

Human Ethology Bulletin

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LAST CALL FOR PAPERS

The 17th biennial meeting of the International Society for Human Ethology will be held in Ghent, Belgium 27-30 July 2004. Symposium, oral presentation, and poster proposals that address any aspect of research or theory within the field of human ethology are welcome. Deadline for submission of abstracts is **5 April 2004** but earlier submissions are encouraged. Each abstract oral should follow this format:

Line 1: authors' names, last name first in capital letters, then first name(s) in lower case letters.

Line 2: institutional address(es)--any information that will fit on one line.

Line 3: e-mail address of corresponding author.

Line 4: title of presentation in capital letters. Then skip a line and single-space the abstract of no more than 100 words.

Proposals for symposia should include the same information on lines 1 through 4 for the communicating author, plus a 250-word, single-spaced description of the symposium theme together with the set of individual papers (3 or 4), each of which is to follow the four-line format including a 100-word abstract. The symposium will be accepted or rejected as a whole, and the communicating author will be notified.

Individual Presentations, including those for symposia, will be 20 minutes in length, including 5 minutes for discussion. The schedule may permit additional discussion time for symposia. Presenters of posters are expected to appear at the poster session. All presentations are to be in English.

Please specify if you wish your oral presentation (individual symposium papers are eligible but posters are not) to be considered for the **Linda Mealey Young Investigator Award**. To do so, type YI on a fifth line, below the title of the presentation. See separate description of this award (p 3) for details.

Please specify in a cover letter if you intend to make a powerpoint presentation and if you prefer the poster form of presentation. You may request a formal letter confirming acceptance of your submission; otherwise, notification will be by e-mail.

Proposals will be reviewed by Astrid Juette <astrid.juette@kli.ac.at> and Glenn Weisfeld <weisfeld@sun.science.wayne.edu>. Please send your submission to both reviewers.

Hard copies on disk with the name of the operating system and word processing system will also be accepted; see the Officers Box of the Human Ethology Bulletin for addresses.

Ghent is one of Western Europe's most attractive historical cities, known for its excellent gourmet dining and extensive cultural life. Its university was founded in 1817 and is one of the largest universities in the Low Countries. The city is located 55 km to the west of Brussels, covers 156 sq. km of which 36 sq. km is port area. It is the second largest city of the region 'Flanders', and the third centre in Belgium. Ghent is the core city of a metropolitan area of 515,000 inhabitants; 290,000 people live in the villages of the Ghent commuting belt outside the city limits. Every day, 35,000 people commute to Ghent.

The city combines an impressive past with a vivid present. In summer, Ghent is visited by tourists from all over the world. The official language in Ghent is Dutch but most people also speak French, English and/or German. The Belgian currency unit is the euro. There are exchange offices and banks in the city centre, credit cards are accepted in most places.

Transport

International air travellers usually arrive at Brussels International Airport. From there, a regular train service connects to Ghent, either at Ghent St-Pieters or at Ghent Dampoort railway station. Visitors to the city center take trains to Ghent St.-Pieters. The conference venue is located in the city center, as are the hotels.

Conference Lodging

The meeting will take place at the Sofitel Gent Belfort, Hoogpoort 53 B-9000 Gent. Through Sofitel, we reserved 50 rooms at the IBIS Kathedraal Hotel at two minutes walking distance from the conference venue. We obtained a special conference discount, rooms here are 90 EURO single room, breakfast included. In addition, 20 rooms are reserved at the NOVOTEL hotel, next to the Sofitel. Here too, room rates are discounted at 127 EURO single room, breakfast included. These rooms are reserved on a first come, first serve basis. Both the conference location as the hotels suggested here for lodging are right in the middle of the historic city center. Lodging at university dormitories will also be offered later on, as well as contact details for other hotels.

Room reservations can be made directly at hotel:

Sofitel Gent Belfort

Hoogpoort 53
B-9000 Gent
Belgium
Phone: + 32.(0)9. 233.33.31
Fax: + 32.(0)9. 233.11.02
<http://www.gent.be/gent/home/art/10x10.gif>

Novotel Gent Centrum

Goudenleeuwplein 5
9000 Gent
Belgium
tel: +.32.(0)9.224.22.30
fax: +.32.(0)9.224.32.95

e-mail: h0840@accor-hotels.com "Novotel Gent Centrum

Property Summary

117 rooms. 4 stories. Built in 1986. Renovated in 1996. In the very heart of the historic centre, next to the city-hall, the Belfry, St-Bavo's cathedral, museums and shops.

Credit Cards Accepted

Visa, American Express, Diners Club, Eurocard

Check In/Check Out

12:00 / NOON / 12:00 / NOON

Deposit and Cancellation Policy

A credit card is required to book online. Cancellation policies may vary due to availability and rate booked. When making reservations, please read the rate rules given immediately after selecting a specific rate.

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More info at: <http://www.ibishotel.com>

For General information about Ghent see:
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B-9000 Ghent
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Fax +32 (0)9 225.62.88
E-mail toerisme@gent.be

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Botermarkt 17A
B-9000 Ghent
Tel. +32 (0)9 266 52 32
Tel. +32 (0)9 266 52 33
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For more information about Ghent see:

"<http://www.gent.be/gent/english/index.htm>"
www.gent.be/gent/english/index.htm

For more information on the conference visit:
"<http://www.psw.ugent.be/bevolk/ishe2004>"

Or contact the ISHE conference organizer:

kristiaan.thienpont@ugent.be



LINDA MEALEY AWARD

ISHE presents up to five awards to young scientists for outstanding original research done in human ethology. The work can employ an experimental, observational, or questionnaire method. The only condition is that an evolutionary framework be used for discussion of the results.

The award honors the late Linda Mealey, a president of ISHE, respected researcher, and dedicated mentor of students. It consists US\$500, free Society membership or membership extension, free registration at the next ISHE congress, a suitable book on human ethology or a related discipline, and a certificate of award.

Only undergraduate and graduate students are eligible. Students can apply more than once, but only once per congress.

A copy of the paper is to be submitted by 1 June 2004. The paper is to be no longer than eight double-spaced pages, excluding references. The deadline for submission of the abstract is 5 April, as for any other congress submission. All applicants will present the paper orally at the Ghent congress in a regular program session as organized by topic. Entries will be so designated in the program. Three judges will read all submission and attend all oral presentations. Both the written and oral forms will be evaluated. The applicant must be the first or sole author, and must have done the principal work on the research and the preparation of the written and oral presentations.

Submissions (the eight-page paper) are to be sent to ISHE secretary Frank Salter at salter@erl.ornithol.mpg.de. Abstracts are to be sent to Astrid Juette: astrid.juette@kli.ac.at and Glenn Weisfeld: weisfeld@sun.science.wayne.edu just like any non-award abstract. Be sure to write YI on the fifth line, just below the line with the title of the presentation.

**The International Society for Human Ethology
is pleased to announce graduate research scholarships
in Human Ethology for the year 2004-2005**

The **Owen F. Aldis Scholarship Fund** was established to support graduate and postgraduate studies in human ethology by promising students. The fund is administered by the Board of Trustees of the International Society for Human Ethology (ISHE) in collaboration with the ISHE Board of Officers. Up to ten students may be awarded an Owen F. Aldis Scholarship for 2003-2004.

Goals: Nurturance of excellent students by encouraging empirical research in all fields of human behavior using the full range of methods developed in biology and the human behavior sciences and operating within the conceptual framework of evolutionary theory.

The scholarships are intended to support scholarly work that contributes to the advancement of knowledge and learning in human ethology, broadly conceived. †Human ethology investigates the proximate causation, ultimate causation, ontogeny and phylogeny of evolved human behaviors and their variants. Naturalistic observational studies are especially encouraged. In some cases, studies involving non-human species may be considered, if their relevance to human behavior is made clear.

A stipend not to exceed US\$5000, to be applied to documented, legitimate research costs (e.g., equipment, supplies, books, computer software), plus a travel stipend not to exceed US\$1000 to attend the biennial ISHE congress. The travel stipend may be applied to documented costs of travel, lodging, board (US\$30 per diem), and registration. No funds will be provided for indirect costs for institutional expenses.

Applications will be evaluated anonymously by at least three senior ISHE and Board of Trustee members or (and ad hoc specialists if necessary).

Eligibility: Graduate (predoctoral) students, in any academic discipline related to human ethology, who are in good standing as certified by their academic advisor or director at a recognized educational or scientific institution are eligible. Applications must be submitted in English.

Deadline for Application: June 30, 2004

Awards announced: September 1, 2004

For complete application guidelines, please visit the ISHE website at
<http://evolution.anthro.univie.ac.at/ishe.html>

Registration for ISHE 2004

**17th Biennial conference of the International
Society of Human Ethology
Ghent, Belgium,
July 27 to 30, 2004**

Personal data:

NAME (FIRST, LAST):

ORGANIZATION:

MAILINGADDRESS:

Registration fee:

Before April 1st:

MEMBER: US\$ 300.
NON-MEMBER: US\$ 335.
(includes one year membership)
STUDENT: US\$ 185.

After April 1st:

MEMBER: US\$ 325.
NON-MEMBER: US\$ 360.
(includes one year membership)
STUDENT: US\$ 220.

Registration includes a welcome reception on Tuesday 27th, morning and afternoon coffee at the conference location, and lunches on Wednesday, Thursday and Friday.

Banquet registration fee (optional): US\$ 50.

Coach service Berlin-Ghent:

Participants at the HBES meeting in Berlin may take advantage of a coach service that takes them from city center Berlin to city center Ghent, so they

can join both meetings without having to make travel arrangements between Berlin and Ghent. ISHE offers this service at a special rate of US\$ 50. per person, conditional upon the number of passengers (50 is the absolute minimum) and date of enrollment (signing up for the coach service can be done until April 15th, no later). Payment in advance. In case the required number of 50 passengers is not reached by that time, the coach service will be cancelled and those who signed promptly refunded.

Total Fee

Registration fee = -----

Banquet Fee = -----

Coach = -----

Total Amount Due: -----

Please pay by credit card (VISA or Mastercard of Eurocard):

Credit card information:

Type of credit card: -----

Credit Card Number:

Exp. Date: _____

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Send payment to:

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Book Reviewer Position Available

We are seeking an additional international scholar for help organizing and editing reviews. Those interested in this position should send their CV and current research interests to the editor or book review editor.

BOOK REVIEWS

*Sense and Nonsense:
 Evolutionary Perspectives
 on Human Behaviour*

By Kevin N. Laland and Gillian R. Brown
 (University of Cambridge). Oxford: Oxford
 University Press, 2002, ix + 369p. ISBN 0 19 850884
 0 (Hbk).

Reviewed by G. William Farthing, Department of
 Psychology, University of Maine, Orono, ME
 04469-5742, USA.

The authors list three main goals for this book. First, to provide an introductory overview of five contemporary evolutionary approaches to understanding human behavior and culture. These approaches, or perspectives, include human sociobiology, human behavioral ecology, evolutionary psychology, memetics, and gene-culture coevolution.

Second, to provide a critical evaluation of the sense and nonsense in each of these approaches. And third, to make suggestions for integrating the different approaches. Besides presenting the theories and critique, the authors illustrate each approach with some of its most interesting and persuasive research.

Following two chapters on the historical background to current theories and controversies, the authors discuss E. O. Wilson's Sociobiology (1975) and the reaction to it. Wilson defined sociobiology as 'the systematic study of the biological basis of all social behaviour'. The authors review the key neo-Darwinian ideas employed by Wilson, such as the gene's-eye view of evolution, inclusive fitness, kin selection, and reciprocal altruism. It was Wilson's last chapter, where he attempted to apply these ideas to human behavior, that aroused often-heated controversy among social scientists as well as biologists such as Stephen Jay Gould. Wilson's views were interpreted as too strongly genetically deterministic, and fairly or not, he was accused of

providing a genetic justification for the status quo, and [perpetuating] inequalities on the basis of sex, class, and race (p. 89). While Wilson may have been unfairly characterized as a neo-Spencerian, there were legitimate arguments about proposing plausible hypotheses that in fact had little empirical foundation (sometimes called "just-so stories"). Also, he generalized too strongly from animal behaviors to humans, and it was argued that the human capacity for language and culture introduces a new level of complexity for understanding the origins of human behavior.

Of the other four evolutionary approaches to human behavior, the authors identify evolutionary psychology as the most successful, at least in terms of the number of advocates and the amount of published books and research.

Evolutionary psychology is a direct descendant of sociobiology, and it is based on the same neo-Darwinian ideas that were the foundation of sociobiology. In fact, in the second edition of *Sociobiology*, Wilson claimed that human sociobiology is "nowadays also called evolutionary psychology" (Wilson, 2000, p. vii). However, some evolutionary psychologists, such as Leda Cosmides and John Tooby, would disagree and say that evolutionary psychology (EP) has evolved beyond sociobiology. One of the main principles of EP is gene-environment interactionism (or bio-cultural interactionism) in the development of behavior, and this is particularly important for understanding human behavior. Certainly, the accumulated research provides far better support for contemporary EP hypotheses than was available to Wilson in the 1970s. For example, David Buss's cross-cultural studies of male-female differences in mate selection strategies. But many social-scientist critics would argue that while EP pays lip service to the interactionist principle, in fact there has been insufficient application of this principle, and EP still emphasizes heredity over culture.

Whereas ethologists, as well as behaviorists, put the emphasis on observable behaviors, mainstream evolutionary psychologists are concerned with discovering evolved psychological mechanisms (EPMs) that underlie adaptive behaviors. These highly efficient cognitive EPMs are assumed to be domain-specific, for example, for detecting and remembering cheaters in social exchanges. The human set of EPMs is said to be the foundation for universal human nature. EPs reject the old empiricist ideas of the newborn human

mind being a "blank slate," or in contemporary terms, an unprogrammed general purpose computer. One of the controversies surrounding EP concerns the degree to which human cognitive mechanisms are general-purpose versus narrowly domain-specific.

Another core idea of mainstream EP is the environment of evolutionary adaptiveness (EEA). The human mind--that is, our set of EPMs--was selected over time to adapt humans to conditions identified largely with the Pleistocene era on the African savannah, when humans became hunters as well as gatherers and scavengers. The EEA concept has been criticized because it wrongly assumes that the environmental conditions during this critical time of human evolution were relatively constant. EPs Tooby and Cosmides reply that the EEA is a statistical composite, intended to cover the net long term effects of the variable Pleistocene environments in which humans evolved. Since we cannot observe ancient hunter-gatherer societies, EPs have made inferences from anthropological observations of hunter-gatherer societies that still exist, or existed until recent times. Critics argue, however, that not all contemporary hunter-gatherer societies are alike, nor can we know which, if any, represent human societies of the Pleistocene. EPs try to identify human universals that would apply in all cases, but criteria for identifying human universals are controversial. At what level of description do we look for human universals in thinking, emotion, and behavior?

Human behavioral ecology (HBE) is the second major evolutionary approach to human behavior. The main premise of HBE, sometimes known as Darwinian anthropology, is that human behavioral strategies are adaptive across a broad range of ecological and social conditions. Whereas traditional anthropology is concerned with the influence of culture on behavior, HBE is more concerned with how an individual's behaviour is influenced by the environment in which he or she lives and how the alternative behavioral strategies that people adopt produce cultural differences (p. 109). Whereas it seems that most research by evolutionary psychologists (EPs) has been done on North American college students, HBEs make observations in relatively undeveloped societies in remote parts of the world. To test the hypothesis that human behavior is adaptive, HBEs compare observed behaviors with those predicted by models such as Optimal Foraging Theory. In principal, HBEs want to

directly test the hypothesis that people in different cultures adapt to their environments in ways that maximize their reproductive fitness. But in practice, proxy measures, such as calories gained per hour of foraging, are used since they are easier to measure than, and presumably are correlated with, reproductive fitness.

There are other important differences between EP and HBE. First, whereas EP is concerned with discovering evolved psychological mechanisms (EPMs) that presumably underlie adaptive behavior, HBE is concerned with studying adaptive behavior per se. Second, while EPs expect EPMs to promote behavior that was adaptive during the time of human evolution (the EEA), HBEs expect human behavior to be adaptive in current environments. This is a major disagreement. Some EPs think that HBEs have misinterpreted the implications of Darwinian theory for human behavior. Of course, both questions, the past adaptiveness and the current adaptiveness of human behavior or EPMs, are important. And regardless of the theoretical disagreement between evolutionary psychologists and Darwinian anthropologists, there is no doubt that anthropologists' ethnographic studies and cross-cultural comparisons are essential for testing EP hypotheses.

The other two descendants of sociobiology, memetics and gene-culture coevolution, have been less influential than either EP or HBE. The main idea of memetics was proposed by Richard Dawkins in the last chapter of *The Selfish Gene* (1976). In order to understand cultural evolution by analogy to biological evolution and genetics, Dawkins proposed the concept of the meme. Memes are ideas and products that form the smallest culturally inheritable units. That is, they are inheritable in the sense that they can be passed down from one individual to another through human learning processes. Like genes, memes are replicators. Memes are selected according to their own rules of fitness. Whereas many memes may ultimately promote the survival and reproductive fitness of members of the society, this is not always the case. Some successful memes are benign but largely irrelevant (rock music?), while others may be positively harmful to human interests (e.g. tobacco use). Religion, for example, is a meme, though one could argue whether it is more often adaptive, benign, or harmful. Among the criticisms of memetics are the facts that it is difficult to define the boundaries of memes, memes are not necessarily passed on unchanged, and the

rules of meme selection that enable irrelevant or harmful memes to survive and reproduce have not been clearly specified. The authors conclude that while memes are a clever and often-discussed idea, there has so far been little research to support meme theory.

The interaction of genes and culture in influencing both human behavior and each other is the concern of gene-culture coevolutionary theory, sometimes called dual-inheritance theory. The authors characterize it as a sort of cross between memetics and evolutionary psychology. Compared to EP, coevolutionary theory puts more emphasis on the importance of cultural inheritance for human behavior, but contrary to HBE, it argues that many cultural features may arise and continue relatively independently of a group's physical and biological environment.

The most distinctive idea of coevolutionary theory is that culture may influence genes. For example, around the world most human adults cannot process milk. They don't have enough lactase enzyme activity in their body to digest the lactose in milk effectively, so milk gives them stomach aches. However, among human populations in parts of the world with a long history of dairy farming, the frequency of lactase genes is relatively high (up to 90%, compared to about 20% in populations without dairy traditions). Presumably, the cultural practice of dairy farming resulted in a fitness advantage for the lactase genes.

The basic idea of gene-culture coevolution is compelling. However, most of the relevant work has been theoretical rather than empirical. Proponents have published mathematical models that show the plausibility of their ideas, but there has been little empirical research to test aspects of the theory.

In their concluding chapter the authors compare and attempt to integrate the different evolutionary approaches to human mind and behavior. A major difference concerns the degree to which cultural processes can operate relatively independently of genetic heredity and current environments, with memeticists and coevolutionists arguing for a large degree of independence, whereas EPs and HBEs see more constraints on culture by genes and environments.

The authors conclude, however, that the similarities and compatibilities of the different approaches are greater than and more important

than their differences. Integration of the different evolutionary perspectives on human behavior will likely increase as their proponents become more familiar with the alternative perspectives. Laland and Brown's book, *Sense and Nonsense*, should be an important step toward that integration. As a teacher of a course on evolutionary psychology, I found this book to be a valuable introduction to the other perspectives.

G. William Farthing obtained his Ph.D. in psychology at the University of Missouri in 1969. He is Professor of Psychology at the University of Maine, where he teaches courses on cognitive and evolutionary psychology, and does research on psychological aspects of physical risk taking.

Life at the extremes: The science of survival

By **Frances Ashcroft**. 2000, Berkeley, CA: University of California Press. xxi + 326p. (Hardback, \$45.00). ISBN 0-520-22234-2. [2002 paperback ed., ISBN 0-520-23420-0, US\$17.95]

Reviewed by **Thomas R. Alley**, Department of Psychology, Clemson University, Clemson, SC 29634-1355, USA.

This very informative yet highly readable book examines the environmental limits of survival, and the consequences of approaching or exceeding those limits. The author is Professor of Physiology at Oxford, but the book is intended for a general audience. While physiology is the focus of her book, the text does highlight the essential interplay of behavior, biology and environment. The many cross-species comparisons reflect her training as a zoologist. The text also reflects a significant amount of historical research, aided by numerous figures and photographs. Both the content and the writing render what could be a dry discourse on physiology into an exceptionally engaging book. One such feature is the inclusion of a variety of first-hand accounts, including the author's own unpleasant encounters with mountain sickness and extreme heat. Inspiring tales of intrepid researchers and inventors, some of whom used themselves as research subjects, also are presented.

Her account is full of gripping tales of deadly, or near deadly, encounters with a variety of extreme

environments. While many of these are clearly outside of the environment of evolutionary adaptedness for humans, our limitations in dealing with such environments helps to clarify the range of environments to which we are adapted (e.g., warm rather than cold). The capacity to live in some environments, such as the high altitude of certain settlements in the Andes and elsewhere, probably reflects genetic adaptation. Nonetheless, when discussions of adaptations occur, these more often involve acclimatization rather than evolution. Numerous behavioral adaptations, such as shade seeking and inactivity in hot environments, are duly noted as appropriate. Incidentally, she finds the concept of race useful for understanding physical and physiological differences between peoples adapted to different environments.

The treatment of high altitude covers altitudes that are habitable (e.g., La Paz), tolerable for limited duration (e.g., Mt. Everest), and deadly. Other environmental extremes examined include those of high pressure (Chap. 2), high temperature (Chap. 3), low temperature (Chap. 4), and micro-, zero and negative gravity (Chap. 6). The focus in these chapters is on human behavior, cognition, and biology, although the author frequently introduces other species with contrasting capabilities. [Readers desiring a considerably deeper and more technical look at temperature and human survival are encouraged to consult the recent book by Gisolfi & Mora (2000)]. Chapter 5 reviews some extremes of human performance, considering the physiological constraints on speed, stamina, and strength (p. 188). The final chapter [7] explores non-human life in the most extreme conditions; i.e., the environmental limits of life. These environments include those with no oxygen, extreme pressure or temperature, high acidity or alkalinity, and high salinity.

The author does not just discuss the outer extremes of environments, but turns her attention to the whole range of departures from a normal or idealized environment. Thus, she discusses such minor effects as those produced by immersing one's face in water, as well as more catastrophic conditions, such as those discussed in a section titled *Imploding and exploding organs*. She frequently contrasts the limits of human survival with those of other species. The text presents the resolutions to a number of mysteries of animal life such as why sperm whales (capable of diving to over 1100 meters!) do not get the bends, and why

penguins do not get frostbite on their feet. Other mysteries, she points out, remain, such as the survival of the even deeper diving (1500 meters) elephant seal, or why nitrogen at pressure produces narcosis in humans. The author debunks a number of myths and offers survival tips for many extreme environmental conditions.

This book reveals some remarkable adaptability of animals, human and otherwise. The best examples for humans certainly include the ability to withstand an ambient temperature (127°C) well above the boiling point of water for several minutes; long enough to cook eggs & steak! She also discusses such striking human behaviors as firewalking, bungee-jumping, swimming in icy waters, running marathons and competing in the Ironman triathlon. One amazing example from among non-human animals is the take-off acceleration of a flea: over 1350M/sec/sec which is roughly equal to a g-force of +200!

Although written for the general reader, the depth of the presentation insures that the text will be informative to all but experts. Some technical matters are relegated to boxes or footnotes, making the remaining text easier for general readers. Many boxes, however, are for side points and concern such topics as the development of thermometers or living in microgravity. The author frequently wanders somewhat off topic to talk about Scoville units for measuring the heat (spicy) of foods, bathscapes, thermometers, etc. I found that these enhanced, rather than detracted from my reading enjoyment. Academics may be disappointed that the book itself just lists about 47 recommended readings instead of a set of references. The author, however, claims that details on many of the sources for the book are available at: www.fireandwater.co.uk but that appears not to be true at this time.

Readers whose work or recreation exposes them to environmental extremes ñ by scuba diving, mountaineering, or living far from the equator, for instance, are particularly likely to enjoy this fine book. This is an exceptional general science book that will appeal to a broad spectrum of people interested in how humans (and to a lesser extent, other animals) can endure extreme conditions. Highly recommended.

Reference

Gisolfi, C. V., & Mora, F. (2000). *The hot brain: Survival, temperature, and the human body*. Cambridge, MA: MIT Press.

"The Cannibals are Feeding"

by Bill Charlesworth

Human ethology is being boiled alive—despite its illustrious forerunners and pioneers. As E.O. Wilson (1975) predicted almost three decades ago, "ethology..and comparative psychologyare destined to be cannibalized by neurophysiology and sensory physiology from one end and sociobiology and behavioral ecology from the other." (p.6) As he noted, we can no longer rely on the "ad hoc terminology, crude models and curve fitting that characterize most of contemporary ethology and contemporary psychology" (p.6).

Wilson's prediction is partially correct-lately, ethologists appear disoriented and uncertain and the cannibals, enflamed by volutionary theory, are very busy feeding and working hard. They also appear to be driving innocent human ethologists towards their boiling pots. For some ethologists the ingestion process has already begun.

As a member of the tribe being ingested, I see two reasons for this turn of events. The first is confusion among many human ethologists about what human ethology can and should do as members of a distinct behavioral science. The second is the fear that deep down many human ethologists know what they should do, but can't get themselves to do it.

As for the confusion, human ethologists, especially young human ethologists, seem to forget that, traditionally, ethologists study how behavior contributes to adaptation and reproductive success as well as how the mechanisms underlying such behavior operate. The behavior most have studied was accessed primarily by field observations, that is they were carried out in natural or almost natural settings. When focusing on humans in particular their task got more complicated requiring them to rely on what their subjects said. Consequently, in order to get a full picture they had to rely on a wide range of non-behavioral sources, cognitive, cultural, neuropsychological, obtained from other disciplines.

However, despite being interdisciplinary ethologists knew that focusing on behavior was only one of two distinctive features of their discipline.

The other feature was their commitment to evolutionary theory. The theory required them to focus on behavior because natural selection operates on behavior—not ideas, opinions, attitudes, feelings etc.—these were the main targets of psychologists, anthropologists, and other social scientists. Complex phenomena require both discipline specialization as well as disciplined cooperation (but not surrender to) other disciplines. Why then all the fuss? What's specifically wrong with allowing Wilson's cannibals to take over? My answer: Because if the cannibals take over, who will do the ethologists' job? So why don't bigger numbers of human ethologists do their job? As we see it, there are at least two reasons why they can't or just won't. The first is that for various reasons human ethology has dropped out of most radar screens. Examples—in most North American universities, human ethology is no longer taught as a separate discipline; textbooks that do mention ethology often mention instincts, Lorenz and Tinbergen, and stop there, the implication being that ethology (as a animal discipline) has lost its relevance for humans. The irony is, however, that no ethologist I know denies the role of experience in shaping an animal's behavior—the whole imprinting literature is a transparent instance of nature/experience interaction. It appears that the opponents of

However, despite being interdisciplinary, ethologists knew that focusing on behavior was only one of two distinctive features of their discipline. The other feature was their commitment to evolutionary theory. The theory required them to focus on behavior because natural selection operates on behavior—not ideas, opinions, attitudes, feelings etc.—these were the main targets of psychologists, anthropologists, and other social scientists. Complex phenomena require both discipline specialization as well as disciplined cooperation (but not surrender to) other disciplines.

Why then all the fuss? What's specifically wrong with allowing Wilson's cannibals to take over? My answer: Because if the cannibals take over, who will do the ethologists' job? So why don't

bigger numbers of human ethologists do their job? As we see it, there are at least two reasons why they can't or just won't.

The first is that for various reasons human ethology has dropped out of most radar screens. Examples: in most North American universities, human ethology is no longer taught as a separate discipline; textbooks that do mention ethology often mention instincts, Lorenz and Tinbergen, and stop there, the implication being that ethology (as a animal discipline) has lost its relevance for humans. The irony is, however, that no ethologist I know denies the role of experience in shaping an animal's behavior—the whole imprinting literature is a transparent instance of nature/experience interaction. It appears that the opponents of ethology have created a myth that is impervious to extinction. At any rate, human ethology is no longer a hot education topic.

At the research publication level the term ethology and (more recently sociobiology) have been removed from much discourse. Both terms, for example, have been removed from at least one major journal. Actually, the removal may have been a result rather than a cause of reasons just mentioned. Current research itself also appears to be affected. For example, many studies presented at human ethology meetings could be presented at meetings of other disciplines, and no one would recognize the difference. Human ethology has become so interdisciplinary it has lost itself.

As for the general public perception of human ethology, it has pretty much faded from sight—at least in North America and parts of Europe. Culture and early socialization trump instincts especially in the areas of sex, war, and politics. I emphasize instincts not genes: genes are being wildly celebrated in the popular press. But pretty much at the politically safe molecular level—and hardly ever in connection with specific behaviors. To suggest that behavior is a part product of genes and that behavior characterizes a certain portion of the population that has social problems is the kiss of death.

The second reason many human ethologists are marching to the cannibals' boiling pot has to do with fear-fear of the fact that to do human ethology right, one has to observe, describe and make sense of naturally-occurring behavior in terms of its possible genetic base and its context and consequences. Many ethologists seem to deny that behavior is still the beef of ethology.--

"There are other dimensions we should focus on, like cognition and emotions." No objection to that, but still, where's the beef?

Two examples of beef—Sarah Blaffer Hrdy's work on primate reproductive strategies that is based on a great number of field observation hours; and the work on play fighting by the late Owen Aldis who spent over 2,000 hours observing humans and animals. In my estimation, both efforts provide us with a much more credible story about behavior than other research results.

Alas, the worm in the apple. Dealing with observed behavior means getting up from the computer, going into the field, getting dirty and tired, adhering to some kind of observation plan, and possibly living a bit dangerously—just what honest war reporters have to do if they want to see for themselves what is happening on the battlefield. As we all know the first casualty of war is the truth.

So doing field research is inconvenient, labor intensive, and difficult to do without clear cut methods and equipment. But it need no longer be. Today things are different. We have clear cut, effective methods for doing observational research—many good methods books and now available—some dated, but good methods are usually never fully dated. And we now have access to super technology, Noldus Information Technology, Inc. (<http://www.noldus.com>) offers the best "solutions for behavioral recording and analysis" in existence. Its star is the "Pocket Observer", a handheld computer that makes me wish I were 30 years younger doing field observation.

And what about the cannibals? They are roaring ahead with new and interesting research. Some of them are making claims which may hold for decades, others are making claims embarrassingly familiar to anyone dealing with human behavior on a day to day basis (teachers, parents, bartenders, social workers, bounty hunters, politicians, lovers) will find tediously obvious. On the conceptual level, some cannibals are ingeniously tackling evolutionary questions using data already collected by others—demographic data, archival material, existing surveys of opinions etc. Others are ingenious in telling exciting evolutionary stories (often ignoring the great problems of getting some truth out of history). Fine. Nothing wrong with taking a good idea, being imaginative and running with it.

But what in the longer run? What if the findings of others run out or cease to be novel? What if Wilson's neuro-sensory physiology research proves so reductionistic, that behaviors is nowhere to be seen or imagined? What if behavioral ecology totally neglects to seek out genetic differences in populations? What if evolutionary stories run out of steam and are forced to rely more on rhetoric than, empirical data? What if key data are so easily accessible anyone can take it right off a Website and write competing stories that undermine claims of priority? What if there is no way to check on the validity of all that internet information pouring out every second? Not everything on Websites is peer-reviewed. What if the information so easily accessed is no better than what average folks know already? What if ancient Chinese and Middle Age scholars have already observed and dissected today's hot topics? What if much Website info is ideologically or economically driven and hence of questionable reliability?

These are not unfair questions to ask those who get their basic information second hand from sources that have different quality control standards! Ever since the empirical sciences got underway, criteria for reliability, validity, replicability, comprehensiveness as well as novelty have been absolutely crucial for successful science. Peer-review, transparency about the methods used to collect data, clarity of arguments, statistical tests --are crucial criteria for published research. Are these canons being obeyed? Or can we in this postmodern era ignore them?

The point is obvious and I am sure it was for Wilson back in 1975. Field work done by ethologists like himself is the backbone of his volume. His great synthesizing efforts relied on the giants who knew their species in an out.

Now these giants need scientific descendants. Without young researchers looking at the new samples, new species, exploring new adaptations, expanding etc., the science of evolutionary behavior will come to a halt. With no new data on real world behavior where adaptation and reproduction take place in all their intricacies we can draw no serious evolutionary conclusions about human behavior. Scholarly comments on humans will be made elsewhere—most likely by those who spent little systematic time trying to depict the enormous variety of humans than now exist.

So here we are faced with the problem of abandoning field work and hence losing track of what humans are really doing today. Perhaps some major institutions would be happy if this happened. If good scientists get out of the field those with less benign designs of humans will be able to move in for less objective reasons.

So what's the solution? Openly discuss this issue. ISHE has at least three good forums—its biennial conference, this Bulletin, and the ISHE website. The ultimate aim of open discussion is to convince young researchers who have the energy and enthusiasm to do field work, young researchers who know that respectable science cannot go far without a solid foundation of empirical data on which to test its hypotheses and build its interpretations. And when we find these young researchers we support them. We can supply mentors and some grant money.

Ethology should only be cannibalized if it deserves it. It is on the verge of deserving it. The cannibals have been good to us for they have scared some of us to think of shaping up and adapting to the present realities of the field. In short, adapt or be cooked. I think we should adapt.

Comments and reactions to Bill Charlesworth's open letter to Human Ethologists are welcome. Please submit to Editor at peterlaf@maine.edu.

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Society News

The Plenary Committee has been busy lining up guest speakers for the upcoming conference at Ghent. Thus far three speakers have made commitments:

Francisco Giner Abati is Professor and Researcher in the Social Anthropology Department of the University of Salamanca, where he has taught since 1978. He has a B.A. in Philosophy (Universidad Complutense de Madrid, 1974), a Ph.D. in Anthropology, (University of Salamanca, 1982) a B.A. in Medicine (University of Salamanca, 1987) and a Med. D in Tropical Medicine and Parasitology (Berhard-Nocht Institut, Hamburg (Germany, 1989). He has published a books on human aggression (1983) and two books on the Etnography of the Himba (1992, 1998). He is currently working on English translations of his series of documentaries of indigenous tribes of Asia and Africa.. To date 24 films (18 on African tribes and 6 in Asia) have already been broadcast on Spanish National TV (TVE) and are now being translated and reformatted in English. Each film provides an overview of tribal social organization and customs, as well as a detailed look at their technology and everyday life.

Anne Campbell, Professor, University of Durham, England, says on her website:

My research is concerned with sex differences in aggression with emphasis upon female aggression, both as an end in itself and because it may illuminate the more physically dangerous nature of male aggression. To this end I have employed a variety of methods and populations including ethnographic work with gang members in New York, interviews with British inner-city teenagers, developing a psychometric instrument to measure differences in the representations which people hold about the causes and

consequences of their own aggression and larger-scale analysis of criminal justice, employment and mortality trends. Recent work and interests include:

*A longitudinal study of sex-typed preferences in infancy and toddlerhood

*A reinterpretation of sex differences in forms of aggression based on differences in parental investment and the fitness enhancement benefits of survival to the primary caregiver

*an analysis of the foci of female-female adolescent competition in terms of bidirectional mate selection under monogamy

*The role of general and specific inhibitory mechanisms in the expression of aggression

*The extent to which representations that men and women hold of their own aggression derives from accurate phenomenological reports rather than cultural transmission

Allan Mazur is a professor of public affairs in the Maxwell School of Syracuse University, where he has taught since 1971. Earlier he was on the social science faculties of Stanford and MIT. He has a BS in physics (Illinois Institute of Technology, 1961), an MS in engineering (UCLA, 1964), and a PhD in sociology (Johns Hopkins, 1969). He is an elected fellow of the American Association for the Advancement of Science, was recently Gilbert White Fellow at Resources for the Future in Washington, DC, and is author or coauthor of over 150 articles and five books. Mazur splits his research between biosociology, and the sociology of science, technology, and environment. Within biosociology, his special interests are physiognomy (in its modern sense), hormones and behavior, nonverbal behavior, and comparative primate behavior.

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