

HPS 2690 History and Philosophy of Psychology

**Topic: The development of evolutionary theories of mind and behavior:
Darwin, Baldwin, Lorenz, Wilson**

Part 1. Darwin

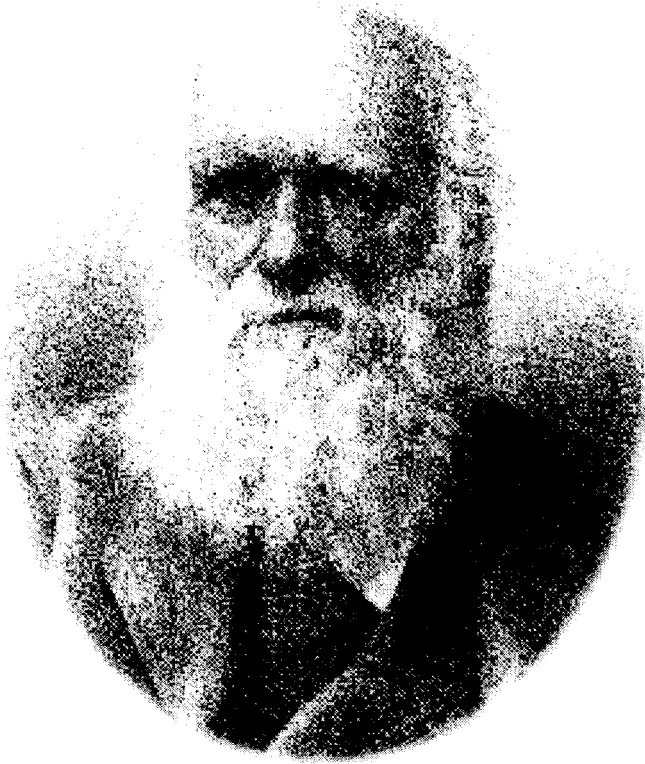


Week 2. Concentrate on Richard's claims about Darwin's early theories of the evolution of mind

- Richards (1987) *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, Chs 2-3 (Ch 1 contains useful background material too)
- Darwin's M and N ('Metaphysical') notebooks and 'Old and Useless Notes', plus extract from C (Second Transmutation) notebook.

Week 3. Concentrate on Richard's claims about Darwin's theory of the evolution of morality and the moral sense

- Darwin (1871) *The Descent of Man and Selection in Relation to Sex* (1981 Princeton edition) Chs II, III, V, XXI
- Richards (1987) *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, Chs 4 and 5.



Week 4. Richard's claims about Darwin's theory of the evolution of emotion, especially on the role of natural selection

- Two papers which can be downloaded from my website
<<http://www.pitt.edu/~pauleg>>
Griffiths, P.E (In Press 2001) Emotion and Expression.
International Encyclopedia of the Social and Behavioral Sciences. Pergamon/Elsevier Science. Read paragraph on Darwin at the beginning.
— Emotion, Evolution of. — section on Darwin and section on Lorenz's interpretation of Darwin
- Richards Ch 5 pp 230-234 (which you already have);
- Darwin (1872) '*Expression...*', Introduction, Chs I, II and III, Ch V pp130-145 (Expression in Monkeys) and Ch XII pp 289-308 (Fear in man). Chs I-II and III can be read over fairly lightly
- Lorenz's Preface to the 1965 Chicago edition of '*Expression...*'.



THAT TROUBLES OUR MONKEY AGAIN.

From a cartoon by Martin Chuzzlewit. — "I DON'T SEE DARWIN, BUT WHAT YOU LIKE ABOUT HIM? BUT I WISH TO KNOW WHAT YOU THINK ABOUT HIM."

Week 5. Baldwin and Organic Selection

- Richards, Ch. 10. Richards Ch. 8 is also relevant, as it introduces you to G.J Romanes, Baldwin's stalking horse in many of his papers, and to Conwy Lloyd Morgan, with whom Baldwin had a priority dispute.
- Baldwin, J.M (1896) "Heredity and Instinct." Science **3**: 438-441, 558-561. This is a nice simple introduction to Baldwin's thought and show its continuity with the debates around the Descent of Man very nicely. In part I, the intention of describing a non-Lamarckian process which mimics the effects of use inheritance is very clear here, as is the theme of mind directing evolution. In part II Baldwin address the question of WHY a trait becomes instinctive via selection of heritable variants if it is being produced by learning anyway.
- Baldwin, J. M. (1996). A New Factor in Evolution. This is the classic paper, but as it is almost literally a string of quotations from his other papers, it is very hard to follow. I have given you a reprint because the two issues in which it originally appeared have been stolen from the library. From Adaptive Individuals in Evolving Populations. R. K. Belew and M. Mitchell. Reading, Mass., Addison-Wesley: 81-90.
- Lloyd Morgan, C. (1896). "On Modification and Variation." Science **4**(20 November): 733-740 is a short example of how similar the two men's ideas were. Again, the reprint from Adaptive Individuals in Evolving Populations. R. K. Belew and M. Mitchell. Reading, Mass., Addison-Wesley: 81-90 (Lloyd Morgan 1996)
- Baldwin, J. M. (1897). "Organic Selection." Science **5**(23 April): 634-636 shows him trying to defuse the priority dispute. I have also given you the identical version he published in Nature the same month. There was a German version as well!
- Baldwin, J. M. (1896). "Physical and Social Heredity." American Naturalist **30**(May): 422-428. Optional reading. This is Baldwin disputing with Edward Drinker Cope (founding editor of the journal)

over the existence of Lamarckian inheritance. I have included Cope's response.

Week 6. The 'Baldwin Effect'

Two famous and two recent attempts to describe and evaluate the significance of the Baldwin effect. Questions about these include whether any of them correctly characterize some elements of Baldwin's thought, why this group of ideas has remained in so attractive, and why Baldwin's name has remained attached to it.

Waddington, C. H. (1942). "Canalisation of development and the inheritance of acquired characters." Nature **150**: 563-565

Simpson, G. G. (1953). "The Baldwin Effect." Evolution **7**(June): 110-117

Between Baldwin Scepticism and Baldwin Boosterism Peter Godfrey-Smith (Forthcoming)

Baldwin and the Expansion of the Evolutionary Repertoire in Evolutionary Biology, Stephen M. Downes (Forthcoming)

Week Seven: Early Ethology and the Nazi Movement

Richards, Ch 11. contains his defense of Lorenz, along with some other material linking the earlier material we have studied to the origins of ethology.

Kalikow, T. J. (1983). "Konrad Lorenz's Ethological Theory: Explanation and Ideology, 1938-1943." Journal of the History of Biology 16(1): 39-73. This is her most substantial work arguing that Lorenz is

Kalikow, T. J. (1978). "Konrad Lorenz's 'Brown Past': A reply to Alec Nisbett." Journal of the History of Behavioral Sciences 14: 173-9. This is interesting for her list of his publications in the Nazi period and for Nisbett's reply to her criticisms of his biography of Lorenz.

Klopfer, P. (1999). Politics and People in Ethology: Personal reflections on the study of animal behavior. Lewisburg, Bucknell University Press. Extract from p. 56-63. This is a strong indictment of Lorenz based on material not available to Kalikow. Unfortunately, the material he cites is not available at Pitt. We stopped subscribing to *Universitas Zeitschrift fuer Wissenschaft, Kunst und Kultur* in 1979!

Barends G. P. (1991). Early Ethology: Growing from Dutch roots. The Tinbergen Legacy. M. S. Dawkins, T. R. Halliday and R. Dawkins. London, Chapman and Hall. Just a sentimental memoir of Tinbergen, but interesting for the contrast between his war experiences and those of Lorenz.

Ethology 1: What was 'Classical Ethology'?

Update on Lorenz and Nazism: It looks as if Klopfer's 1999 account is basically correct. The source, which he doesn't cite, is (Dieckmann 1996) Chapter 3, section 3. I have had this copied for anyone who is interested.

A comment on book sharing. I am having the extracts listed below copied and the books returned to the library. Those writing papers on ethology will need to share these books over the next couple of months. Use the email list at the head of this message to contact people and try to be cooperative and we should all be fine.

(Lorenz 1957 (1935)) (Lorenz 1935) is perhaps the most influential paper, and makes use of the ideas of Von Uexküll.

(Lorenz and Tinbergen 1938; Lorenz and Tinbergen 1957 (1938)) is the galapagos finches of ethology and a great introduction to the use of the concept of interleaved behavioral elements that Lorenz later recanted.

(Lorenz 1952; Lorenz 1957) is a reasonable review of the developments between these classic papers and the upsurge of interest in ethology following the war.

(Burkhardt 1983) is a very simple introduction. (Burkhardt 1981) is also of interest but the library's way of binding the few issues to prevent them being lost makes them quite impossible to photocopy. Look for a few journal issues stuck together with nothing on the spine in between various loose copies of old environmental science pamphlets at the appropriate alphabetical point in the Hilman 4th floor journals.

Ethology 2. Debates over Instinct and Innateness

(Lorenz 1937; Lorenz 1957 (1937)) is his theoretical articulation of the early instinct concept.

(Lehrman 1953) is the classic critique. I am sending you the abridged version that appears next month in (Oyama, Griffiths et al. 2001) together with the commentary on the context of the paper by Tim Johnston.

(Gottlieb 2001) is by a student of Kuo and Schnierla's whose career has been spent trying to do away with the instinct concept. Here he reviews his intellectual development.

(Lorenz 1965) Chapters 1-6. This is Lorenz's mature response to these critiques.

Ethology 3. The Hydraulic Model

(Lorenz 1996) Ch 21 is an early account of the model.

(Lorenz 1957) should be revisited on this topic.

(Lorenz 1966) Ch 4. shows the application of these ideas to human society.

(Hinde 1956) is a good example of how early these ideas fell out of favor amongst ethologists.

(Sipes 1973) is a famous attempt to refute the drive model of aggression.

(Wilson 1978) Ch 5 is a sociobiologists reply to Lorenz

Ethology 4: Observation and Objectivity

(Lorenz 1996) Ch 13 is defense of 'inductive' method – theory free, qualitative observation. Ch 4 (if you can manage it) is a pure epistemological discussion which grounds some of these methodological views. But read this only if you manage everything else this week.

The chapter on Gestalt Perception in the two volume collected Lorenz papers *Studies in Animal and Human Behavior*, trans. Robert D. Martin. One of you guys has one copy of the Lorenz papers and the other hasn't some up from storage, so I can't tell you the chapter number. When the storage copy arrives I will leave it in the copying shelf in the department.

(Barkow 1979) and (Barash 1979) are typical representatives of the sociobiologists scorn for the old ethology. These are commentaries on a paper by Eibl-Eibesfeldt defending ethology against the famous 'imperialist'

section in (Wilson 1975) where he diagrams sociobiology expanding to subsume first ethology and then the social sciences. EE's paper basically just goes over the methods and successes of his own classical work in human ethology. Worth a look if you have time, although the actual methodological discussion is rather poor (Eibl-Eibesfeldt 1979).

Other relevant readings on ethology

(Dewsbury 1985) is a collection of autobiographical sketches. Those by Eibl-Eibesfeldt, Hinde, Lorenz, Marler and Tinbergen are interesting background material. I have had these copied and left in the department.

I have also copied and left out an extract from Von Uexküll.

Additional reading on instinct and innateness would include: (Lehrman 1970) and (Lickliter and Berry 1990). I have left copies of these out, but these are focused on the ideas rather than the actors, events and influences, and so are of limited relevance.

If you don't know Tinbergen's 'Four Questions' you can find them in his 1951 *The Study of Instinct*.

The Russian manuscript is a goldmine for unguarded ideas from Lorenz. His 'The Eight Deadly Sins of Civilised Man' is famously his most fascistic post-war book. The library has it.

If you are interested in Lorenz's epistemology the classic book is 'Behind the Mirror' (1973). The journal *Evolution and Cognition* is devoted to the tradition started by Lorenz in epistemology. The library doesn't have it, but I have a complete run in my office (1991-2001). I wouldn't recommend a philosophical essay on Lorenz's epistemology as a paper topic – it makes no sense to look at this without also considering Popper and Campbell – but a reconstruction of his influences and thought could be really valuable. The first issue of the journal, however, has an article by Hinde on Lorenz's ideas about humans, which was presented at a conference held in 1990 to mark Lorenz's death. I have put this issue out if anyone is interested.

Hinde also has some very interesting stuff on the ethology of emotions, namely (Hinde 1985; Hinde 1985). He traveled a long way from (Hinde and Fisher 1949)!

References on ethology:

- Barash, D. P. (1979). "Human ethology and human sociobiology." Behavioral and Brain Sciences **2**(1): 26-27.
- Barkow, J. H. (1979). "Human ethology: Empirical wealth, theoretical dearth." Behavioral and Brain Sciences **2**(1): 27.
- Burkhardt, R. W., Jr. (1981). "On the emergence of ethology as a scientific discipline." Conspectus of History **1**(7): 62-81.
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- Dewsbury, D. A., Ed. (1985). Studying Animal Behavior: autobiographies of the founders. Chicago, University of Chicago Press.
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- Eibl-Eibesfeldt, I. (1979). "Human ethology: concepts and implications for the sciences of man." The Behavioural and Brain Sciences **2**(1): 1-57.
- Gottlieb, G. (2001). A Developmental Psychobiological Systems View: Early Formulation and Current Status. Cycles of Contingency: Developmental Systems and Evolution. S. Oyama, P. E. Griffiths and R. D. Gray. Cambridge, Mass., MIT Press: xxx-xxx.
- Hinde and Fisher (1949). "The Opening of Milk Bottles By Birds." British Birds **XLII**: 347-357.
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- Lehrman, D. S. (1953). "Critique of Konrad Lorenz's theory of instinctivebehaviour." Quarterly Review of Biology **28** (4): 337-363.

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