

WILLIAM E. HERFEL

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Ph.D. Philosophy, Temple University, Philadelphia, Pennsylvania 19122 USA; 1990.

B.Sc. Natural Science: Mathematics and Physics, St. Mary's College of Maryland, St. Mary's City, Maryland 20686 USA; 1985.

RESEARCH INTERESTS

- Scientific, methodological and philosophical foundations for theory, practice and empirical study of Chinese Medicine using complex dynamic systems theory
- Application of the nonlinear dynamics and complex systems theory to the understanding of science, technology, society and the market
- Complex dynamic systems approaches to environmental management and sustainable development
- Social dimensions of sustainable communities
- Philosophy of alternative approaches to physical, mental, emotional and spiritual health
- Socioeconomic and philosophical dimensions of academic integrity

TEACHING & CURRICULUM DEVELOPMENT

- Introduction to Philosophy
- Introduction to Western Intellectual & Cultural Heritage.
- Introduction to Philosophy of Psychology
- Introduction to Formal Logic
- Evolution, Sex and Gender
- Philosophy of Human Sexuality
- Chinese Philosophy
- Philosophy & Social Studies of Science
- Technology and Human Values
- Human Values and Commercial Practice
- Nonlinear Dynamics and Cognitive Science
- Marx and Nietzsche
- Critique of Modernity
- Enlightenment & its Discontents
- Foucault Seminar

ACADEMIC APPOINTMENTS

Conjoint Lecturer, School of Humanities & Social Science, University of Newcastle, NSW, Australia; February 2007- present.

PhD Candidate/Priority Research PhD Scholar, Centre for Complementary Medicine Research (CompleMED), University of Western Sydney, NSW, Australia; September 2005- June 2007.

Lecturer, Department of Philosophy, University of Newcastle, NSW, Australia; February 2001- September 2005.

ACADEMIC APPOINTMENTS (CONT'D)

Associate Lecturer, Department of Philosophy, University of Newcastle; February 1994-February 2001.

Post-Doctoral Researcher, University of Newcastle; September 1991-February 1994.

Visiting Lecturer/Adjunct Instructor, various universities in Philadelphia, USA area. 1987-1990. Details on request.

Teaching Assistant, Philosophy Department, Temple University; 1985-1989. I had full teaching responsibilities including selection of text and preparation of syllabus.

PUBLICATIONS

Edited Book

Herfel, W. E., W. Krajewski, I. Niiniluoto and R. Wójcicki, eds. 1995. *Theories and models in scientific processes*. Vol. 44 of *Poznan Studies in the Philosophy of the Sciences and the Humanities*, Amsterdam: Rodopi.

Refereed Book Chapters and Journal Articles

Herfel, W. E., D. Rodrigues and Y. Gao. 2007. Chinese Medicine and the Dynamic Conceptions of Health and Disease. *Journal of Chinese Philosophy* **34** (s1): 57-79.

Herfel, W. E. 2007. Positive Feedback and Praxiology: Path Dependence in Action. In W. W. Gasparski and T. Airaksinen, eds. *Praxiology and the Philosophy of Technology*, 55-77. Vol. 15 of *Praxiology: The International Annual of Practical Philosophy and Methodology*. New Brunswick: Transaction Publications.

Atkins, J. and **W. Herfel**. 2006. Counting Beans in the Degree Factory (Some Practical Meta-Ethical Reflections on Academic Integrity in Australian Universities). *International Journal for Educational Integrity* **2** (1): 3-12.

Herfel, W. E., C.A. Hooker. 1999. From crystal to slime mould: The replacement of epistemic statics by epistemic dynamics. In M. L. Dalla Chiara, R. Giuntini and F. Laudisa, eds. *Language, Quantum, Music*, 7-18. Vol. 281 of *Synthese Library*. Dordrecht: Kluwer Academic Publishers.

Herfel, W. E. 1999. On Social and Material Aspects of Technological Control. *Science and Education* **8** (1): 55-62.

Herfel, W. E. 1999. On cognitive and social dimensions of science: constructivism & nonlinear dynamics. In G.C. Cornelius, S. Smets and J.P. Van Bendegem, eds. *Metadebates on Science*, 89-100. *The Blue Book* (Vol. 6) of 'Einstein Meets Magritte'. Dordrecht: Kluwer Academic Publishers.

Herfel, W. E. and C. A. Hooker. 1997. Cognitive dynamics and the development of science. In D. Ginev and R.S. Cohen, eds. *Issues and images in the philosophy of science*. 127-172. Vol. 192 of *Boston studies in the philosophy of science*. Dordrecht: Kluwer Academic Publishers.

Herfel, W. E. 1995. Nonlinear dynamical models as concrete construction. In Herfel et al. eds. *Theories and Models in Scientific Processes*, 69-84. Amsterdam: Rodopi.

PUBLICATIONS (CONT'D)

Reviews

Herfel, W. E. and W. D. Christensen. 2000. Review of Marc De Mey *The Cognitive Paradigm. Mind and Machine* **10** (1).

Herfel, W. E. 1998. Review of Carl Mitcham *Thinking through Technology. The European legacy* **3** (1).

FORTHCOMING PUBLICATIONS

Refereed Book Chapters and Journal Articles

Rodrigues, D., Y. Gao, and **W.E. Herfel**, 2008. Analysing a Chinese Medical Case Study in terms of Self-Organisation (in Chinese)). *Journal of Medicine & Philosophy* (医学与哲学), accepted on 06/12/2007.

Gao, Y. **W.E. Herfel** and Rodrigues, D. 2008. Toward a New Research Paradigm: Traditional Chinese Medicine from a Nonlinear Dynamical Perspective (in Chinese), *Journal of Medicine & Philosophy* (医学与哲学), accepted on 28/01/2008.

Gao, Y. and **W.E. Herfel**. Constructing Post-Classical Ecosystems Ecology: The emerging dynamic perspective from self-organising complex adaptive systems. *To appear* in Hooker and Collier (eds.) *Philosophy of Complex Systems* Volume 10 of Gabbay, Thagard and Woods (eds.) *Handbook of the Philosophy of Science*, Elsevier: <http://www.johnwoods.ca/HPS/abstractConstructingPostClassicEcologyGaoYin.pdf>.

Herfel, W. E., D. Rodrigues and Y. Gao. Complex Dynamical Systems and Chinese Medicine. *To appear* in Hooker and Collier (eds.) *Philosophy of Complex Systems* Volume 10 of Gabbay, Thagard and Woods (eds.) *Handbook of the Philosophy of Science*, Elsevier: <http://www.johnwoods.ca/HPS/abstractComplexDynamicalSystemsAndChineseMedicine.pdf>.

D. Ihde and **Herfel, W. E.** Philosophic Implications of Modeling the Complex Dynamics of Technoscience. *To appear* in Hooker and Collier (eds.) *Philosophy of Complex Systems* Volume 10 of Gabbay, Thagard and Woods (eds.) *Handbook of the Philosophy of Science*, Elsevier: http://www.johnwoods.ca/HPS/volume%2010%20HPS%20Proposal_Compex_Dynamics_of_Technoscience.pdf.

HONORS & AWARDS

Priority Research PhD Scholarship, Complementary Medicine Research Centre, UWS 2005.

Teaching Assistantship, Temple University; 1985-1989.

National Dean's List; 1985.

Who's Who among America's College Students; 1985.

Palmer Award for Extracurricular Achievement; 1984.

Bausch & Lomb Science Scholarship; 1979-1980.

RESEARCH SUPERVISION

Dr. Gao Yin (PhD) Awarded 2005.

Mr. John Hawkins (Hons, First Class) Awarded 1999.

RESEARCH GRANTS

RMC Travel Grant, University of Newcastle, 2005.
OSPRO Travel Grant, University of Newcastle, 2004.
Faculty of Arts and Social Science Research Incentive Grant, University of Newcastle, 2001.
OSPRO travel Grant, University of Newcastle, 2000.
RMC Travel Grant, University of Newcastle, 1995.
RMC Travel Grant, University of Newcastle, 1994.

CONFERENCE ORGANISATION

Co-organised with Profs. C.A. Hooker and H.I. Brown *International Conference on Non-Formal Foundations of Reason*, The University of Newcastle, August 1993.

INTERNATIONAL CONFERENCE PRESENTATIONS

Post-classical Ecology: On the Emerging Dynamic Perspective from Self-Organizing Complex Adaptive Systems.

Presented at the International Society for the History, Philosophy and Social Studies of Biology Conference, Exeter, UK, 25-29 July 2007 (co-authored with Gao Yin).

Adaptability, Complex Dynamics and Chinese Medicine Research. World Congress on Chinese Medicine. Hong Kong. 23–25 November 2006.

Ethical Dilemmas in the Degree Factory. An invited interactive workshop presented at Asia-Pacific Educational Integrity Conference, Newcastle, Australia, 2-3 December 2005 (co-presented with J. Atkins).

Counting Beans in the Degree Factory (Some Practical Meta-Ethical Reflections on Academic Integrity in Australian Universities) Asia-Pacific Educational Integrity Conference, Newcastle, Australia, 2-3 December 2005 (co-authored with J. Atkins).

A Chinese Medical Contribution to the Dynamic Conception of Health and Disease.
Presented at the 14th International Society for Chinese Philosophy Conference.
UNSW, Sydney, Australia, 13-19 July 2005 (co-authored with D. Rodrigues and Gao Yin).

Toward Research Collaboration on Chinese Medicine and Complex Dynamical Systems.
Presented at the Sino-Australian TCM and Complex Systems Conference,
Heilongjiang Traditional Chinese Medicine University, November 2004 (co-authored with D. Rodrigues and Gao Yin).

An Application of the Concept of Self-Organising Dissipative Structure to Chinese Medicine.
Presented at The First World Congress on Chinese Medicine, Melbourne, Australia,
November 2003 (co-authored with D. Rodrigues and Gao Yin).

From crystal to slime mould: The replacement of epistemic statics by epistemic dynamics.
Presented at the Logic, Methodology and Philosophy of Science Conference,
Florence, Italy, August 1995 (co-authored with C.A. Hooker).

On cognitive and social dimensions in science.
Presented at the Conference: Einstein meets Magritte, Brussels, Belgium, June 1995.

Of castles and clouds.
Presented at the International Union for History and Philosophy of Science
Conference, Warsaw, Poland, August 1994.

Constructivism and nonlinear dynamics: toward an integration of the cognitive and social.
Presented at the Association for Foundations of Sciences, Language and Cognition
Workshop, Madralin, Poland, August 1994.

The social enables as it constrains: a look at the role of social constraints in scientific practice.
Presented at the International Conference on Non-Formal Foundations of Reason,

Newcastle, NSW, August 1993.

INTERNATIONAL CONFERENCE PRESENTATIONS (CONT'D)

Analog to digital conversion and biological regulation.

Presented in the workshop, *Putting the finger on digital modelling*, at the 1989 Summer Conference in History, Philosophy, and Social Studies of Biology at Western Ontario, Canada, June 1989.

INTERNATIONAL INVITED PRESENTATIONS

An Application of the Concept of Self-Organising Dissipative Structure to Chinese Medicine. Presented at Heilongjiang Traditional Chinese Medicine University, September 2004 and Liaoning Traditional Chinese Medicine University, November 2004 (co-authored with Gao Yin and D. Rodrigues).

Making Sense in Western Terms.

Presented at Heilongjiang Traditional Chinese Medicine University. September 2004 (co-authored with Gao Yin and D. Rodrigues).

Toward a New Research Paradigm: TCM from a Nonlinear Dynamical Perspective.

Presented at Liaoning Traditional Chinese Medicine University, October 2004 (co-authored with Gao Yin and D. Rodrigues).

Making Sense in Western Terms.

Presented at University of North Carolina, Chapel Hill, USA; St. Mary's College of Maryland, USA, November 2000 (co-authored with Gao Yin and D. Rodrigues).

Acupuncture and Nonlinear Dynamics.

Presented at Zhejiang Traditional Chinese Medicine Hospital; Zhejiang Traditional Chinese Medicine University, Hangzhou; Beijing Traditional Chinese Medicine University, Beijing; Liaoning Traditional Chinese Medicine University, Shenyang; Heilongjiang Traditional Chinese Medicine University, Harbin, People's Republic of China, March-April 2000 (co-authored with Gao Yin and D. Rodrigues).

Why does your keyboard say QWERTY?: On the necessity of contingency for explaining technological and scientific change.

Presented at St. Mary's College of Maryland, USA October 2000.

Beyond the wall: Poly processes as models of technoscientific evolution.

Presented to the Technoscience Research Group, SUNY Stony Brook, USA May 2000.

Technology, social dynamics and culture: thoughts on appropriate technology transfer. A series of lectures presented to the Hangzhou Electricity Company, People's Republic of China, March 2000.

Chaos, nonlinearity and predictability.

Presented at University of Central Florida, Orlando, Florida, USA, February 1990.

The emergence of complexity: New digital models for biological systems.

A workshop presented at Swarthmore College, Swarthmore, Pennsylvania, USA, September 1989.

Butterflies, the weather and the science of chaos.

Presented at Lawrence University, Appleton, Wisconsin USA, May 1989

NATIONAL CONFERENCE PRESENTATIONS

- EBM meets the Yellow Emperor: Understanding the Efficacy of Chinese Medicine.
Presented at the Annual Conference of the Australasian Association for the History, Philosophy and Social Study of Science, University of Newcastle, July 2004 (co-authored with D. Rodrigues).
- Making Sense in Western Terms.
Presented at the Annual Conference of the Australasian Association of Philosophy, University of Tasmania; Annual Conference of the Australasian Association for the History, Philosophy and Social Study of Science, University of Melbourne, June 2001 (co-authored with Gao Yin and D. Rodrigues).
- Traditional Chinese Medicine from a non-linear dynamical perspective.
Presented at the Third National Symposium of the Australian Acupuncture and Chinese Medicine Association, Melbourne, May 2001 (co-authored with D. Rodrigues and Gao Yin).
- On the necessity of contingency for explaining technological and scientific change.
Presented at the Annual Conference of the Australasian Association of Philosophy, University of Tasmania, July 2001 and the Annual Conference of the Australasian Association for the History, Philosophy and Social Study of Science, University of Melbourne, June 2001.
- Constructivism & nonlinear dynamics: toward an integration of the cognitive and social
Presented at The Australasian Association for Phenomenology and Social Philosophy Conference, University of Sydney, September 1995.
- From crystal to slime mould: The replacement of epistemic statics by epistemic dynamics.
Presented at the Annual Conference of the Australasian Association for the History, Philosophy and Social Study of Science, UNSW, Sydney, July 1995 (co-authored with C.A. Hooker).
- Constraints and media: philosophical reflections on the significance of mathematical modeling in natural science.
Presented at the Annual Conference of the Australasian Association of Philosophy, Australian National University, July 1994.
- Science as a complex evolutionary system: constructivism and nonlinear dynamics.
Presented at the Annual Conference of the Australasian Association for the History, Philosophy and Social Study of Science Conference, Melbourne, July 1993.
- Lost in phase space: predicting chaotic dynamics.
Presented at the Annual Conference of the Australasian Association of Philosophy, Adelaide, July 1993.

NATIONAL INVITED PRESENTATIONS

- Making Sense in Western Terms.
Unit for History and Philosophy of Science, Sydney University, Sydney Australia, March 2002 (co-authored with Gao Yin and D. Rodrigues).
- On Knowledge, Technology and Markets.
Presented to the Philosophy Department, Newcastle University, May 1999.
- Chaos, Human Genetic Engineering and the Precautionary Principle.
Presented to the Philosophy Department, Newcastle University, October 1996 (co-presented with Keith Joseph).
- Evolution and self-organisation.
Presented to the Biology Department, Newcastle University, May 1992.

NATIONAL INVITED PRESENTATIONS (CONT'D)

What's the use of portraying scientific models as abstract entities?
Presented at Newcastle University, April 1992.

Topics in self-organisation.

A series of three lectures presented to the Self-Organising Systems Study Group,
Newcastle University, October-December 1991.

MEMBERSHIPS OF NETWORKS & PROFESSIONAL ASSOCIATIONS

Executive Committee: Association for Foundations of Science, Language and Cognition
(AFOS) 1994-present.

SCHOLARSHIPS IN RESIDENCY

Heilongjiang University of Traditional Chinese Medicine, Harbin, China. September-
December 2004.

Heilongjiang University of Traditional Chinese Medicine, Harbin, China. March 2000.

Technoscience Research Group, State University of New York at Stony Brook, USA. May
2000.

Department of Political Science, The University of Memphis, USA. July 2000.

Department of Philosophy, St. Mary's College of Maryland, USA. September-December
2000.

ADMINISTRATION AND GOVERNANCE (UNIVERSITY OF NEWCASTLE)

Engineering Faculty Curriculum Review 2002.

Standing Committee of the Arts and Social Sciences Faculty Board 1998-2002.

Arts and Social Sciences Faculty Board 1994-2002.

Philosophy Department Library Liaison Officer 2000-2003.

Philosophy Department Web Page Redesign Coordinator 1999-2000.

Board of Interdisciplinary Gender Studies Committee 1997-1998.

Board of Interdisciplinary Cultural Studies Committee 1997-1999.

OTHER SCHOLARLY ACTIVITIES

Advisor: University of Newcastle (Student) Philosophy Club. 1994-2003.

University of Newcastle Program: Foundations for University Teaching 1998

University of Newcastle Teaching Portfolio Workshop 1994.

CONSULTANCIES & COMMUNITY SERVICE

Executive Committee President: Together We Inspire Growth (TWIG) 2007-present.

Newcastle Urban EcoVillage (NUEV): Conflict Resolution Strategy. 2006.

Newcastle City Council: Applying Systems Thinking to the Newcastle Environmental
Management Plan Review 2001.

Resident and spokesperson: EcoHome, an Integral Urban House Newcastle project 1995-1997.

Member: Integral Urban House (Newcastle) Committee 1993-1998.

Member: Permaculture Hunter Region 1996-1998.

Member: APACE (Appropriate Technology, Community and Environment) 1996-99.

Member: Association for Environmental Education 1996-1997.