# Curriculum Vitae

**Dr. Itay Shani**
Department of Philosophy,
Kyung Hee University,
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## Current position
Research Professor (5 year contract plus possibility for tenure), Department of Philosophy, Kyung Hee University (Seoul, Korea), 2010-present

## Education
Ph.D. Philosophy (June 2004). The University of Western Ontario (UWO), London, Ontario

M.A. Philosophy (cum laude, June 2000), Tel-Aviv University (M.A. thesis topic: *The Causal Paradigm in Semantics*, supervisor: Prof. Marcelo Dascal)

B.A. Philosophy and History (February 1996), Tel-Aviv University

## Dissertation:
*Content and its Problems: A Critique of Contemporary Naturalistic Semantics*, the University of Western Ontario, 2004. Committee members: Prof. Ausonio Marras (supervisor), Dr. Jillian McIntosh, Dr. Chris Viger, external examiner: Prof. Chris Eliasmith

## Academic employment history
Post Doctoral Fellow (National Research Fund of South Africa), University Johannesburg, 2008-2010
Post Doctoral Fellow (Mellon Fellowship), University of the Witwatersrand (Wits), 2006-2008
Limited-duty faculty, The College of Management (Tel-Aviv) 2005-2006
Limited-duty faculty, University of Haifa, 2005
Limited-duty faculty, The University of Western Ontario, 2004

**Areas of Specialization**: Philosophy of mind and psychology, foundations of cognitive science.

**Areas of Competence**: Metaphysics, epistemology, philosophy of language, logic and critical thinking, early modern philosophy, philosophy of science, complexity theory.

## Refereed Articles
Mind stuffed with Red Herrings: Why William James' Critique of the Mind-stuff Theory does not substantiate a Combination Problem for Panpsychism. Forthcoming, **Acta Analytica**, DOI 10.1007/s12136-010-0095-8.

Representation and Aspectual Shape, *Special Issue: Interactivist Summer Institute (ISI) 2007: Perspectives on Interactivism* (guest editor A. Levine), **New Ideas in Psychology**, Vol. 28, 2010, pp. 324-337.

The Whole Rabbit: on the Perceptual Roots of Quine's Indeterminacy Puzzle. **Philosophical Psychology**, Vol. 22, No. 6, 2009, 739–763.

Dynamical Agents: Consciousness, Causation, and Two Specters of Epiphenomenalism (in collaboration with Liam P. Dempsey). **Phenomenology and the Cognitive Sciences,** Vol. 8(2), 2009, pp. 225-243.

Against Consciousness Chauvinism. **The Monist**, *special edition on Intentionality and Phenomenal Consciousness* (edited by T. Horgan and U. Kriegel) Vol. 91(2), 2008, pp. 294-323.

Consciousness and the First-person: A Critical Assessment of Searle's Connection Principle. **Journal of Consciousness Studies,** Vol. 14 (12), 2007, pp. 57-91.

The Myth of Reductive Extensionalism. **Axiomathes**, Vol 17 (2), 2007, pp. 155-183.

Teleonomic Functions and Intrinsic Intentionality: Dretske's Theory as a Test Case. **Journal of Cognitive Systems Research,** Vol. 8, 2007, pp. 15-27.

Narcissistic Sensations and Intentional Directedness: How Second-Order Cybernetics Helps Dissolve the tension between the Egocentric Character of Sensory Information and the (Seemingly) World-Centered Character of Cognitive Representations, **Cybernetics and Human Knowing,** Vol. 13 (3), 2006, pp. 87- 110.

Intension and Representation: Quine's Indeterminacy Thesis Revisited. **Philosophical Psychology**, Vol. 18 (4), 2005, pp. 415-440.

Computation and Intentionality: A Recipe for Epistemic Impasse. **Minds and Machines,** Vol. 15 (2), 2005, pp. 207- 228.

### Invited Articles
Aim that Bow! An Interactivist Gaze at the Problem of Intentional Tracking. Forthcoming in **Axiomathes** (DOI: 10.1007/s10516-010-9133-9), special issue on Interactivism (edited by M. Bickhard).

### Book Reviews
Review of Radu J. Bogdan's 'Predicative Minds'. Forthcoming, **Philosophy of the Social Sciences**.

Review Essay: The Mind as a Scientific Object. C. Erneling and D.M. Johnson (Eds.) **Philosophy of the Social Sciences**, Vol. 37, 2007, 229-241.

### Academic Work in Progress
A book manuscript: '*Meaning in Action: Mental Representation in the Brave New World of Embodied Cognition*', in preparation.

Papers:

The Explanatory Gap as a Problem of Entailment. Under review.

Panpsychism and the Eccentric Builders Scenario: A brief Philosophical Defense. Under review.

Type-Identity Statements and the Explanatory Gap: An Argument for Compatibility (with Sungho Choi). In preparation.

Dynamical Cognition and the Two Visual Systems Hypothesis: Some Philosophical Reflections. In preparation.

### Academic Awards:
National Research Fund post-doctoral fellowship, The Republic of South Africa. The University of Johannesburg (Started July 2008).

Andrew D. Mellon Postdoctoral Research Fellowship, 2007-2008
Held at the University of the Witwatersrand (Wits), Republic of South Africa.

Andrew D. Mellon Postdoctoral Research Fellowship, 2006-2007
Wits University

Andrew D. Mellon Post-Doctoral Research Fellowship, 2006-2007. Rhodes University, Republic of South Africa (Declined).

2001 Ontario Graduate Scholarship (1 year/ $15,000)
1999 President Scholarship for Graduate Study (PSGS) (2 years/ $10000 per annum; the University of Western Ontario)
1999 International Graduate Student Scholarship (IGSS) (4 years/ reduces tuition to local standards; the University of Western Ontario)
1999 Graduate Tuition Scholarship (covers full amount of Canadian tuition and activity fees for 4 years; University of Western Ontario).
1999 Special University Scholarship (approx. 1500 per annum/4 *years*; University of Western Ontario)
1998 Tel-Aviv University Faculty of Humanity award (1 year/$2500)
1997 Tel-Aviv University Department of Philosophy Graduate Student award (1 year/$1000)

### Other Awards:
1999-2000 Nomination for Graduate Student Teaching Award, The University of Western Ontario

### Refereed Presentations
September 20, 2009: "Mind Stuffed with Red Herrings: Why James' critique of the Mind-Stuff Theory does not substantiate a Combination Problem for Panpsychism", UKZN Spring Colloquium, Byrne Kwazulu-Natal.

June 11, 2009: "The Explanatory Gap as a Problem of Entailment". Towards a Science of Consciousness, *the 15th International Interdisciplinary Scientific Conference on Consciousness*, Hong Kong's Polytechnic University, Hong Kong.

May 26, 2007: "Interactivism and Cartesian Subjectivity". Interactivist Summer Institute 2007, hosted by the American University of Paris, Paris.

January 18, 2007: "Preempting Causal Preemption: A Transcendental Argument for Emergent Downward Causation." Annual Conference of the Philosophical Society of Southern Africa, hosted at the University of Stellenbosch.

February 17, 2005: "Teleonomic Functions and Intrinsic Intentionality: Dretske's Theory as a Test Case," The Israeli Philosophical Association's Annual Conference, at the University of Haifa

November 9, 2002: "Representation and Multiple Correspondences: Content Indeterminacy Revisited." Graduate Student Conference in epistemology, The University of Rochester, N.Y.

November 4, 2000: "Back to Neptune: Or How to be Consistent about Causal Theories of Reference". Graduate Student Conference, City University of New York.

## Invited Presentations

August, 2010: On Aggregates and Unities, *Metaphysics of Science International Conference*, Kyung Hee University, Seoul

April 29, 2009: "Mind stuffed with Red Herrings: William James on the non-additivity of Experience", University of Johannesburg, Philosophy Department Colloquium.

March 4, 2009: "The explanatory Gap as a Problem of Entailment", University of Kwazulu Natal Philosophy Department Colloquium, Durban.

September 11, 2008: "Rage against the Machine: Mechanism and the Mind-Body Problem", University of the Witwatersrand (Wits) Philosophy Department Colloquium, Johannesburg

September 27, 2007: "The Whole Rabbit: How, and How Not, to Solve Quine's Indeterminacy Puzzle", University of the Witwatersrand Philosophy Department Colloquium, Johannesburg

August 30, 2006: "Intension and Representation: Quine's Indeterminacy Thesis Revisited", University of Kwazulu Natal Philosophy Department Colloquium, Durban.

May 5, 2006: "Consciousness and the First-Person: A Critical Appraisal of Searle's Connection Principle", University of the Witwatersrand Philosophy Department Colloquium, Johannesburg
.
July 5, 2005: "Narcissistic Sensations and Intentional Directedness: an interactivist rejoinder to Akins' critique of naturalistic semantics", The Konrad Lorenz Institute for Evolution and Cognition Research, Altenberg, Austria.

March 30, 2005: "Intension and Representation: Quine's indeterminacy thesis revisited", Tel-Aviv University Philosophy Department Colloquium.

March 21, 2005: "Intension and Representation: Quine's indeterminacy thesis revisited", the University of Haifa Philosophy Department Colloquium.

April 23, 2004: "Computation and Intentionality: A Recipe for Epistemic Impasse," Dalhousie University Philosophy Department Colloquium.

August 7, 2002: "Semantic Engines: What's Wrong with Symbolic Computationalism." The University of Western Ontario's Interdisciplinary Linguistic Discussion Forum.


## Professional Service

Refereeing work for the following journals:
*Cognitive Processing*
*Dialectica*
*New Ideas in Psychology*
*Philosophia*
*Philosophical Psychology*
*Philosophy of the Social Sciences*

Conference Organization:
*Metaphysics of Science*, an international philosophy conference held at Kyung Hee University, Seoul August 3-5, 2010. (Member of Organizing Committee)

Head of organizing committee for the UWO Graduate Conference in Philosophy of Mind: "Metaphysics of Mind and language," the University of Western Ontario, April 25-27, 2003.


## Professional Memberships
The American Philosophical Association 2007-2008

Institute for Interactivist Studies, since 2007.

## References
Prof. Ausonio Marras, Professor emeritus, the University of Western Ontario (thesis supervisor). amarras@uwo.ca

Prof. Emma Ruttkamp, University of Johannesburg (recent academic host) emmar@uj.ac.za

Prof. Mark Bickhard, Lehigh University, mhb0@Lehigh.Edu


## *Teaching Experience*

### Instructor
March-June 2009. *Problems of Consciousness* (Philosophy 3B); University of Johannesburg.

February - May 2008. *Mind in Action: From Classical AI to Dynamical Embodied Cognition* (4015/7013, MA/Honours); Wits University, Johannesburg.

February - November 2007. *Tutorial Leader of the Wits Students Philosophical Society*; Wits University, Johannesburg.

August-February 2005. *Introduction to the philosophy of science*; the College of Management, Tel-Aviv.

January-June 2005. *Basic topics in the philosophy of mind: Consciousness and mental representation*; U. of Haifa (2nd and 3rd year course)

September 2003- May 2004. *Logic and Critical Reasoning*; The University of Western Ontario, distance studies.

September 2002- May 2003. *Introduction to Symbolic Logic* (131); Western Ontario

November 1998- June 1999. *Guided Readings in Philosophy* (Hume/Kant); Tel-Aviv University

**Related Academic Experience**
Assessor of annual progress reports for the *National Research Fund* of South Africa (NRF), in the Human and Institutional Capacity Development (HICD) Directorate, October 2009.

MA thesis supervision, University of Johannesburg, 2009.

Research Assistant to Professor Robert Stainton (language and cognition research group), fall 2003.


# Research Interests

Currently, my primary research focus is threefold, involving investigations into the ontology of consciousness, the nature of representation, and the theoretical foundations of cognitive science. All of these avenues of inquiry share certain general common themes, chief among which are my tendency to approach the relevant problems from a theoretical perspective which draws heavily on insights from systems theory (or complexity theory), and the suggestion that the key to further progress depends on certain radical changes to our currently dominant physicalist framework.

The ontology of consciousness: The question which interests me most here is what are the conceptual accommodations necessary for creating a theoretical framework in which consciousness is a truly integrated aspect of nature? In particular, I focus on the question to what extent does the problem of consciousness pose a challenge to the physicalist orthodoxy, in either its functionalist or its identity-theory varieties, as well as on the complementary question what alternative outlook on nature is best qualified for a systematic account of the evolution of consciousness. My research into this problem space pays particular attention to the ontology of experience. To be more specific, the main problem I struggle with is the question 'is experience an emergent phenomenon arising out of the integration of, and interactions between, wholly insentient entities, or is it in some sense aboriginal, which is to say that it exists, in some rudimentary form, in pre-neuronal, and even pre-biotic systems'? So far, I have focused on a critical examination of the explanatory gap (2 research papers, one under review, one in final stages of preparation), as well as on the debate between physicalists and panpsychists, in particular with respect to the so-called *combination* problem (2 papers, one published, one under review). In the near future I plan to work on the following topics: First, I intend to write a paper (currently in early stages of preparation) criticizing the popular idea that experience emerges out of information processing, or in other words that phenomenal consciousness is an emergent of access consciousness; instead I offer a remodeling of the relation between these two major kinds, or aspects of consciousness. Second, I plan to conduct a thorough inquiry into the question under what conditions might it be possible for systems with simple sentient capacities to coalesce into wholes which manifest integrated complex experiences. In other words, the goal here is to find out whether it is possible to make logical, metaphysical, and scientific sense of the idea of an evolving "mental combinatorix", beginning with exponentially primitive forms of sentience and culminating with highly evolved experiential life forms. My intention is to integrate knowledge from neuroscience, quantum theory, quantum theories of consciousness, and theories of self-organization at the cellular and the pre-biotic levels, in order to answer the question which sorts of physical organizations substantiate an enhanced capacity for experience and which are not.

The nature of mental representation: My research into the nature of mental representation has focused on developing and elaborating a theory of mental content predicated on the idea that content is best understood against the background of a dynamical systems modeling of autonomous agency, and more to the point that it is best understood as an emergent form of anticipatory indication of interaction prospects, in service of the selection of adaptive actions. The essential tenets of this interactivist approach to mental representation have been developed in some detail over the last 30 years or so by Mark Bickhard of Lehigh University, with whom I maintain regular research contacts, while substantive contribution has also been made by Clifford Hooker and his co-workers at the Newcastle complexity research group in Australia; some converging ideas can also be found in the works of Michael Anderson and Greg Rosenberg, James Barham, neurologist Antonio Damasio, Rick Grush, and, to a lesser degree, in some of the writings of Ruth Millikan and of Andy Clark (not to mention good old Pierce!). I myself have written extensively on this topic, focusing on various aspects of the program (see list of publications). Nevertheless, this rich framework is still a work in progress with plenty of room for original contribution (see for example my forthcoming *Axiomathes* paper). Moreover, much work needs to be done in order to render

this approach appealing to wider audiences within philosophy, AI, and the cognitive sciences. This later task also involves demonstrating how the theory deals with certain well-known problems in the field of mental representation such as the problem of normativity, epiphenomenalism, the debate between internalism and externalism, the representation of abstract and fictional entities, and the relations between intentionality and consciousness. Equally important, in the face of the fact that some of the most familiar and vociferous proponents of embodied cognition argued extensively against the very usefulness of the concept of mental representation (e.g., Gibson, Maturana and Varela, Noe, Thelen and Smith), there is a vital need to explain how representation can be given a richly elaborated, coherent sense *within* a neurophysiologically informed dynamical systems framework, as well as to motivate realism with respect to mental representations. I plan to discuss these issues systematically and extensively in a manuscript titled '*Meaning in Action: Mental Representation in the Brave New World of Embodied Cognition'*, which is currently in early stages of preparation (however, much work is already done in the form of relevant published papers on which I intend to capitalize).

The theoretical foundations of cognitive science: My main goal in this domain, for the next coming years, is to focus on a second book project titled '*The Myth of the Mechanical Mind: On the Limitations of the Machine Metaphor as a Guiding Metaphor in the Cognitive Sciences*'. My research into various topics in the philosophy of mind and the theoretical foundations of the cognitive sciences led me to suspect that one of the most formidable problems inhibiting further progress in these fields is our attachment to the idea that to explain mental phenomena as an integral part of nature – to "naturalize the mind" – is tantamount to explaining mind in predominantly mechanistic terms. This mechanistic credo is particularly conspicuous in the hypothesis that minds are computing machines, but the computational hypothesis is by no means its only manifestation. Thus, mechanistic assumptions are abundant in theories of perception and representation, in discussions of problems of mental causation or of the modularity of the mind, or in the belief that naturally evolved intelligent beings are the products of a blind "design" process by courtesy of natural selection (to mention but a few prominent examples).

Its popularity notwithstanding, the idea that minds are machines entails some severe constraints inherent in the very nature of mechanistic systems, and I came to believe that these constraints play a significant role in accounting for the difficulties encountered by the naturalistic project. Not least among these is the fact that while we have every reason to suppose that autonomy is a sine qua non of psychological agency mechanistic systems are necessarily heteronomous (i.e., their behavior is exclusively controlled by external forces), with the result being that genuine autonomy – and all that depends on it, such as representation and purposeful action – fall outside the scope of everything which may rightfully be called a machine. Equally important, despite the hype surrounding such topics as 'machine consciousness,' machines and mechanisms are precisely the kind of entities to which ascriptions of experience are least appropriate. 'The Myth of the Mechanical Mind' aims to systematically discuss these and other, related problems and to offer a coherent post-mechanistic alternative (or, as philosophical projects often come to, to at least delineate the general outlines of such an alternative…).

Admittedly ambitious, this project aims to unravel the mechanistic foundations of much of the theoretical and experimental work in contemporary studies of the mind; to intimate how this mechanistic picture is but a special case of a larger mechanistic outlook, whose roots can be traced to the scientific revolution of the 17th and 18th centuries and whose implications for our scientific image have been enormous ever since; to conduct a careful study of  the notions of 'machine', 'mechanism', and 'mechanical explanation', in both their physical and formal characterizations, in order to establish what exactly is implied by the hypothesis that natural systems in general and psychological systems in particular are mechanistic; to demonstrate the availability of a significantly non-mechanistic picture of nature as this seems to emerge across many areas of contemporary science – from physics and the sciences of complexity to chemistry, biology, psychology, and mathematics; to reflect on the nature of this theoretical shift and the manner in which it substantiates a decoupling of naturalism from mechanism; and finally, to illustrate the emancipative effect of this change in perspective for the study of the mind.