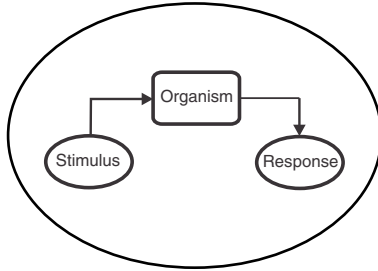


The Domain of Perceptual Control Theory (PCT)

Exploring the significance of PCT without explaining it

Bill Powers always sought more effective ways to explain PCT. One way was to place PCT between *Behaviorism* and *Cognitive Psychology*, because from the outside controlling looks like stimulus-response, and from the inside controlling is experienced as thinking and acting. The summary illustrations below portray these relationships. For overview as well as in-depth explanations of PCT, see several papers and books at PCT websites.

Behaviorism



Basic premise

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

Pro

- Intuitively obvious—we can see how changes in the environment make people and animals react.
- Long tradition—350+ years.
- Embedded in our culture
- **Everybody** knows this is true.

Con

- Scientific method for inanimate objects misapplied to living things.¹
- Denies existence of purposes, goals.
- Diverse actions are counted as the 'same response'.
- False/misleading explanations and terminology.

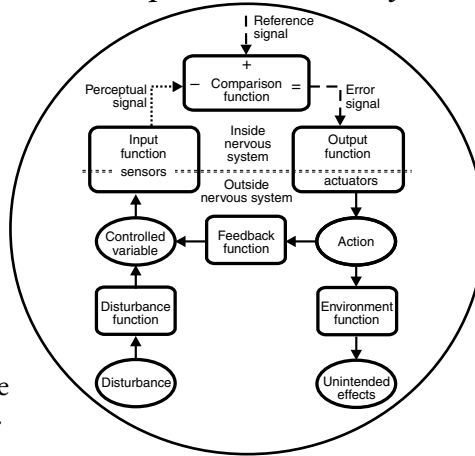
Prospects for the future

None. A natural science cannot be built on a descriptive, non-functional, mistaken paradigm.

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

2 For theories & modeling, see *Experience, Reality, and HPCT*.

Perceptual Control Theory



Basic premise

Living organisms are systems of control systems, which use their actions to control their sensed perceptual **input**.

Pro

- Scientific method for control systems correctly applied to living things.
- Long development—1952+.
- Explanations of purposes, conflicts, cooperation, etc. make sense.
- Interactive demonstrations and computer simulations compelling.
- All functional elements explicitly defined and quantifiable.
- Models behavior of individuals.²
- PCT principles help explain life.

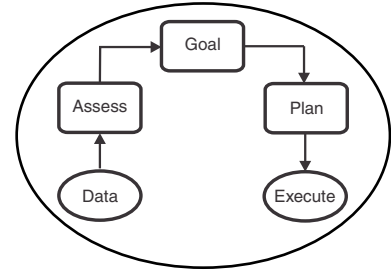
Con

- Far from intuitively obvious—has to be demonstrated, studied.
- Cannot be integrated into any prevalent school of psychology.
- 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
- **Everybody** knows this is true.

Con

- Scientific method for inanimate objects misapplied to living things.¹
- Physically impossible for the brain to specify muscle action.
- Assess–goal–plan: Contrary to common assumptions, the brain does **not** process symbols the way a digital computer does.
- Poorly defined elements.
- False/misleading explanations and terminology.

Prospects for the future

None. A natural science cannot be built on false assumptions, vague definitions, and non-functional word-pictures.

It matters little which of the great multitude of psychological theories 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, feelings...

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 scientists who study living things are ignorant of how control works, they cannot recognize control in action. 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 ubiquitous in nature. Have a look at Bill Powers’ essay *The origins of purpose: the first metasystem transitions* at site in 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 posterous.

About Scientific Revolutions

Scientific revolutions² are rare but significant. Examples include how the discovery of Oxygen rendered the chemical science of Phlogiston obsolete, the rise and decline of the caloric theory, and the atomic-molecular theory. These and more are described in the *Harvard Case Histories in Experimental Science*, edited by James Bryant Conant, then president of Harvard, for students majoring in the humanities or social sciences.³

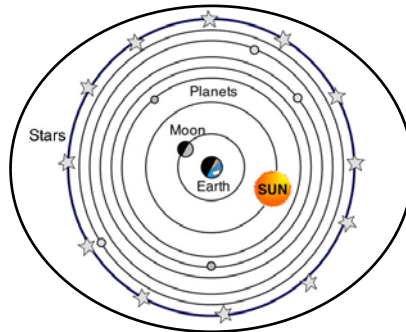
PCT lays a foundation for psychology to become a natural science, not merely an art. Once you understand how you function, you can change your life and relationships for the better. Welcome to the PCT revolution!

¹ For qualitative differences, see *Descriptive versus generative scientific theories*.

² The seminal work on scientific revolutions is *The Structure of Scientific Revolutions* by Thomas S. Kuhn.

³ Download from pctrresources.com under Public.

***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.
- **Everybody** knows this is true.

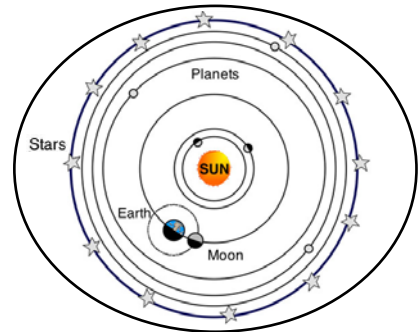
Con

- Physically impossible (But people could not know that in the 1500s.)
- False/misleading explanations and terminology.

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 appear stationary, because they are 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 is 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.