurations. They are sensations of various intensities.

Notice that in order to change the chair configuration—say, to set up a folding chair so you can sit in it, or to turn a chair to a different direction or move it to a different place, or to reduce it to kindling, it is necessary that at least some of the sensations change. You cannot alter the configuration without changing sensations. On the other hand you can easily change a sensation without altering the configuration of which it is part; you can paint the chair blue, or use sandpaper to smooth a rung, or turn all the lights down until you can barely see the shape, and it will remain exactly the same chair. Furthermore, it is not *necessary* to alter the configuration in order to alter any of the sensations that make it up.

This means you can control a sensation to match (for example) a different brightness or color without having to control a configuration, but you can't control a configuration (change it to match the shape you prefer) without altering at least one sensation. In fact this all means that sensations can exist without configurations existing, but configurations cannot exist unless sensations exist.

So out in that external world which we now think of as an inner representation, a complex collection of perceptions, we find that there are hidden relationships between different classes of perceptions. Configurations are, as mathematicians would say, functions of sensations. We have discovered something about the brain's way of representing the world outside: it forms representations of sensations, and then it forms representations of configurations *out of the representations of sensations*.

To shorten the story, by doing this analysis in many different ways and at many levels of abstraction, and across many different sensory modalities, we can form a picture of a whole hierarchy of perception and control, in which higher levels of representations are formed from lower-level representations, and higher levels of perceptions are controlled by altering lower levels of perceptions. Just for the record and without getting further into details, the classes so far identified have been tentatively labeled (from lowest to highest) intensity, sensation, configuration, transition, event, relationship, category, sequence, procedure, principle, and system concept.

We can go beyond this to say that we can define *levels of control*, in which one level controls its own kind of representations not by telling multiple lower systems how to act, but by giving them goals, specifications that say "Make your perception look like *this*," where "this" is simply a set of numbers saying how much of each lower system's kind of perception is to be present. We call those specifications *reference signals*. And each level controls its own representation to match the reference signal it is given by telling still lower systems how much of *their* perceptions they are to create and maintain, until we reach the lowest level where a system in the brainstem tells the lowest system in the spine to make its sensations of muscular effort be *this* intense, thus having physical effects on the outside world. In this way the hierarchy of perception becomes a hierarchy of control.

To the conscious entity that is internally constructed in this way, all this seems to take place not in the head but in the world of which it is conscious and in the small movable part of it that carries the observer around with it. If you want to know what a relationship or a category or a sequence or a configuration looks like, don't close your eyes and try to imagine something in your brain; open your eyes and look at the world around you, the busy changing world that extends from your skin to next person, to the horizon and on to the farthest galaxy. That is the world your brain gives you to experience: an immense theater that fits into a volume smaller than a soccer ball. My late wife, Mary Andrews Powers, found this perfect summary of the situation in a collection of poems by Emily Dickinson:

The brain is wider than the sky,  
For, put them side by side,  
The one the other can contain  
With ease, and you beside.

## LAST PART

Now I have to ask you to forget the proposed names of those tentative 11 levels of perception currently suggested in PCT, and remember only the underlying principle: that perceptions of one level are altered as a means of controlling perceptions of a higher level. That is the first principle on which the Method of Levels is (now) based. The second principle is simply the observation of a fact: it is possible for a human being to change the point of view from which representations in the brain are observed. There is no explanation for this phenomenon of “point of view”: it is as mysterious as consciousness itself. But we can form a mental image of how it works: it’s as if one’s awareness can merge with control systems at various levels in the hierarchy of control, this merging creating a field of consciousness in which one is consciously aware from the viewpoint of some subsystem in the brain. When identified with a given level in the hierarchy, one is conscious only of perceptions of lower levels; to see the perceptions at the level where awareness is based, it is necessary to move awareness to the next higher level.

No doubt you are in need of clarifying details and examples; they will be encountered as you go through this book. More than that, you will encounter a new point of view toward helping people as they deal with their own psychological problems.

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