

# *Perceptual Control Theory*

## *A Business Proposal*

Or, why would anyone want to learn about Perceptual Control Theory?

### **INSIGHT THAT MAKES A DIFFERENCE**

A new concept of how all living things function is available, an explanation that lays a foundation for a new natural science of life. It is called Perceptual Control Theory (PCT). You can check it out for yourself in as much detail as you want and can download a free Book of Readings at my website, [www.livingcontrolsystems.com](http://www.livingcontrolsystems.com).

In time, this conception will replace contemporary psychology, just like the conception of the solar system replaced the then prevailing astronomy 400 years ago. This will make a huge difference to people all over the world.

This conception is by no means limited to all aspects of psychology. Because it offers a new conception of how living things function, it has a lot to say about neurology, robotics, evolution, linguistics, and much more.

In his book *Innovation: The Five Disciplines for Creating What Customers Want*, Curtis R. Carlson suggests that a proposal should deal with Need, Approach, Benefit and Competition. PCT is one of the most significant innovations in recent centuries, one everyone deserves to know about, so I am adopting these headings. I hope you find it of interest.

### **NEED**

People want to live happily ever after, but many of us never figure out how.

We are all psychologists; we all deal with ourselves and with other people. Each of us discovers and internalizes ways of dealing with ourselves and our relationships with others from infancy forward. The understandings we put together from a variety of personal experiences vary greatly. These personal understandings translate into skills and determine our effectiveness and satisfaction as human beings, parents, lovers, leaders, managers, salesmen, teachers and friends, in our personal lives and in the workplace.

For the most part, we are clueless as to how behavior actually works, for the simple reason that what seems intuitively obvious is not necessarily so. Much of what we conclude by ourselves and are told by experts is flat wrong. So we get into lots of trouble in every which way.

Conflict is the root cause of most of our problems. Not only does it waste energy—it destroys cooperation, teamwork, personal initiative, care, productivity and quality. Failure to resolve conflict results in stress, frustration, resentment, destruction of personal relationships, and wars.

When an entire field of study, such as psychology, systematically employs statistics to turn descriptions into make-believe facts and pretend explanations, our culture gets permeated with mistaken notions about lots of things. All of us are misled and life becomes needlessly confusing, with conflict and poor relationships as a result.

We have difficulties within ourselves, in relationships with others, between groups and between nations.

Will Rogers got it right:

*It isn't what we don't know that gives us trouble,  
its what we know that ain't so.*

What we need is an understanding of human behavior that actually fits the way human beings function.

We need to turn this soft field of study into a hard natural science.

## APPROACH

We should study, teach and share Perceptual Control Theory, PCT, as widely as possible, as a basic concept as well as in-depth, with people in all walks of life. If you want to understand what behavior is, how it works and what it accomplishes, PCT is the only game in town.

PCT is the result of one mans curiosity, expertise, creativity and determination across more than fifty years. It is an application of engineering science to the phenomenon of behavior. PCT lays a foundation for a solid natural science of psychology and creates a scientific revolution, something that has happened many times in the natural sciences but never in psychology. We have a long way to go, but the basics are compelling.

People do not respond to stimuli, nor does the brain plan actions. People control. All living things control. Control has not been clearly understood until an engineer at Bell Laboratories provided an explanation in 1927. After all these years, very few people in the world understand how control works, and those who do think that control systems control their *output*, while, when you think about it, all control systems control the signals generated by their sensors, their *input*.

Engineers have applied control theory since the early 30s to numerous devices that act as if they were alive, such as the cruise control in your car or autopilot in a plane. It turns out that control is the defining difference between inanimate objects and living organisms. And what living organisms control are not their actions (output), but their perceptions of what they experience (input). Action/behavior is automatic. Actions are the means we employ to control for the perceptions we want.

Failure to distinguish between “reactions” by 1) inanimate objects and 2) control systems when using the scientific method borrowed from physical science means that much research in psychology has been looking at the wrong things, the wrong way. As a result, most psychological studies must be reconsidered.

When it was first published in 1973, Carl R. Rogers commented on William T. (Bill) Powers seminal work *Behavior: The Control of Perception*

Here is a profound and original book with which every psychologist—indeed every behavioral scientist—should be acquainted. It is delightful to have a person of such varied and unorthodox background come forth with a unique theory of the way in which behavior is controlled in and by the individual, a theory which should spark a great deal of significant research.

(In this comment, Carl Rogers made a very common, profound mistake. Like most of us, he modified the new information to fit what he already thought he knew. Behavior is not what is controlled by individuals; their perceptions are.)

PCT is a counter-intuitive, revolutionary and therefore controversial approach to explaining behavior. It has already provided insight regarding infant development, psychotherapy, management practices, marriage counseling, personal relations, respectful learning environments in public schools, programs of personal change in schools and in prisons, research methods that are appropriate for psychology, and sociology.

When you understand PCT, you learn that we are controllers, that it is our nature to control, and that when we attempt to control others we easily create conflict. PCT shows that we cannot predict what another living being will do, and we cannot tell what another person is doing by watching what he or she is doing.

PCT shows what control is and how it works; how it gives rise to conflict or cooperation, depending on what individuals want and how they interpret what they experience. Control is not a dirty word. Control is necessary for life and being in control or contented is satisfying. When others attempt to control us we resist and dislike it.

PCT is rooted in physical science. It provides an explanation for the appearance of stimulus-response as well as the impression that the brain issues commands to our muscles. By way of an analogy, PCT amounts to an introduction of the idea and functional mechanism of the solar system in an age when people were studying circles within circles to explain anomalies as all heavenly bodies obviously move around the earth. Once you understand the new functional concept, the old descriptive science, with all its elaborate embellishments, crumbles. You have to start over, building on the new concept. With a correct concept, you can understand and do much more than you could before.

PCT is an explanation that works. You can download tutorials and working simulations here: [http://www.livingcontrolsystems.com/demos/tutor\\_pct.html](http://www.livingcontrolsystems.com/demos/tutor_pct.html)

Perceptual Control Theory gives an intuitively satisfying explanation for purposeful human behavior, which is control. Hierarchical PCT (HPCT) outlines a hierarchical arrangement of multiple control systems as a testable explanation that allows for the complexity of our experience.

PCT focuses on how we look at and experience things, and the way these perceptions are compared with experiences we want. PCT explains how thoughts become actions and feelings and why stimuli appear to cause responses. PCT improves our understanding of human interpersonal behavior, including conflict, cooperation and leadership in families, education, business and society.

## BENEFITS

The major benefit of studying PCT is personal. Your outlook changes dramatically, shifting from a focus on action/behavior to a focus on what people want to experience and their ability to control satisfactorily under the circumstances. You gain a clear, sensible understanding of how emotions may arise and what role they play. When you understand PCT, dealing with people no longer will be complex and confusing, a matter of luck, a gift, or something best left to specialists.

PCT has been applied to provide insight regarding infant development, psychotherapy, management practices, marriage counseling, personal relations, respectful learning environments in public schools, programs of personal change in schools and in prisons, research methods that are appropriate for psychology, and sociology. Here are some of the particulars for your consideration:

Crisis periods in infancy have been observed and described by many, but the book *The Wonder Weeks: How to stimulate your baby's mental development and help him turn his 10 predictable, great, fussy phases into magical leaps forward* by Dutch researchers Hetty van de Rijt and Frans Plooij is unique in that it explains what is going on in the mind of an infant as it grows through stages, which become crisis periods, at certain, highly predictable times in the first 20 months of life. This book was first published in The Netherlands in 1992 and has provided insight and comfort to parents around the world, contributing to the healthy development of children. This book also provides tangible evidence of the hierarchical development of mental capabilities in infants, perfectly aligned with Hierarchical Perceptual Control Theory as spelled out by Bill Powers.

Tim Carey's book *The Method of Levels: How To Do Psychotherapy Without Getting In The Way* distills the essence of all psychotherapy, peeling away superfluous trappings of various treatment modes. Carey spells out a very simple questioning approach that anyone can use with a trusting friend to resolve persistent psychological distress. You will find illustrations that show how simple and effective the Method of Levels is at this website.

Jim Soldani's paper on *Effective Personnel Management* is the story of how one man in a factory environment read the original work by Bill Powers several times, understood the basic principles of PCT, thought through what the implications were in his environment, and organized an approach to plant management that made a dramatic and very profitable difference.

Every author who has worked with PCT and has written about it brings his or her own background to the story. Ed Ford has a background in social work, so his early work *Freedom From Stress* is focused on marriage counseling and personal relationships in the family as well as in school.

Ed Ford was consulted by administrators in an inner city school in Phoenix, Arizona, and together they developed what became a successful program to support

students and create a harmonious, respectful learning environment in the classroom. His book *Fundamentals—Discipline for Home and School* spells out some basics.

In her work *A People Primer: The Nature of Living Systems*, Shelley Roy writes a series of easy-to-read letters introducing and explaining PCT from A to Z. The letters deal with issues such as maintaining a focus on self when in conflict with others, helping students in school to understand that they control, resolving internal conflict in a work setting when you are ordered to do things you know are not right, understanding the ramifications of coercion in a prison setting, and managing personal and organizational change.

In 1985, the year before he retired as professor of psychology and education at the University of Oregon, Phil Runkel wrote a six page, single spaced letter to Bill Powers, with questions about an article that had been published seven years earlier. A few days later, Bill Powers responded with a nine page reply. So began a focused, respectful correspondence between two lucid gentlemen. You can read the first several letters at this website. Phil Runkel reconsidered everything he ever knew about psychology in a remarkable display of intellectual integrity.

In the first of his two works on PCT, *Casting Nets and Testing Specimens: Two Grand Methods of Psychology*, Phil Runkel reviews current psychological research methods (that is ‘casting nets’) and tells the reader in an easily understandable way what kinds of information the methods do and do not provide. Any research method is a tool appropriate in some but not all situations. Runkel shows that the mainstream research tools of psychology are not sufficient to explain individual behavior and its causes. The reader is then familiarized with the concept of causation and with Bill Powers’s Perceptual Control Theory, which is the framework that is necessary for a change in perspective on human behavior (that is, ‘testing specimens’). Runkel explains how an appropriate investigation of causation in individual human behavior should be designed, and then expands the view to an interaction between individuals.

Eighteen years after that first letter, Phil’s second work *People as Living Things: The Psychology of Perceptual Control* went to press. This major work introduces PCT and relates it to all of contemporary teachings in psychology. This provides a perspective that is unique among all the books on PCT. You will find Phil’s writing style most enjoyable and his insights deep.

You can understand PCT at a very simple level, recognizing that we always act to control our perceptions; to affect the world so we experience that which we want to experience. You can also study PCT in depth, to grasp it in some detail; to immerse yourself in an emerging natural science.

## COMPETITION

The major competition that PCT faces is the simple, unavoidable fact that without specific instruction, people draw intuitively obvious conclusions.

Would you agree that when you were very little, you observed that others react to you, whether you spoke to them or touched them. There, I used the word “react” which already embodies what I think of as the intuitively obvious conclusion.

Along these lines, René Descartes formalized the concept of stimulus and response in the mid-1600s. Behaviorists have worked hard to build a science based on this concept, and while some will claim that behaviorism is out of fashion, it is very much with us and Experimental Analysis of Behavior, EAB, is alive and well.

For example, if you stand on the deck of a ship during a storm, the heaving deck (your environment) makes you do things (—but only if you want to stay upright ☺). Applications of this concept permeate our culture. Surely you have heard of Gold stars, Incentive programs, and One minute management.

Would you also agree that when you got around to wondering about it, you concluded that your mind issues commands to your muscles.

For example, if your ship is at rest, the environment does not make you walk across the deck to the other side. You just walk. So now we study how the mind can issue commands to our muscles. Engineers have demonstrated (using a laborious approach called Inverse Kinematics) that it is very possible to precompute commands to muscles and motors so limbs move just so—provided you have a powerful computer and provided that there are no disturbances at all. Muscles must not tire, and the environment must not change. This is the case for robots in repeatable circumstances and for animated 3-D figures in computers, but never for living organisms in the real world.

The intuitively obvious idea that the brain issues commands to our muscles lies at the heart of cognitive psychology, and psychologists are working hard to sort out the complexities of our minds on this basis.

Not so obvious is the fact that neither of the above concepts are sufficient to explain how you can make your way across that deck during the storm, or how a swallow can fly right into the small opening of her nest, without fail, on a windy day.

Perceptual control theory explains both nicely. PCT is a larger, more all-encompassing explanation than either behaviorism or cognitive psychology. Therefore, PCT cannot be integrated into these limited concepts any more than it was possible to integrate the idea of the solar system into the existing earth-centered astronomy. I am convinced, along with my colleagues studying PCT, that PCT is destined to fundamentally revise contemporary psychology in coming decades.

Just as the transition from an earth-centered astronomy to a sun-centered astronomy took decades, so a transition from intuitive but incorrect explanations for behavior to a counter-intuitive, but correct explanation will take decades. What happens during scientific revolutions is that younger students, who are not yet fully invested in the current explanation, evaluate the differences and choose the better explanation. A generation later, the transition is complete. In this case, the process is underway, the evidence is there for anyone to examine, and payoff in several domains is already available. It is exciting to benefit from and participate in this scientific revolution.

As I write this, undergraduate as well as graduate students in Australia and the U.K. are comparing their standard, currently obligatory curriculum to the PCT alternative and are excited about PCT. They find that PCT has great explanatory power, think about it away from class, and are relating it to a large number of phenomena and personal experiences.

### **A WORD ABOUT “THEORY”**

The word *Theory* in Perceptual Control Theory stands for Law of Nature as in Newton’s laws of motion in physics or the periodic table of the elements in chemistry.

Unless you explain that PCT is a physical explanation of how all living things function, at all times, in all circumstances, without exception, people will naturally compare it to any of the concepts catalogued in *Elsevier’s Dictionary of Psychological Theories* (2006) with its 2,000 entries, where theory means a hunch, a hypothesis, that one will find something if one looks close enough. In more than 50% of instances, anyway.

People find that PCT makes common sense, but, in fact, it is very difficult to determine the scientific validity of PCT by just reading or talking about it. You have to look at the technical details to see just exactly how things work. Your listeners can download and run tutorials and simulations on Windows computers. Mary Powers, the late wife of the creator of PCT, put it succinctly in an email to a discussion group: At the blah-blah-blah level, PCT is no better than any other theory. The tutorials and simulations are there to take you way beyond the blah-blah-blah level.

If PCT is right (and I am sure it is based on the evidence) psychology has to start over, just like astronomy had to start over when people realized that the solar system was the correct way to explain movements in the heavens. When people understand what is actually going on, what behavior is, how it works and what it accomplishes, they will be able to figure out what to do in any number of circumstances by reasoning from basic principles.

*Dag Forssell, October, 2009*