



Perceptual Control Theory, Philosophy, and China

December 2002: Richard S. Marken, Ph.D., Senior Behavioral Scientist, The RAND Corporation, and organizer of the Control Systems Group (CSG) Annual Meeting for 2003, received an e-mail request for reservations from Zhang Hua Xia, Professor of the Department of Philosophy, Sun Yat Sen (Zhongshan) University, Guangzhou, China.

Invitations were extended to these three distinguished scholars:

- Yan Zexian, President, South China Normal University; Professor, SCNU Research Institute of Philosophy, and Chairman, Social Science Research Association of Guangdong Province
- Professor Zhang, who also holds a professorship at SCNU and is Vice-Chairman of the Society of Systems Science of China
- Fan Dongping, Associate Professor, SCNU Research Institute of Philosophy.

March 2003: Dr. Robin Wang, Professor of Philosophy at Loyola Marymount University (the site of the meeting), volunteered her translation services for the three visitors because (she said) Dr. Yan, in particular, is very important in China, and she was impressed that a man of his stature would attend the conference.

A month before the conference, Marken received a draft of the group's proposed paper for the conference. He reports:

"I was impressed with their understanding of PCT....These Chinese researchers had really done their homework!"

July 2003: At the CSG four-day event, the delegation from China presented a well-received joint study, "Some Axiological Interpretations of PCT: from Perceptual Control Theory to Deep Ecological Ethics," which offers an interesting new perspective on the controversial field of philosophy, ecological ethics. The authors acknowledge their reliance on Powers' book *Behavior: the Control of Perception*, and cited Marken's *Mind Readings: Experimental Studies of Purpose* as another major resource for their study, as well as references and articles from the CSG archives.

Although ecological ethics is not a field he has been actively engaged in, Powers remarked:

"This paper shows that the PCT point of view brings new premises into old philosophical debates, and is bound to take philosophy as well as science

in a new direction. It will be interesting to continue this discussion with our new friends and colleagues.”

New Answers to Old Questions

The *axiology* paper suggests the concept of a control system as presented in PCT is the answer to some long-standing puzzles of philosophy—one being what British philosopher Hume called the “is-ought” problem: Perception tells us what *is* in the world, but what tells us how the world *ought to be*? PCT proposes that the answer lies inside the organism, not in its environment, in the form of a reference signal, or reference condition:

“Perceptual control theory, put forward by W. T. Powers, can be analyzed in terms of general control theory and systems theory, as well as in terms of the behavioral science of animals and humans. In recent years, PCT is widely applied in neuro-clinical pathology, management, sociology and computer science. In particular, Powers himself applied the theory to study origins of life (The Origins of Purpose: the first metasystem transitions, p. 125-138 in F. Heylighen, C. Joslyn & V. Turchin, eds. 1995, The Quantum of Evolution. Gordon and Breach Science Publishers: New York.)”

—Zhang Hua Xia et al: *Some Axiological Interpretations of PCT*

A Chinese Edition of Behavior: The Control of Perception

During the meeting, the Chinese delegation announced they are more than halfway through the translation of *Behavior: the Control of Perception*. In further discussions, an agreement in principle was made for publication of the book in China. Professor Yan invited Bill Powers and his wife, Mary, to come to China for the release of the first Chinese language *B:CP*, scheduled to coincide with the 30th anniversary of the original publication of this important work. In addition, discussions have been initiated with this group about translating and publishing other PCT books, including *Making Sense of Behavior* (Powers, 1998) and *Mind Readings* (Marken, 1995).

SIDEBAR: SIGNS OF OUR TIMES

It’s interesting to note that Professor Fan told one observer at the meeting that she first found Bill Powers and PCT on the internet at the CSG website.

Facts about SCNU

- South China Normal University¹ comprises two colleges, 18 departments, eight scientific research sections and one research center.
- The eight research institutes are dedicated to Education, Philosophy and Administration, Ancient Chinese Documents, Economics, Quantum-electronics, Microelectronics, Environmental Science, and Physical Education at Schools.
- Doctoral programs leading to the Ph.D. degree are available in Psychology and Biology.
- Current enrollment at SCNU is 17,000 students with more than 1,230 teachers. Since the founding in 1951, SCNU has educated 60,000 undergraduates and postgraduates.
- The modern campus is located at Shipai, Guangzhou, in the Guangdong Province.
- The general library has a collection of over 1,600,000 books, of which 200,000 are from other countries.
- SCNU has close ties with the University of Nebraska, Georgia State University, the University of Virginia in the US; the University of Glasgow in the UK; the Chinese University of Hong Kong, and the University of East Asia in Macao. SCNU also maintains wide-ranging academic exchanges and cooperation with universities in the former USSR and Japan.
- On average, over the past decade, there have been seven foreign experts and teachers on staff every academic year. They are housed in the Foreign Experts Building, constructed especially to accommodate these visiting educators. The university provides a program of regular diversified recreational activities and excursions to enrich their experience outside the classroom and research facilities.
- Guangdong Province (also known as Yue) is located along the southern part of the South China Sea, 100 miles or less from Hong Kong and Macao.

“GuangDong is a place with beautiful mountains and rivers [and] a moderate climate. ...As the South Gate of China, GuangDong has been opening to the outside world for a long time.”²

¹ Source: *A Brief Introduction of South China Normal University*

² Source: *GuangDong Province*

References

[Control Systems Group](#)

[South China Normal University](#)

[GuangDong Province](#)

[Books about PCT](#)

A Short Glossary

Axiology

- (1) A branch of philosophy dealing with values: that is, ethics, aesthetics, religion.
Based on the Greek word *axios* (worth) —Robin Wang, Ph.D., LMU
- (2) “The study of the nature, types, and criteria of values and of value judgments,
especially in ethics” —*Webster’s Ninth New Collegiate Dictionary*
- (3) The general theory of value; the study of objects of interest
—Rudolf Hermann Lotze (1817-1881)

Perceptual Control Systems (PCT)

“Perceptual control theory, or PCT, is a theory of human and animal behavior. It is based on the principles of control theory and was originally inspired by the work of the early cyberneticists (Wiener and Ashby, primarily). Its history goes back to 1953.” — W.T. Powers , *A Brief Introduction to Perceptual Control Theory*,

“[Perceptual] control theory is not really a replacement for any existing theory of behavior. Rather, it is an explanation of a phenomenon that is not even recognized by current theories of behavior—the phenomenon of control. Control is the process of producing consistent results in the face of unpredictable disturbances.” —Richard, S. Marken, *Mind Readings*

Control System Group (CSG)

CSG is a membership organization dedicated to the application of William T. Powers' *Perceptual Control Theory* to understanding the purposeful behavior of living organisms.