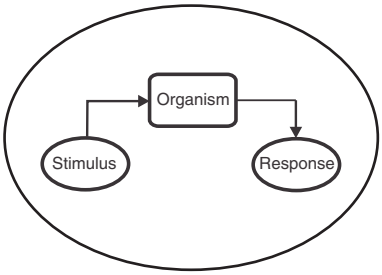
The Domain of Perceptual Control Theory (PCT)

Exploring the significance of PCT without explaining it

Bill Powers never tired of explaining PCT to social scientists and others. One way was a suggestion that PCT fits between *Behaviorism* and *Cognitive Psychology*, because controlling looks like stimulus-response from the outside, and is experienced as thinking and acting from the inside. The illustrations below portray these relationships.

Behaviorism



Basic premise
Stimuli in the environment make the organism respond with ***output***.

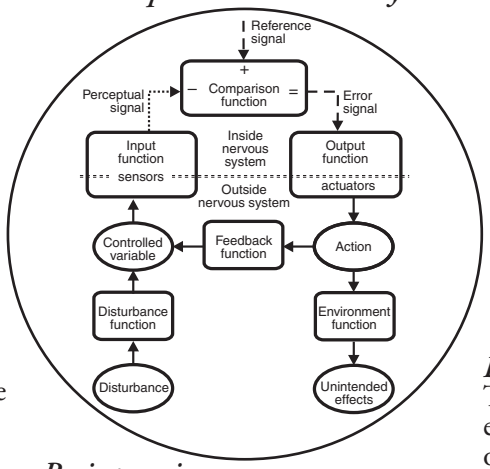
Pro
- Intuitively obvious—we can see how changes in the environment makes people and animals react.
- Long tradition—350+ years.
- Embedded in our culture.
- Statistics provides an appearance of science.

Con
- Scientific method applied wrong[1].
- Brain function beyond scope.
- Hopelessly simplistic approach.
- Use of statistics provides group averages only (of low quality).
- False/misleading make-believe explanations and terminology.

Prospects for the future
None. A natural science cannot be built on a descriptive, non-functional, mistaken concept.

1 The scientific method as used in ***output***-focused psychologies relates an Independent and a Dependent variable. See *The Experimental Method is Crippling Psychology* at site in footer.

Perceptual Control Theory



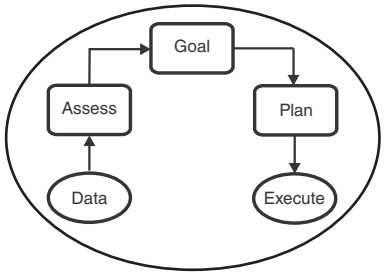
Basic premise
Living organisms are systems of control systems, acting to control their perceptual, sensed ***input***.

Pro
- Scientific method used correctly for the study of control systems.
- Long development—1952+.
- Aligned with common sense.
- Explanations make sense.
- Interactive demonstrations and computer simulations compelling.
- All functional elements defined.
- Study individuals. No statistics.
- All elements quantifiable.
- PCT principles help explain life.
- Never failed a test, so far.

Con
- Far from intuitively obvious—few people or life scientists understand how control works and thus fail to see it working throughout nature.
- Shows that current psychologies are fundamentally mistaken.

Prospects for the future
Bright. PCT lays a foundation for psychology and the life sciences to become natural sciences.

Cognitive Psychology



Basic premise
The brain evaluates data from the environment, creates a plan based on goals and computes commands to muscle fibers, creating ***output***.

Pro
- Intuitively obvious—we sense that we think and act.
- Long tradition—1950s+.
- Currently dominant.
- Embedded in our culture.
- Statistics provides an appearance of science.

Con
- Scientific method applied wrong[1].
- Physically impossible for the brain to specify muscle action.
- Assess–goal–plan: Contrary to common assumptions, the brain does ***not*** processes symbols the way a digital computer does.
- Poorly defined elements.
- Use of statistics provides group averages only (of low quality).
- False/misleading make-believe explanations and terminology.

Prospects for the future
None. A natural science cannot be built on non-functional, descriptive words and false assumptions.

It matters little which of the great multitude of psychological theorizing you have come to believe in. You act to experience what you want to experience and keep it that way by resisting disturbances, always have, always will.

You ***are*** a system of control systems. Once you understand, all the old explanations crumble. If you want to understand how we function—what behavior is, how it works, and what it accomplishes—PCT is the only game in town.

With PCT, you gain a new perspective on conflict and how to resolve it, relationships, management, and more.

Over...

The Domain of PCT, continued. About scientific revolutions—and one most people know about.

While this comparison focuses on psychology, the insight PCT offers reaches far beyond psychology and the social sciences.

When a life scientist studies a phenomenon, he or she will be blind to control in action if ignorant of how control works. This affects research in biology, neurology and more. Engineers have understood how control works since 1927.

The basic function is simple: Control is comparing what should be with what is and acting to eliminate any difference.

Life is control "all the way down". For example, control is essential for flawless replication and repair of DNA across millions of generations. Control is necessary to guide the growth of any organism. Control is pervasive.

Have a look at Bill's essay *The origins of purpose: the first metasystem transitions* at the site listed in the footer.

Explore without explaining

If you just heard about PCT you might ask what is the big deal, but not want to study the function/workings of a control system, much less a hierarchical system of same.

This short paper is meant to outline the pros and cons of PCT compared to current psychologies.[1]

The idea of PCT rendering contemporary psychologies obsolete may seem preposterous.

About Scientific Revolutions

Scientific revolutions are rare but very significant. *The Structure of Scientific Revolutions* by Thomas S. Kuhn discusses them in detail.

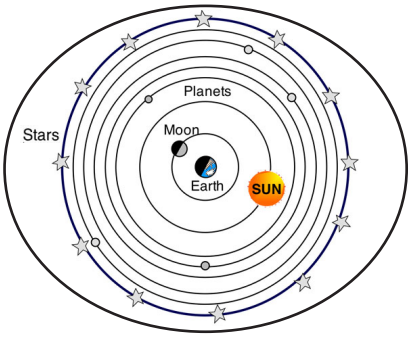
Edited by the then president of Harvard, James Bryant Conant, *The Harvard Case Histories in Experimental Science* were designed primarily for students majoring in the humanities or social sciences.

Here are essays that outline how the discovery of Oxygen rendered the chemical science of Phlogiston obsolete, the rise and decline of the caloric theory, the atomic-molecular theory, and more. Download from www.pctresources.com under Public.

PCT lays a foundation for psychology to become a natural science, not merely an art. Once you understand how you function, you can change your life and relationships for the better. Welcome to the PCT revolution!

1 For qualitative differences, see *Descriptive versus generative scientific theories* at the site listed in the footer.

Earth-centered astronomy
Ptolemy
Almagest (150 AD)
Originating in antiquity



As of the late 1500s...

Basic premise

The earth is the immovable object at the center of the universe, with all heavenly bodies revolving around it.

Pro

- Intuitively obvious—anyone who looks at the heavens can see this.
- Long tradition—1,200+ years.
- Mathematical projections can predict solar eclipses.
- Embedded in our culture.
- Church dogma supports this.

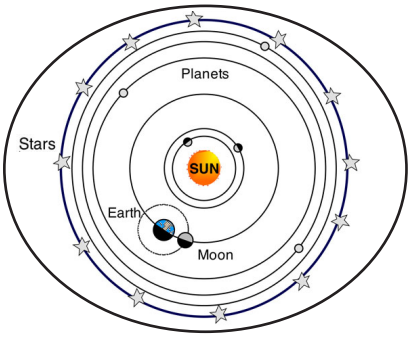
Con

- Physically impossible (But people could not know that in the 1500s.)
- False/misleading make-believe explanations and terminology.
- You could not have engaged in space travel, but there were no rockets anyway.

Prospects for the future

None. A natural science cannot be built on non-functional, non-quantifiable descriptions of appearances.

Sun-centered astronomy
Copernicus
On the Revolution of the Heavenly Spheres (1543 AD)



As of the early 1600s and today

Basic premise

The sun is the center of the solar system, with planets moving around it. The earth revolves on its axis. Stars are stationary, very far away.

Pro

- A physically correct explanation.
- Explanations make sense.
- Space travel possible.

Con

- Far from intuitively obvious—the functioning model has to be taught.
- Shows that Ptolemy and church authorities are fundamentally mistaken.

Prospects for the future

Bright. Lays a foundation for astronomy to become a natural science, not a descriptive, non-functional art.

Dag Forssell, 2015

It matters little whether you believe the sun is carried by the gods in a carriage across the sky, that the earth is flat, or the center of the universe. The earth spins on its axis, always has, always will. Once you understand, all the old explanations crumble. If you want to engage in space travel, sun-centered astronomy is the only game in town.