# Barbara G. Goodrich, Ph.D., D.V.M.

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Lecturer, Department of Philosophy, University of Colorado at Denver D.V.M., The Golden Cat Clinic, Golden, Colorado

# **EDUCATION**

D.V.M., Colorado State University College of Veterinary Medicine & Biomedical Sciences (2014)

Equivalent of a B.A. in Biology, Metropolitan State College of Denver (2002-2006)

Ph.D., University of Colorado at Boulder, Department of Philosophy (1994)

Dissertation: "Merleau-Ponty and the Psychology of Time Experience," Director: Forrest Williams

M.A., University of Houston, Department of Philosophy (1987)

Thesis: "Heraclitus, Nietzsche, and Wittgenstein: Flux, Knowledge, and Forms of Life," Director: Cynthia Freeland

B.A. cum laude, University of Houston, Department of Philosophy with membership in the Honors Program (1985)

# ACADEMIC APPOINTMENTS

Courses taught include Logic, Social and Political Philosophy, Philosophy of Art, Introduction to Philosophy, Ideology and Culture: Racism and Sexism

1994-2002, 2006-current: Lecturer, University of Colorado Denver, Department of Philosophy (Several years off in early 2000s to take veterinary school prerequisites)

One of the first faculty to develop and teach online courses for CU-Online

1990-1994: Graduate Part-Time Instructor, University of Colorado Boulder

# VETERINARY AND RESEARCH EXPERIENCES

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	Spring 2013	Veterinary Student Volunteer for socializing laboratory cats for adoption, Canine Socialization
		Project, Colorado State University
	February 2013	Veterinary Student Volunteer, Spay Day, Humane Society of Boulder Valley, Boulder, CO,
	August 2012	Veterinary Student Volunteer for the Humane Society Veterinary Medical Association's Rural Area
		Veterinary Services, Standing Rock, ND
	July 2012	Veterinary Student Volunteer for the Fluid Therapy Guidelines Taskforce Meeting of the American
		Animal Hospital Association and the American Association of Feline Practitioners
	2011-2012	Veterinary Student Assistant with Dr. Craig Webb's research in progress regarding lipid peroxidation in feline erythrocytes
		peroxidation in terme et ythrocytes
	April 2011	Honors project for veterinary neurology class with feline cerebellar hypoplasia patient
	2006-2010	Veterinary Assistant, P/T volunteer, Table Mountain Veterinary Clinic, Golden, CO
	Fall 2005	BIO 490D, Research in Environmental Microbiology, with Professor Rebecca Ferrell, Metropolitan
		State College of Denver, identifying and analyzing nitrifying bacteria for possible use in septic systems to prevent algae blooms in rapidly developing areas
		systems to prevent argae ordanis in rapidry developing areas

#### NON-ACADEMIC POSITIONS, CLASSICAL MUSIC

Classical harp studies beginning in childhood, attendance of Boston University's Tanglewood Institute to study with Lucile Lawrence in high school, professional harpist since high school

1997-2010 Classical harpist, The Brown Palace Hotel, Denver, CO 1981-1987 Classical harpist, The Heritage Club, Houston, TX

# **INTERDISCIPLINARY GOALS**

Goodrich combines veterinary medicine with continuing philosophical work, especially in the philosophy of biology and psychology/ethology. Her philosophical background in biology-grounded phenomenology, environmentalism, and animal welfare led her to the emerging fields of neuroscience and comparative ethology, and also to clinical veterinary medicine, including behavior modification.

She is currently publishing at the intersection of philosophy and biology, especially the dimension of time and rhythms regarding consciousness. This dimension of rhythms through time is key -- the neurological basis of anesthetic agents are a vivid example -- and it is the basis of all physiology as currently understood, yet traditional paradigms of cognition in both philosophy and the natural sciences have not been able to accommodate it. The most fruitful sources of exploration for this groundbreaking topic will include not only academic neurophysiological research, but also philosophically informed comparative vertebrate physiology & ethology: normal, pathological, and high-performance. Veterinary case studies may be among the most valuable raw data.

Goodrich's clinical work will be based on the new protocols for low-stress treatment of the most challenging populations of veterinary patients: fragile or feral cats, small mammals and birds, and wildlife. She aims to promote public support of wildlife rehabilitation and protection simultaneously with trap-neuter-vaccinate-release/gentle programs for feral cats.

There are also vital philosophical precedents to a time-based, empirically grounded approach, such as those found in Nietzsche and the early Merleau-Ponty. Further articulation of this approach, updated and integrated into current biology and neuroscience, is needed, both in the form of papers and in the form of the occasional seminar. Philosophy and veterinary medicine is not a traditional pairing, but it is an extraordinarily useful and timely one.

# PROFESSIONAL VETERINARY ASSOCIATIONS

American Association of Feline Practitioners American Animal Hospital Association American Veterinary Society for Animal Behavior British Small Animal Veterinary Association Colorado Veterinary Medical Association Humane Society Veterinary Medical Association American Veterinary Medical Association

## PUBLICATIONS AND REFEREEING

Tempos of eternity: music, volition, and playing with time, invited chapter for forthcoming book *Art, Aesthetics, and the Brain*, eds. Marcos Nadal, Joseph P. Huston, Luigi Agnati, Francisco Mora, and Camilo José Cela-Conde, Oxford University Press, 2013.

How is it that some works of music, the most temporal of all art forms, can elicit an experience of timelessness? This essay explores three such pieces, by Messiaen, Lauridsen, and Chico Marx, respectively. The effects of these works can be explained only if subjective time is more complex than usually thought; it may include not only sensation but also a purposive stance, particularly involving the anticipation that is crucial to music. Drawing from Schopenhauer, Huron, Merleau-Ponty, and recent neurophysiological data, this chapter introduces an account of how music can profoundly alter our experience of time's passage. One implication is that time perception may originate not from a single "counter" or oscillation, but from the *interaction* of at least two kinds of rhythmic biological processes, perhaps one associated with motility or volition, and one associated with perception. Such an approach may also clarify the remarkably enduring gifts of Clive Wearing as described by Oliver Sacks.

Referee for Reviews in the Neurosciences, 2011

We do, therefore we think: time, motility, and consciousness. *Reviews in the Neurosciences* 21, 331-361 (2010). This article is a philosopher's expanded review of two recent books on neurophysiology: Rodolfo Llinás's *I of the Vortex* and György Buszáki's *Rhythms of the Brain*. Researchers such as these are converging on a view of consciousness as originating in *motility*, and as inherently *temporal* due to the brainwave oscillations that underlay it. Most current discussions of consciousness include implicit philosophical presuppositions inherited from the canon of Plato, Aristotle, Descartes, and Kant, e.g. that consciousness is self-reflective, passive, and timeless. Because of this, Llinás's and Buszáki's insights may not be fully appreciated. However, western philosophy also includes what might be described as a counter-tradition – and one that is more compatible with empirical biological science than the usual canon. Heraclitus, Spinoza, Schopenhauer, Nietzsche, and especially the 20<sup>th</sup> century French philosopher and psychologist Merleau-Ponty all anticipated aspects of Llinás's and Buszáki's approaches. Their alternative conceptual vocabularies are useful for strengthening Llinás's and Buszáki's approaches, sketching out a notion of consciousness

emerging from motility, and generating new hypotheses for neurophysiological research.

## **MANUSCRIPTS IN PROGRESS**

Towards new metaphors for subjectivity.

To replace the old hypostatizing Cartesian notion of the soul while avoiding the inadequate metaphor of computer software, we can turn to the very different vocabulary of physiology, especially processes involving patterns through time, homeostasis, and interacting and balancing forces. This approach can accommodate our intuitions about human subjectivity while remaining grounded in empirical science, and can also allow room for carefully limited, reasonable inferences about the experiences of less complex vertebrates.

## Rethinking the role of philosophy.

Academic western philosophy is in danger of becoming irrelevant as more and more topics split off from the old "natural philosophy" to be addressed by specialized new disciplines. Philosophy has been defined variously as a set of texts, a set of questions, or a set of skills, but many of the canon's texts are increasingly of historical interest only, and many of the questions have been exported to other disciplines. Nonetheless, philosophy remains vitally important, not only to philosophers and students of philosophy, but to many other disciplines in the sciences as well as humanities, fine arts, and law. Familiarity with intellectual history allows theorists to identify tacit inherited assumptions in their fields, and familiarity with traditional answers to philosophical questions permits researchers to avoid repeating errors of the past, as well as providing valuable conceptual vocabularies. The skills of rigorous conceptual analysis are needed in any field in which abstract theory drives the questions. The "philosopause" of many mid-career research scientists can sometimes lead to unwarranted metaphysical speculation, but actually points to a legitimate interdisciplinary need, as well as the dual-discipline possibilities permitted by our increasing longevity. I suggest that academic philosophy develop new roles for double-degrees and for collaboration with people who are already experts in other fields, to fill out intellectual history background, to hone conceptual analysis and theory-building skills further, and to promote creativity. All participating academics, including the philosophers, would benefit immensely.

# **REFERENCES**

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