Three "Dangerous" Words

By W. Thomas Bourbon

This very personal essay was composed for consideration as a foreword for a book with the apt working title

Starting Over—Psychology for the 21st century

which became

Making Sense of Behavior—The Meaning of Control

"Behavior controls perception." Three simple words that summarize the subject of this little book. They don't look very dangerous, do they? But they are. What could possibly be dangerous about that little phrase? Many things, if you really understand it. Let me tell you about some of the "dangers" that I have seen during the 24 years since I first read the phrase. Remember that I am describing things I saw during a quarter of a century—everything did not happen all at once.

For one thing, many people don't perceive the words the way they are written, or spoken. Instead, they believe the phrase says "perception controls behavior." How could that be? How could people, including widely-respected behavioral scientists, influential editors of scientific journals, and respected educators all believe the phrase says something that means the opposite of what it really says? Ah, that's the danger! The phrase says that the relationship between behavior and perception is *exactly the opposite* of what most scientists believe it to be. Nearly everyone in behavioral science believes *perceptions cause behavior*, whether directly, or as a step in between stimuli from the environment as the cause, and behavior as the effect. When those scientists see or hear the phrase "behavior controls perception," they experience a feeling of *error*, between the way they *think things are*, and the way the phrase *says they are*; immediately, they say something to correct the error they perceive in the statement, so that they can hear themselves saying what they believe *should* be said. Those scientists behave to make their perceptions be the way they want them to be. They behave to control their perceptions.

This book is about those three simple words, and about what they imply for all of the sciences of behavior and for all of the practical applications that grow out of those sciences. When he first wrote those words, back in the 1950s, Bill Powers created an entirely new theory of behavior—an entirely new science of life itself. Bill's theory is called Perceptual Control Theory (PCT), and it is different from every other kind of theory I know in behavioral science, social science, or the life sciences. "Behavior controls perception." I can tell you, for certain, that if enough people ever understand that simple phrase, the world will be a different place—a better place. In this little book, Bill Powers gives you some clues about why that will be so, and he invites you to join in the excitement, and the challenge, of behaving to make it happen. I can tell you another thing for certain: the challenge in teaching people about PCT is great, and that brings me back to the "dangers." You need to know something about them, in case you decide to join in the PCT project. Let me describe just a little of what has happened to me, and to people I know, during the 24 years after I first read and understood Bill's little phrase. Let me tell you about some of the dangers, while we follow my path from the university to medical schools. Remember that nothing I describe here even came close to discouraging me, or any of others who are most closely associated with PCT. It is a unique and powerful theory. I simply want to tell you a few of the ways that some people misunderstand it, and the ways that others are threatened by it.

My first encounter with PCT came in 1973, when I read a journal article by Bill (William T. Powers, 1973, Feedback: Beyond Behaviorism, *Science, 179*, 351-356) [Reprinted in *Living Control Systems* (1989) p. 61-78.] I knew, immediately, that Powers had created a new theory that explained a festering mess in my own mind, he had found one clear principle that explained many seemingly unrelated facts in the behavioral and life sciences. The principle? You know it by now: behavior controls perception. That same day, I ordered Bill's book, *Behavior:*

The Control of Perception. The danger? I read it, and knew my life would never be the same. For one thing, I knew in a flash that my career as a traditional research psychologist was over. I could never go back to accepting all of the "theories" and research methods that I had learned were "true," and that I was teaching to innocent university students. It took many years for me to absorb some of the big implications of PCT and the process is not complete.

Immediately after I read Bill's book, the danger began to spread from me, to my students. I changed what I taught in all of my psychology courses, for undergraduates, and graduate students alike. For the sake of my students, who had to survive in traditional psychology, I still taught the "essentials," but I put them in the context of PCT—the comprehensive theory that explains how behavior controls perception. Over the next nineteen years, in practically every class, the time came for "The Declaration and The Question." A peer-selected class member raised a hand and declared (often with an appearance resembling fear and trembling), "What you are teaching us is different from what we learn in all of our other psychology courses." An accurate declaration, to which my reply was always "Yes, it is!" Then came the question, with unmistakable fear and trembling, "What are we supposed to do?" And my reply was always, "Each one of you will decide what to do."

My students accurately identified the danger of what they learned in my courses: behavior controls perception. Most of them did whatever was necessary to finish my class, and then they vanished back into the world of traditional psychology. However, during most semesters, at least a few students decided that PCT was a better scientific basis for psychology than the traditional ideas taught to them by my colleagues. Those students began to share in the rejection, and sometimes ridicule, that some of my colleagues had directed at me. Some of those students gave up trying to learn more about PCT, but others persisted. I shall always admire my imaginative and daring students who found ways to use ideas from PCT in clinical activities that were always closely monitored and regulated by members of the clinical faculty, some of whom were strongly opposed to anything having to do with PCT. Along with me, several students experienced the frequent rejection of research articles we submitted to scientific journals. Often, the editors and reviewers said bluntly that our papers were about a subject they were not familiar with, and they did not want to read anything about it. Bill Powers, Rick Marken, and anyone else who has tried to publish about PCT research, have all encountered similar rejections. So much for the myth that scientists are an objective and inquisitive lot! In spite of the obstacles in their paths, several of my students maintained their interest in PCT and they use it today, in their clinical practices and their research.

From time to time, one of my faculty colleagues would examine PCT, even if only a little bit. One day, a bright new faculty member, with a shiny new Ph.D. in experimental and theoretical psychology from a major university, came to my lab to learn a little about PCT. One of my thesis students had asked the fellow to serve on his thesis committee. I ran a few simple PCT demonstrations. One product of those demonstrations is a set of statistics that describe what happened during the session. Some of those statistics reveal, unambiguously, the inadequacy of traditional methods in experimental psychology. After one demonstration, my young colleague sat quietly for a while, staring at the computer screen. Then he turned slowly, looked at me, and said, "You know, of course, what this implies about the past three hundred years of research on behavior." Perhaps he expected me to realize the folly of my PCT ways and retract the point of the demonstration. Instead, I paused, then said, "Of course." He sat a while, quietly. He was a bright and energetic fellow, with a brand new doctoral degree. To earn that degree, he had to demonstrate that he knew all of the traditional theories and methods in psychology. Here he was, at the beginning of his professional career, staring directly in the face of something he knew refuted what he had just learned. I ran a few more demonstrations, with their inescapable evidence that most of the traditional statistical analyses in psychology are worthless. Once again, my colleague looked up slowly and said, "You know what this means about the things we teach in statistics and research methods." (In our department, he taught those courses. Back then, all psychology majors took them.) I replied, "Yes." My young "colleague" understood, perfectly, what he had seen, and the danger in it was as clear to him as it could possibly be: he had witnessed compelling evidence that traditional behavioral science was indefensible. How did he handle the danger? He became one of the faculty members who was the most critical of my students when they expressed an interest in PCT.

Nineteen years after I first read the phrase, "behavior controls perception," I decided I would never convert my faculty colleagues, or the community of research psychologists, to an understanding of PCT. I left the university for a new career of research in medical schools. Perhaps there I would find people who were more interested in understanding this exciting little phrase. How could there be any danger in a move to a place where there are "real scientists," rather than just a crowd of traditional psychologists? Three years later, I left the medical schools. My interest in PCT, and my work related to the theory, did not fit there, any more than they had in the university.

Most of the scientists were intent on discovering something in the environment, or in the brain, especially in the brain, which controls behavior. Their reputations, and their funding, were firmly rooted in one or the other of those two ideas about where to look for what causes behavior. Even a passing glance at the idea that behavior controls perception could prove dangerous, in the extreme, to a respectable scientist's professional well being! Four or five brave souls did look, briefly, at our simple demonstrations of control, and at the precision with which the model from PCT explains how behavior controls perception. Each of them described the demonstrations and the model with terms like, "interesting," or "intriguing," and then they went their traditional (safe) ways.

On the clinical side, I made a modest proposal, and a couple of clinical neuropsychologists agreed that we should test it. I suggested that some of the performance tasks and research methods used in PCT yield behavioral data and modeling coefficients that might help assess the functional status of various clinical patients. (Most of the patients had a history of stroke, or of injury to the head or spine.) I survived long enough at the medical school to make a start on testing that proposal. It looked like we might be able to identify effective levels of control in some patients who were classified as, "nonfunctioning," after conventional diagnostic procedures in neurology, and clinical neuropsychology. (In those clinical areas, practically all of the diagnostic procedures grow out of research and theorizing about environment, or brain, as the locus of whatever it is that allegedly controls behavior.) It looked like we could also identify a range of ability to control, in patents who were all lumped into single categories of functioning, or non-functioning, by conventional diagnostic procedures.

I vividly recall several patients who expressed thanks, and appreciation, that someone finally tested them in a way that allowed them to show what they can do, rather than in ways that always show how they fail.

Some of the clinicians described our early results with terms like, "fascinating," and "interesting, but… You knew it was coming! …there was no way to use results like those. The numbers did not fit into existing diagnostic protocols or categories, and… Purely incidentally, of course! …there was no way to bill an insurance provider for procedures like those. Now *that* is real danger! And so it goes.

The simple idea described in this little book is unique in behavioral and life science, therefore it is viewed as a threat by many people in those fields. That's too bad. They are missing out on a chance to participate in the creation of a new science of life, an experience I would not miss for the world!

Well, there you have a quick tour of some of the dangers I have seen for people who understand the simple phrase of Bill's that I first read in 1973. Bill Powers, and his wife Mary, have lived with those dangers since the 1950s. Many others have lived with them over the past few decades. Most of us have "survived," although a few former colleagues have dropped by the wayside, professionally and intellectually. For all of us who remain, and for the many others who have joined us, we would not miss a minute of the adventure. When it comes to developing the science and the applications that grow from the idea that "behavior controls perception," nothing I have described is really a danger, after all. At the worst, they are annoyances and nuisances. If "dangers" like the ones I described don't frighten you, and if you want to become part of the revolution that PCT *will* bring to the behavioral and life sciences, and to all of human kind, then I urge you to read this little book. There is no better place for you to begin your adventure!

Tom Bourbon
Houston, Texas
July, 1997
Revised January, 2008