

# Human Ethology Bulletin

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## The XIX Biennial Conference of the International Society for Human Ethology (ISHE08)

July 13 - 17, 2008

University of Bologna — Italy

[www.ISHE08.org](http://www.ISHE08.org)

The next biennial conference of ISHE (ISHE08) will be held in Italy at the University of Bologna. This issue (see pp. 26ff.) contains information about ISHE08 and a **Call for Submissions** for this meeting.

In addition to information about ISHE08, this issue contains reviews of three books (with one review covering two related books on meat eating and food sharing), announcement of the most recent winners of the Owen Aldis Awards, and the now usual *Bulletin* contents: listings of new books and new articles (Current Literature), membership information, lists of upcoming conferences and forthcoming reviews, and various other announcements. More unusual items in this issue are the three items in the Brief Communications section. These pieces include a report on the sociobiology controversies based on a graduate teaching experience, an interview with a Roger Masters concerning some controversial links between water chemistry and behaviour, and a brief report from the recent International Ethological Conference (IEC) held this past summer in Halifax, Canada.

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## Bulletin Policies

**Submissions:** All items of interest to ISHE members are welcome, including articles (*Brief Communications*); responses to articles; news about ISHE members; announcements of meetings, journals or professional societies; etc.

**Brief Communications** may cover such topics as teaching ethology, ethological methodology, human evolution, and evolutionary theory. These sorts of submission should be sent to the Editor. **Book reviews** and review inquiries may be sent to the Editor or to an Associate Editor. Guidelines for book reviews are available from any staff member and on the ISHE web site.

All submissions must be in English, and sent to the appropriate editor via email, preferably as an attachment. If email is impossible, hard copies will be accepted, as long as they are accompanied by the same text on diskette or CD-R (preferably in Microsoft Word format). All submissions, including invited submissions, are subject to editorial review. Some submissions are rejected, but political censorship is avoided so as to foster free and creative exchange of ideas among scholars. Submissions are usually reviewed only by members of the editorial staff, although outside reviewers are used occasionally. All submissions should be original, and are not to be published elsewhere, either prior to or after publication in the *Bulletin*, without permission from the Editor.

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**Back Issues:** Back issues of the *Human Ethology Bulletin* may be ordered following the policy and pricing available in the most recent issue.

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## Brief Communications

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### *Sociobiology: The Old Synthesis*

By Aurelio José Figueredo, Ph.D.

Director, Graduate Program in Ethology and Evolutionary Psychology. Dept. of Psychology, University of Arizona

This brief communication has two purposes: (1) to describe a recent teaching experience that might be of instructional interest to other ISHE members, and (2) to describe the products of the intellectual exercise occasioned by that teaching (and learning) experience which might be of possible scholarly and research interest to other ISHE members.

During the Spring 2007 semester, I offered a graduate seminar entitled: Sociobiology: 30 Years Later. I decided to do this not out of nostalgia, but out of a realization that none of my current graduate students had been born yet in 1975. In spite of their training in contemporary evolutionary psychology, none of them had ever read Ed Wilson's original Sociobiology: The New Synthesis, which I personally considered a foundational document in our field. All they knew is how various individuals had represented it afterwards, much of which I considered grossly inaccurate. My other motivation was to check on the accuracy of my personal memory of the work because, frankly, I had not reread it during the intervening 30 years, and psychologists have amply documented that all memories may be seriously reconstructed by subsequent experiences and interpretations.

The syllabus read as follows:

This graduate seminar will be a 30-year retrospective on sociobiology and how the ideas have fared over time. Sociobiology has evolved into what is now called Evolutionary Psychology as well as related specialties in other fields such as Behavioral Ecology and Darwinian Anthropology. The big question is, how different are these descendants from their common ancestor and how have the theories and facts offered by sociobiology in the 1970s held up under the scrutiny of continuing research in the area. We will be rereading the 25<sup>th</sup> Anniversary Edition of E.O. Wilson's classic text "*Sociobiology: The New Synthesis*" and supplementing it with more recent readings to see how those intellectual contributions have held up over time. We will also be considering how well the field has addressed the criticisms directed at it since its inception. For that reason, we will also be reading "*The Triumph of Sociobiology*" by John Alcock during the first few weeks of the course.

I took the first three weeks of the course to present to them the basic content of Alcock's (2001) *The Triumph of Sociobiology*, while the graduate students prepared their class presentations. Each graduate student class presentation covered one or more chapters of Wilson's (1975) *Sociobiology* and compared and contrasted this material with more recent publications on the same or closely related topics and included a complete list of the updated references used.

Although the Alcock *Triumph* book, and my elaborations upon it, provided a summary of the Sociobiology Wars of the 1970s, the main goal of the seminar was not to rehash the old controversy. Instead, it was to pursue the purely scientific goal of determining to what extent the original ideas had survived into the 21<sup>st</sup> Century, how they had been retained, modified, or superseded in the field. Our goal was to find out just how much had changed and how much has stayed the same over the

intervening quarter-century, aside from all the inflated rhetoric. Our sole criterion was empirical support and empirical disconfirmation of predictions, rather than verbal argumentation or the speculative imputation of motives, ideological or otherwise.

The graduate students did an impressive amount of work. By the time the semester was done, we had collectively compiled a master bibliography of 29 pages of relevant references. These were all articles that somehow "updated" the information provided by Wilson in 1975, by testing empirically verifiable predictions, presenting new findings relevant to the original evidence, and pursuing either consilient or competing theories. We are now considering writing a *Behavioral and Brain Sciences* style "target article" on our findings to solicit comments on our conclusions from the scientific community. One of my purposes in preparing this Brief Communication is to solicit opinions from ISHE members as to whether you believe that such an endeavor would be something worthwhile. If you have any feedback for our group on the merits or limitations of this idea, please contact me at [ajf@u.arizona.edu](mailto:ajf@u.arizona.edu).

Essentially, what we found was that Wilson's (1975) book held up surprisingly well. Although much progress has been made in the field and its daughter disciplines, the theoretical core of sociobiology theory is essentially intact and functioning. There were some factual corrections to be made as more data have accumulated, and some of the emphasis in our research has changed, but it would be a sorry state of affairs indeed if we had not progressed at all in over 25 years!

Furthermore, I witnessed first-time reactions of a new generation to the old controversy. They were frankly dumbfounded as to why

most of Wilson's assertions were even considered controversial. I had to take them back to the Zeitgeist of the 1970s for them to even understand the nature of the original critiques in the context of the times. In either case, without any prompting from me, they found them all to be completely without merit. Some appeared to be the results of identifiable misunderstandings, but the conclusion of the group was that they were not consistent with a correct interpretation of what Wilson actually wrote. I studiously avoided expressing my own opinion on any of these old battles to try to obtain their independent reactions, at least until the end of the course. I was nonetheless gratified to find that my memories of all this were quite accurate. It was an additional testimony to how well most of Wilson's ideas had held up over time that my students found them quite uncontroversial and initially had no idea what the problem was that the critics had with the theory.

Current mainstream metascience holds that a simple strategy of theory falsification (e.g., Popper, 1963) is insufficient to resolve conflicts between theories. Some of Wilson's positions have been subsequently shown to be inaccurate, but these corrections have not substantially threatened the validity of the theory, nor were they in any way related to the ideologically-based criticisms leveled at the time. For example, Dolphins indeed have higher intelligence than he gave them credit for, due to an almost "Chimpanzee-like" social (and "political") structure of shifting male alliances that was not in evidence in the 1970s. Higher Dolphin intelligence is therefore not anomalous in the light of these new findings and is consistent with evolutionary theory. Neo-Popperian philosophers of science (e.g., Lakatos, 1978) instead emphasize competition among theories rather than "naive falsificationism", based upon maximizing predictive capacity,

or "adding empirical content", while minimizing requisite assumptions, or "employing fewer primitives". All the more recent research that we reviewed in ethology and evolutionary psychology is still based upon the same intellectual foundation of evolutionary theorizing as sociobiology. We found no profound shifts in the basic ways of thinking about the evolution of behavior or the forces underlying social selection, such as kin-selection and reciprocal altruism, as well as a resurgent interest in group selection. Few, if any, new assumptions had to be made to account for a wide variety of subsequent empirical findings in evolutionary science. In fact, a large number of new findings lend further support to the original ideas. Furthermore, although some historians of science (e.g., Kuhn, 1970) have characterized different "research paradigms" as empirically "incommensurable", we had little difficulty in testing old predictions with the new empirical research. What counts as evidence has remained essentially the same, and virtual mountains of such evidence have been accumulated in the intervening quarter-century. Other philosophers of science (e.g., Laudan, 1977) have perceived continuities within evolving and progressing "research traditions", and this is precisely what we found between the old sociobiology and contemporary ethology and evolutionary psychology.

The one major failure of prediction that we found concerned Wilson's prognostications for the future of the evolutionary sciences. In three diagrams representing the past, present, and future of sociobiology and its close relations, he showed the disciplines linking the functional (proximate) and the evolutionary (ultimate) specialties within biology, such as ethology, comparative psychology, and physiological psychology, diminishing in prominence over time. Wilson did not foresee the explosive growth of

ethology, evolutionary psychology, and the neurosciences that has occurred since the late 1970s. However, the failure of this particular prediction has no relevance to the validity of sociobiology theory. If anything, the progress of evolutionary science has been arguably better than anticipated.

In summary, teaching this seminar was a valuable experience for both me and my students. It taught them a bit of important history of science, and it permitted me to see the whole thing again through new eyes. I would strongly recommend offering this kind of seminar as a strategy for teaching sociobiology and related disciplines, including ethology and evolutionary psychology, at the graduate level.

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## Chemical Triggers of Violence

An interview with **Roger D. Masters**

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By **Iver Mysterud**

All fluoride compounds are not created equal. Professor **Roger D. Masters**, who studies the relevance of modern biology for human behavior and politics, has found that two fluoride compounds added to drinking water in the USA actually increase the uptake of lead from the environment. Consistent with the toxic effects of lead, these compounds also influence school achievement negatively and increase levels of violent behavior. It is a scandal that after testing sodium fluoride (NaF) – the compound added to toothpaste – for "fluoridation," American authorities approved hydrofluosilicic acid ( $H_2SiF_6$ ) and sodium silicofluoride ( $Na_2SiF_6$ ) for this purpose without testing their effects. Today, over 90 % of water fluoridation in the U.S. uses these compounds. Working with Myron J. Coplan (a chemical engineer), Masters (Research Professor at Dartmouth College in New Hampshire) has conducted studies that uncovered surprisingly harmful effects of these silicofluorides. In this interview, he talks to **Iver Mysterud** about these unexpected results.

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**I.M: How did an expert on Machiavelli and Rousseau get interested in the influence of heavy metals on human behavior?**

After many years of studying and teaching how political philosophers have understood "human nature," I realized that modern biology has developed the most revolutionary transformation in our understanding of what it is to be human. I therefore began to teach with Dartmouth colleagues in human biology (Ed Berger) and biological anthropology (Ken

Korey), and then to do experimental research (with my political science colleague, Denis Sullivan), applying human ethology to politics by analyzing emotional and cognitive responses to nonverbal displays of candidates and leaders. This work led to a greater interest in brain chemistry and behavior as well as a consideration of the neurobiological correlates often characteristic of violent criminals. It also led to a role in starting the Association for Politics and the Life Sciences and then participation in many activities of the Gruter Institute for Law and Behavioral Research (a foundation started by Dr. Margaret Gruter to introduce human biological findings and research into the study and practice of law).

At a conference, I had the good fortune to meet a retired oil executive, Everett "Red" Hodges, who had focused for some time on the way manganese toxicity seems to be associated with violent criminal behavior (as evident in high levels of manganese in violent offenders). Since manganese down-regulates serotonin, this was not entirely surprising – especially because Michael McGuire of UCLA had discovered that among vervet monkeys, when a subordinate male becomes dominant, his serotonin levels are greatly increased over three weeks following this change in status. Findings of this sort made it clear that because neurotransmitter function is essential to much human social behavior, toxins that modify neurotransmitter function should be of great practical importance. Meeting Herbert Needleman of Pittsburgh and hearing him explain his research on the effects of lead on behavior and cognition made it evident that this was a critical field for further work.

To explore this, I applied for and received a grant from the U.S. Environmental Protection Agency (EPA) to study the association between toxic releases of lead and manganese and rates of violent crime throughout the United States. Using county level data, I found that – controlling for socio-economic and demographic factors -- industrial releases of each of these neurotoxins is significantly associated with

higher rates of violent crime (with a significant interactive effect where both are present).

**I.M.: What are the main results of your research?**

After what might be called epidemiological analyses of crime (that is, using multivariate statistical analysis to assess the correlation between communities with high rates of violent crime and those with lead or manganese pollution), I was contacted by Myron [Mike] Coplan, a senior chemical engineer. Coplan told me about his concern that the use of silicofluorides in public water supplies would have harmful effects. He had worked professionally at plants where fluosilicic acid was a toxic waste product, and he had been astounded to discover that silicofluorides were added to the water of his community of Natick, Massachusetts.

Working with Coplan, whose knowledge of chemistry and scientific rigor were essential, we set out to see whether there were harmful effects of the use of silicofluorides in public water supplies. Thanks to data from James Sargent of the Dartmouth Medical School, we were able to assess the local factors associated with higher average blood lead levels in children. Our first paper showed that in Massachusetts communities using silicofluorides, there were significantly higher blood lead levels in children as well as higher rates of crime – and that these effects were statistically significant controlling for other factors.

We then replicated this work with data from New York state (again by community) and from the entire U.S. by county (using National Health and Nutrition Evaluation Survey III data for children's blood lead). In all samples, we found that the use of silicofluorides increases the uptake of lead from environmental sources such as old housing, and that behaviors associated with lead neurotoxicity (which downregulates dopamine) were also increased. While some of these behaviors only had poor statistics by

community (e.g., learning disabilities, substance abuse), data for all 3141 U.S. counties indicate that use of silicofluorides and presence of lead pollution are significantly associated with higher rates of violent crime.

**I.M.: Why are these fluoride compounds used instead of ordinary NaF?**

I had occasion to supervise the honors thesis of a Dartmouth student (Andrew Rymer) on the history of water fluoridation in the U.S. Combined with Mike Coplan's insights, we know quite well what happened.

In the 1940's, the concept of water fluoridation began to be presented seriously as a means of improving dental health in the U.S. In the first test communities (which were paired with similar communities without water fluoridation), sodium fluoride was proposed as the chemical to be used for this purpose (presumably because it dissociates into sodium and fluorine). Other American communities then sought to fluoridate and soon found that supplies of sodium fluoride were not available. Hydrofluosilicic acid and sodium silicofluoride were substituted. In 1950, on the "assumption" that these compounds would be totally dissociated and hence act in the same way as sodium fluoride, the silicofluorides were approved for use by the U.S. Public Health Service. The key to this substitution was the energetic lobbying of a small group of dental activists who insisted that any of the three compounds involved were effective and that there was never a need to consider possible toxicity.

At no time were the silicofluorides tested. After our first study was published, I wrote the EPA to find out if they had any information on the toxic effects of prolonged exposure to water treated with silicofluorides. I received a reply indicating that the agency had no evidence of these effects. (This letter is available on my web site: <http://www.dartmouth.edu/~rmasters/ahabs/>)

**I.M.: What kind of studies would you like to do to test these connections further?**

It is very important to conduct animal studies comparing responses of similar animals exposed to water treated with sodium fluoride, fluosilicic acid, sodium silicofluoride, and pure water. By pure water, I mean water from a source that has been carefully tested to demonstrate the absence of all toxins. If resources allowed, naturally fluoridated water would be useful as another treatment condition. I do not have to do these experiments and could not conduct them without collaborating with other researchers with experience in animal behavior. One new study by Albert Bergstahler has just provided more evidence of this need by presenting accounts of two cases in which the initiation of fluoridation with fluosilicic acid had extremely harmful effects on an animal population.

It is also important to do more precise observational or statistical human studies comparing matched groups of individuals exposed to fluosilicic acid and pure water (whether by more careful statistical comparison of community groups or by observing behavior and conducting psychological experimentation of matched pairs of individuals). Hitherto it has not been possible to get funding for such studies.

**I.M.: What are the reactions of other scientists to your findings?**

As with all research that cuts across disciplines, there are differences in response due to the frame of reference of scholars and activists. Dentists and others with an interest in defending the status quo immediately attacked our work as "junk science." Among neurotoxicologists there is great interest and thoughtful discussion. Among physicians as well as environmental scientists, there has been less interest since most of our findings concern human behavior, whereas to date most studies of the effects of environmental pollution have concerned cancer and a few other diseases.

Because criminologists and other social scientists tend to ignore all research that focuses on biology and brain chemistry, they pay virtually no attention to our work or to any other comparable studies (such as the findings of Red Hodges on manganese toxicity and violent crime). For example, I recently read a 631 page book on crime (edited by J. Q. Wilson and J. Petersilia. *Crime*, 1995). There was mention of brain chemistry and crime on only 4 pages of this book, with only a sentence or two on manganese as a factor due to its effects on serotonin (and no mention of the association between lead and crime due to its effects on dopamine function). Slowly, however, more attention is paid to our work, as reflected in the publication in the Fall issue of *Neurotoxicology* of an important article (Coplan, Mass, Masters, & Bachman, 2007).

**I.M.: Are the media interested, and if yes, what kind of press coverage have you gotten?**

I have found periodic interest by many journalists, but I believe that their emphasis is shaped by the specialization of academic research and therefore the gap between studies of toxins and behavioral dysfunction. Since universities do not teach most students about brain chemistry and behavior, the public knows little and many journalists avoid topics that they feel the public will not understand.

**I.M.: Why aren't your results on the front cover of the main newspapers and a main topic on talk shows on television?**

I think it is a matter of time. But also, for 50 years there has been debate about "fluoridation," and those opposed to the practice have often been derided as antiscientific. In this debate, both sides still speak of "fluoridation" without reference to the chemicals used. Our work focuses on the difference between sodium fluoride or naturally fluoridated water and the use of the silicofluorides. This distinction has simply not been understood as yet.



**I.M.: What have you done to tell the public and politicians about the seriousness about what you have found?**

We have repeatedly sent reprints and contacted journalists and some politicians. I continue to do so, and more frequently find success in this. My energies in this regard have, however, been greatly reduced by my own health problems over the last 3 years. Combined with additional health problems in my family, I therefore have not been as energetic as I would have liked in seeking public dissemination of our findings. However, I consider myself fortunate to be able to continue to work and will continue my efforts to get this information into the hands of the public and political leaders.

**I.M.: What are the public policy implications of your research?**

First, the use of silicofluorides to public water supplies should be ended immediately. A vast amount of data, including work long before our studies, shows that there is a *huge* difference between the use of sodium fluoride and the silicofluorides (fluosilicic acid or sodium silicofluoride) to add fluorine to a public water supply. Since silicofluorides have never been tested and there is evidence from the chemical studies of Johannes Westendorf in Germany that silicofluorides don't dissociate completely and act as acetylcholinesterase inhibitors, there should *immediately* be a moratorium on their use until they have been demonstrated to be perfectly safe. This would require independent studies showing the error of our repeated findings as well as of the findings of others that have studied the chemistry of the silicofluorides.

Second, there is the broader issue of looking at behavioral effects of neurotoxicants. I recently found, using our data to analyze standardized test scores in Massachusetts, that a community's average lead levels in children's blood is a highly significant factor lowering average test scores in all subjects and in all grades.

Specialists at the Center for Disease Control of the U.S. often claim that lead toxicity is not dangerous at levels below 10µg/dL (probably because they focus on cancer or other diseases). The data on Massachusetts's educational tests show a continuous effect, so that lower levels of lead neurotoxicity still have harmful effects. In many areas, we need to consider neurotransmitter functions in social behavior and reanalyze toxicity from the perspective of behavioral neurotoxicology.

**I.M.: What kind of "old" debates among scientists will your data and perspective add to, and how could it, if possible, contribute to settling some heated disputes?**

Very simply, the nature/nurture dichotomy is as relevant as the "flat earth" theory. Discussions of genes versus environment need to be abandoned. Exposure to neurotoxicants has different effects depending on individual genotypes, and the stage of development at which exposure occurs can make a big difference. Ken Olden has introduced the concept of "toxicogenomics" to encompass this view of complex interactions between genetics, development, and environmental factors. Once used, this broad perspective will transform our understanding of many areas of behavior, including such areas as learning disabilities, substance abuse, and crime (where we've already seen some effects of great importance).

To cite one example, two parallel studies have found that the U.S. ban on leaded gasoline has had the long run effect of lowering rates of violent crime in the U.S. It did so, however, only with a lag of over 16 years. In my calculation, the correlation between violent crime rates in the U.S. and the gallons of leaded gas sold 19 to 21 years earlier is over 0.96 (an almost perfect parallel rare in social science). This means that the particulate discharge of lead had its worst effects on prenatal or early infant development. Since the effects of lead toxicity depend on both genetics and stage of development as well as

environment, this is a good illustration of "toxicogenomics."

This example indicates the need for collaboration with many scholars from many fields. I am collaborating with a diverse group of scientists in my research. Narrow specialization is itself a serious problem, but so is a refusal of social scientists to consider human biology. Learning disabilities provide an excellent example. I gave a seminar at Harvard School of Education and was astonished at the failure to consider that hyperactivity (ADHD) is often associated with high lead levels and other toxins that interfere with dopamine function. Indeed, three members of the seminar even said that ADHD doesn't exist. Since mutations of the D2, D4, or D5 dopamine receptors have recently been linked to ADHD, it's now essential to focus on gene-environment interactions. With 83 million Americans on Prozac and 11 million American children taking Ritalin, one would think that scholars would recognize that behavior can be influenced by brain chemistry!

The implications for widespread popular beliefs may be enormous. In general, Blacks in the U.S. are more likely than other ethnic groups to absorb lead from environmental sources in the same community. The principal reason is lower calcium intake due to lactose intolerance, a genetic condition that was widespread in the African populations that provided slaves for the South before the Civil War. Because higher uptake of toxins can increase the frequency of learning disabilities or poor educational performance, substance abuse, and violent crime, many of the racist stereotypes of Blacks in the U.S. seem to have reflected or been reinforced by exposure to neurotoxicants. Because many other conditions, like autism and Alzheimer's disease, are also being traced to gene-environment interactions, the traditional nature/nurture dichotomy needs to be abandoned.

### Further Reading

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## *Report on the XXX International Ethological Conference (IEC)*

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The **XXX International Ethological Conference (IEC)** met in Halifax, Nova Scotia, Canada August 15<sup>th</sup> to 22<sup>nd</sup>, 2007. This was a large meeting with close to 500 delegates. The format of the meeting has two, one hour plenary addresses in the morning and then three, concurrent sessions (symposia and contributed talks) in the afternoons with poster sessions scattered throughout the conference. There were 12 plenary speakers, 17 symposia, 142 contributed papers and 141 posters presented by delegates from 34 different countries. As usual, there are three days of conference and then a day off for touring the local environment and then three more days of conference. There were planned social gatherings each evening.

There were four human ethology papers given at the conference. As usual, it is easier to see the human applicability in the plenary talks than in the symposia and easier to see the human applicability in the symposia than in some of the more esoteric contributed papers. Yet, these contributed papers remind one that Ethology is an inductive, empirical science. However, with three concurrent sessions, one can pick and choose enough to make most of what one hears have some relevance to Human Ethology. As usual the quality of the papers and posters was good, especially some of the plenary papers, which often were an overview of a lifetime of work. There appeared to be about two or three times as many students as professors in attendance. As a result, there was a lot of social networking going on at the meeting.

If ISHE were ever to meet in conjunction with a larger, international organization with similar interests, the IEC would be an obvious

choice. Whereas the contributed papers are grouped by function, rather than by species, the symposia can be species-specific. I organized a Human Ethology symposium on "Behavioral Pathology" at the IEC in Amsterdam in 1989. In addition, there is also the middle day of the 7 day conference, which is "free" and which could be the opportunity for the Human Ethology group to have special sessions, if it were to ever meet with the IEC.

Being at this meeting reminds one that Ethology is alive and very well, and also highlights the difference between ethological approaches to humans and those of other disciplines which are concerned specifically with humans. All Human Ethologists should make the pilgrimage at least once. The conference meets every two years on the odd years. Every other meeting is in Europe and the other meeting alternates between the other continents, as the conference with delegates from 34 countries is very international. The next meeting will be in Rennes, France in 2009.

**Jay R. Feerman**



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# BOOK REVIEWS

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## The Handbook of Evolutionary Psychology

Edited by **David M. Buss**

Hoboken, NJ: Wiley, 2005. xxv +1028 pp.  
ISBN 0-471-26403-2. US\$95.

Reviewed by **Russell Eisenman**

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This is a very important book. The editor, David Buss, has done a great service to the area of evolutionary psychology and to the advancement of knowledge in general. The chapters present the scientific basis of evolutionary psychology and provide many insights into human behavior. Evolutionary psychology has become one of the most important theories in psychology, and also is used in other fields. Theories become respected when they explain things that other theories cannot, or explain them better. Also, to be respected among scholars and scientists a theory should be scientific, i.e. it should be made up of, at least in part, empirical studies that follow the scientific method.

One of the critiques of evolutionary psychology, and its earlier manifestation as sociobiology, is that it is speculative, backward looking, and unscientific. However, this critique is misinformed (Eisenman, 2003b). As the present volume shows, there are many empirical studies supporting evolutionary psychology theory. Often, the findings are not obvious but,

instead, exciting and provide insights into what humans are really like. In his Foreword, Steven Pinker says that he was frustrated by traditional, non-evolutionary psychology because, in his opinion, it just explained the obvious, without really showing how people think and behave. But evolutionary psychology came along, showing that psychology can provide good insights into people; insights that are not just obvious and mundane descriptions of human behavior, and that are supported by empirical studies and intelligent theory.

### Structure and Contents of the Book

The book contains 34 chapters, preceded by an Introduction by Buss on "The Emergence of Evolutionary Psychology," and followed by an Afterword by Richard Dawkins. The chapters are grouped in seven parts, with each part introduced by brief, excellent insights by Buss, except for Part IV on Parenting and Kinship, which is very well introduced by Martin Daly and Margo Wilson. These introductions help put in focus the understandings and research we do or do not have in evolutionary psychology regarding each of the seven subject areas.

The seven parts are: I. Foundations of Evolutionary Psychology, II. Survival, III. Mating, IV. Parenting and Kinship, V. Group Living, VI. Evolutionizing Traditional Disciplines of Psychology, and VII. Applications of Evolutionary Psychology to Other Disciplines. This last part has only two chapters, one by Joseph Carroll on "Literature and Evolutionary Psychology," and one by Owen D. Jones on "Evolutionary Psychology and the Law."

Other chapters throughout the handbook deal with such interesting topics as the methods of evolutionary science, cooperation and conflict, ovulation, the evolution of language, sexual coercion, commitment, love and mate

retention, evolutionary psychology and mental health, and much, much more. Some of these areas are surprisingly neglected by psychology and other fields. For example, I see little in most general psychology textbooks about ovulation. Yet this is an important phenomenon that, at times, can greatly influence female behavior (Eisenman, 2003a) and that influences men in the sense that concealed ovulation, which human females but few other female animals have (bonobos being an exception), can result in male behaviors such as jealousy, concern over paternity, etc. Chapter 11, "Adaptations to Ovulation" by Steven W. Gangestad, Randy Thornhill and Christine E. Garver-Apgar provides a detailed and excellent discussion of these issues, including many different theories and findings.

There are many other terrific chapters in this book, but I can only mention some of them here. An excellent chapter on how males compete to fertilize a female's eggs and how females bias paternity between two or more male's sperm is Chapter 12, "Female Infidelity and Sperm Competition" by Todd K. Shackelford, Nicholas Pound, Aaron T. Goetz, and Craig W. Lamunyon. So much of this book shows how we need to have a biological viewpoint, but this does not necessarily mean that we neglect insights from other fields in psychology. Evolutionary psychology and other fields of psychology can have combined influences. See, for example, Part IV in which evolutionary psychology is related to traditional disciplines of psychology, such as cognitive psychology, social psychology, developmental psychology, and personality psychology (one chapter on each one) as well as a chapter on "Biological Function and Dysfunction" (Chapter 31 by Jerome C. Wakefield) and a chapter on "Evolutionary Psychology and Mental Health" (Chapter 32 by Randolph M. Neese).

One minor shortfall of this book is the book's Table of Contents: The beginning pages of the chapters are listed and the parts' introductions can be found by going to the first chapter in that part and then going back a few pages, but the reader should not have to do this, especially because the introductions provide excellent insights into the area that the chapters cover.

Although covered in the *Handbook*, it would have been nice to see more about jealousy in this volume. The sparse coverage is surprising, especially since the editor wrote a book on the subject (Buss, 2000). More important is the question of whether evolutionary psychology explains things adequately. Chapter 5 by Edward H. Hagen, deals with some of these issues in a good chapter titled "Controversial Issues in Evolutionary Psychology." Nonetheless, more attention might have been paid to criticisms from other fields or theories, such as occurs when attachment theory rather than evolutionary psychology is used to explain sex differences in jealousy (Levy, Kelly, & Jack, 2006). For the most part, the *Handbook* does not directly confront criticism of evolutionary psychology theory. But, many chapters explain how the theory and findings best explain things, and so often provide a response to the critics.

### Conclusion

This handbook clearly displays the scientific nature of evolutionary psychology. Both the theory and the empirical research, especially taken together, provide a firm foundation for claim as a major scientific enterprise. This, of course, does not mean that everything evolutionary psychologists say is correct. Science is incremental, and future studies by both evolutionary psychologists and non-evolutionary researchers will flesh out what is correct and what is incorrect. But the field of evolutionary psychology would not have

reached the status it now has without having produced major empirical and theoretical insights, many of which are in this fine book.

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## Meat Eating, Food Sharing and the Evolution of Human Behavior

Reviews of:

### **Meat-Eating and Human Evolution**

Edited by **Craig B. Stanford** and **Henry T. Bunn**

Oxford University Press, 2001, xii + 370pp.  
ISBN: 019-513139-8 [Hbk, US\$64.50].

### **The Hunting Apes: Meat Eating and the Origins of Human Behavior**

By **Craig B. Stanford**

Princeton University Press, 1999, xii + 370pp. ISBN: 019-513139-8 [Hbk, US\$64.50]. [Paperback, 2001, ISBN 0691-011605.

### Reviewed by **Thomas R. Alley**

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This review concerns two related books. Not only is the author of the earlier book an editor and contributor to the more recent one, but both books focus on meat eating, hunting, food sharing, and the evolution of human behavior and intelligence. These books present many important ideas, hypotheses and perspectives on the evolutionary origins of human behavior that are central to the evolutionary theory underlying human ethology, yet a number of these have been rather neglected in the *Human Ethology Bulletin*. And both are admirable books well worth the time spent reading them. Consequently, a review of these books seems well warranted even though both books have been in print for some time.

Prior to the publication of either book, a Fall 1998 workshop assembled 18 anthropologists, archaeologists, and primatologists to address the fundamental problems of where, when, and why meat eating evolved in hominids. This workshop on "*The early human diet: The role of meat*" represented a rare interdisciplinary gathering of scholars, and led to the newer (2001) volume. The resultant book includes 21 contributors, most of who are affiliated with anthropology departments. The editors are Craig Stanford, Co-Director of the Jane Goodall Research Center, whose research has focused on the ecology of hunting by wild chimpanzees, and Henry Bunn, an archaeologist who has used both the fossil record and modern foraging people in his work on foraging and hunting.

The 1999 book reflects Craig Stanford's thesis that hunting and the sharing of meat are crucial aspects of hominid evolution. More specifically, Stanford argues that the origins of human intelligence are tied to the cognitive capabilities required for the acquisition and sharing of meat, and that hunting and meat sharing in some higher primates represent shared evolved traits that reflect the origins of human intelligence. Perhaps the main impediment to Stanford's central thesis is this question: If chimpanzees hunt and share meat too, then why are their cognitive abilities markedly inferior to human's? In short, the answer apparently lies in quantitative and qualitative differences in hunting and in the complexities of human food sharing.

In both books, Stanford contrasts his perspective with that of the (in)famous book, *Man the Hunter*. He sees this earlier work as "fatally flawed" by (1) an emphasis on hunting rather than meat sharing, and by (2) "its unconscious ignorance of the role of females in the meat-control system" (1999, p. 11). As Stanford notes in describing observations of chimpanzee behaviors, the

end of the hunt is often a starting point for "a whole other arena of social interaction" (1999, p. 66). Moreover, Stanford (1999) believes many earlier anthropologists misjudged the importance of meat and hunting because meat often counts for little nutritionally. Stanford makes the vital distinction between the objective **value** of meat in a society, which can be quite low, and its **valuation** by society members, which is generally very high. So even though meat may, like sugary treats for a well fed child, be of little value, it can be highly valued. In humans and some higher primates, meat is not just a food but "social currency." Behavior shows that its value is greater than that of nutritionally equivalent plant foods.

Evidence from comparative primatology, ecology, archaeology, and other sources is brought together to form a strong argument for the roles of both hunting and strategic food sharing as among the important forces of natural selection affecting the evolution of hominid intelligence. Stanford (1999) argues that it is not coincidence that the three primates with among the highest cerebral volumes – humans, chimps, and capuchins – are also the most politically savvy primates. Moreover, he argues that selection pressures for adept sharing and control of food are more important than those for cooperative hunting, which occurs in species lacking sophisticated forebrains.

Stanford (1999) presents a brief critical discussion of evolutionary psychology that is a bit of a caricature, but which includes a good criticism of the mind-of-the-Pleistocene accounts common within the field: "Nearly all of what evolutionary psychologists call the adapted human mind is actually the adapted ape mind carried into the present by the continued benefits of avoiding incest, of mating well, and a host of other behaviors" (pp. 182-183).



An expert on chimpanzees and several other primate species, Stanford promotes the (careful) use of ape data in forming theories about human origins. Relying mainly on evidence from archaeology and from studies of the hunting ecology of wild chimps, Stanford (1999) concludes that the predatory pattern of chimpanzees shares a number of features with those of the earliest hominids. These include a diet mostly consisting of plant foods, group hunting by males, meat sharing with some members of the hunting party and with some females, use of meat by males for “their own selfish political and reproductive gains” (p. 127), and seasonal variation in the proportion of meat in the diet. He also notes that two important differences eventually appeared: (1) the use of tools for butchering prey, and (2) a dramatic increase in prey size with the adoption of stone tools. Thus, the similarity between modern wild chimps and early hominids probably decreased markedly after hominids began to use tools and, likewise, the role of meat probably differed markedly between early hominids and later, tool-using *Homo*. “Hunting by more modern men ... becomes routine, strategic, and well coordinated rather than opportunistic” (p. 135). In modern hunter-gatherers, a striking contrast is observed with humans actively searching for prey, whereas for chimpanzees meat is “essentially a bonus” for “foragers in search of plant foods” (p. 244). Hunting is associated by Stanford with the more efficient bipedal locomotion in humans, and with cooperation and weaponry.

Stanford (1999) considers the arguments against using modern hunter-gatherer societies (e.g., Efe pygmies; Aché and Piro of the Amazon) as indicators of prehistoric human behavior, but concludes that “this reluctance is entirely unwarranted” (p. 140). Defending this perspective, Stanford emphasizes the biological basis of human behavior, including the human capacity for

culture. He notes that food getting is a matter of critical importance for modern hunter-gatherers, affecting survival and reproduction, and that these peoples are the best and only living examples of what humans do when faced with natural challenges to survival. While admitting that the cognitive demands of living in a hierarchical society can be substantial, Stanford notes that modern hunter-gatherers are egalitarian, and suggests that the cognitive demands of such societies may be even greater. Members need to be continually aware of their own needs, losses, and gains, as well as those of others living in their group. Whether egalitarian or, as is far more commonplace today, patriarchal, “the evolutionary legacy of our hunting and scavenging past lies ... not so much in the hunt but in the division of the spoils” (p. 200).

In the final chapter of the 1999 book, Stanford discusses meat eating and male dominance. As Stanford again makes clear here, the acquisition, consumption, and distribution of meat have substantial implications for the study of sex differences. In both human and non-human societies, males typically obtain most meat and “attempt to use it to manipulate or control females” (1999, p. 10). For humans, it is well established that this sex difference in foraging behavior occurs in a wide variety of cultures, as does the tendency for men to share more food than do women. In fact, a survey of 179 societies found that only men hunt in 166 whereas there were no societies in which women alone hunt (Murdock, 1965). Stanford interprets this striking sex difference as one tied to male organization of culture and male dominance and manipulation of females in those cultures in which meat plays an important role: “In both chimpanzee and human societies, the control of meat contributes to a might-makes-right form of patriarchy” (1999, p. 9).

Stanford's (1999) analysis of the question "why hunt" brings him to a similar conclusion. Citing Hawkes' (1991) paper on meat-sharing as a mating strategy of "showing off" and Kaplan and Hill's 1985 report that Aché women find the best hunters to be more desirable as sex partners, Stanford apparently (see pp. 156-158) views showing-off-for-mating (but not for political gain) as the best explanation for why men hunt. He also acknowledges a probable role of tolerated theft, with shared meat, particularly from larger game animals, being more valuable to others than is the cost to the hunter in terms of lost meat or lost energy defending the meat. Food sharing is most likely even more complex than indicated in the discussion in this book, however, and interested readers should consult Gurven's (2004) masterful and more recent examination of theories of human food sharing, and the even more recent overview by Kaplan and Gurven (2005).

The more recent book attempts to gather evidence from three areas: I. evidence of meat eating in the hominid fossil record, II. meat eating by nonhuman primates, and III. meat eating by modern hunter-foragers. These form the three main sections of the book, but are supplemented by chapters in a fourth section ("Theoretical Considerations) on "The evolutionary consequences of increased carnivory in Hominids" (by R. A. Foley) and on "Neonate body size and Hominid carnivory" (by Vasey and Walker). Thus, this volume collects diverse views and evidence pertinent to the idea that hunting and food sharing are central aspects of hominid evolution. As such, it may seem unfortunate to have a leading proponent of this perspective serving as (co-)editor of the volume, but the collected chapters do represent diverse viewpoints, add substantially to the information provided by Stanford (1999), and present some views in conflict with Stanford's (and with each other).

So, it would not be fair to say the volume was biased towards Stanford's views. Nonetheless, these views are well represented in this volume, especially with his authorship (with H. T. Bunn) of the opening Introduction and the closing Conclusions, and with one chapter (6) near the middle of the book.

Increasingly sophisticated approaches to the fossil record allow the extraction of more, and more reliable, information about early hominid diets. Most readers may be at least a little familiar with analyses based on tooth wear or on tool artifacts, but these have been supplemented by a more recently developed technique of using isotopic "signatures" in fossilized bones to reveal effects of ingesting different forms of carbon (Schoeninger et al., Chap. 9). In Section I, a variety of methods are used to examine the fossil record for information about meat eating. Two of the chapters in this section are specialized, technical, and narrowly focused; one being T. R. Pickering's chapter on the taphonomy of the South African Plio-Pleistocene cave site, Swartkrans, and the other an analysis by J. D. Speth and E. Tchernov of Neanderthal hunting and meat-processing as inferred from Middle Paleolithic remains in the Kebara Cave (Israel). As you might guess from these brief descriptions, the chapters in this section are likely to be of less interest to human ethologists than those of Sections II, III and IV. The notable exception is Chapter 1 in which Martha Tappen deconstructs the dominant "Serengeti hypothesis" in paleoanthropology (as the early hominid Environment of Evolutionary Adaptedness [EEA]). She notes that "the Serengeti is not a representative sample of African savannahs" but it is "spectacular, dramatic, photogenic, relatively accessible and Olduvai Gorge is there" (p. 14). Furthermore, ancient savannahs differed from contemporary savannahs. Given the pervasive use of the Serengeti model of the hominid EEA in the

human evolutionary sciences, this chapter "Deconstructing the Serengeti" is recommended for human ethologists regardless of their interest in meat eating or paleohominid diets.

Section II examines Living Nonhuman Analogs for Meat-Eating, with four of the five chapters concerned with meat (or insect; McGrew) consumption in nonhuman primates. More specifically, Stanford presents a data-based comparison of wild chimpanzee and human foragers; there is some overlap with the contents presented in his 1999 book but this chapter is not a summary of that larger work. More encompassing but less detailed comparisons between apes (gorillas, bonobos, and chimps) and modern hunting-foraging *Homo* (Hadza) are found in Chap. 9 (M. J. Schoeninger et al.). L. M. Rose uses studies of neotropical primates (*Cebus*) to shed light on the likely role of meat in the early hominid diet. Both Stanford (chimps) and Rose (capuchins) believe the meat acquisition in these primates is more opportunistic than that of humans. More importantly, the high frequency of meat eating in *Cebus* indicates that large brain size and high intelligence are not prerequisites for meat eating. W. C. McGrew examines the costs and benefits of insect consumption in *Homo* and in nonhuman primates, after arguing that insects were probably the only significant invertebrate food source for our hominid ancestors, then provides a nicely detailed call for research. One additional chapter by B. van Valkenburgh takes a broad view of interrelations between carnivores, examining the composition, dynamics, and hierarchical relationships among taxa in the African Plio-Pleistocene predator guild, particularly as these might have affected meat acquisition in early *Homo*. These effects, he suggests, probably included pressure for increased body size, increased intelligence, and weapon use.

Section III starts with H. T. Bunn's description and analysis of hunting, scavenging, and butchering in contemporary Hadza (Tanzania), and comparison of this with the relevant data from Plio-Pleistocene *Homo* as represented at Olduvai. His conclusion is that both butchered intact carcasses of large animals for meat, suggesting that early *Homo* acquired meat by hunting and/or "power scavenging," and that meat sharing occurred. Sharing is central to the next chapter, in which K. Hawkes uses data from three human groups (Hadza, Aché and !Kung) to illustrate that hominid hunters do not own their prey and often even lack good control over the distribution of its meat. Her analysis rejects the reciprocal altruism explanation of meat sharing, instead emphasizing the social benefits (e.g., more or better wives): "big game hunters do it for the reputation, not the meat" (p. 232). This section ends with a review and analysis of food sharing and the ecological and evolutionary models that may explain it. Here B. Winterhalder looks at nonprimate as well as primate species, suggests that routine food sharing probably characterized ancestral hominids, and draws a number of conclusions about food sharing: food transfers "in groups of social foragers are common, linked to clearly specifiable environmental circumstances, [behaviorally] diverse ..., and caused by a variety of evolutionary mechanisms" (p. 297).

The virtues of the edited volume include the provision of an excellent concise historical context in the Introduction, generally excellent summary and analysis of a variety of analogs of ancient hominid behavior, cautious use of inference, and inclusion of work by scholars with varied training and expertise. Weaknesses include the lack of an author index, a missing reference list for the Introduction and, as the editors acknowledge, no detailed biochemical analysis of the value

of meat as a food source. Of course, one could wish for some additional topics and authors to have been included, but the existing roster is impressive.

The 2001 book is intended for scholars and advanced students. In contrast, the 1999 book is much closer to popular science writing. As expected, then, the earlier book is easier to read and should prove accessible to the general reader. Generally well-written, the 1999 book has occasional weaknesses in its organization. Although there are over 16 pages of references, citations are used sparsely; a condition that may at times be frustrating to scholars. On the other hand, the 1999 book offers a marvelously concise presentation of numerous evolutionary arguments, hypotheses, and issues in just 217 pages of text. Each book is highly recommended, although there are limited returns from reading both.

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### Back Issues

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## New Books

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Any qualified individual interested in writing a review of one of the following books, or any other recent and relevant book, should contact the Editor or an Associate Editor. Publishers, authors, and others may call attention to recently published or forthcoming books by sending information to the Editor.

Burbacher, T., Grant, K., & Sackett, G. P.

Nonhuman Primate Models in Research on Developmental Disabilities. Elsevier, 2007, 472 pp. ISBN: 0-12-373743-5

Burling, R. The Talking Ape: How Language Evolved. Oxford University Press, USA, 2007, 304 pp. ISBN: 0199214034

Ember, M., Ember, C. R., & Peregrine, P. N. Human Evolution and Culture. Prentice Hall, 2008, 528 pp. ISBN: 0-13-603635-X

Hanlon, G. Human Nature in Rural Tuscany. Palgrave, 2007, 218 pp. ISBN: 1-4039-7764-X

Hodge, R. Evolution. Facts On File, 2008, 192 pp. ISBN: 0-8160-6679-5

Koella, J. C., & Stearns, S. C. Evolution in Health and Disease. Oxford University Press, 2008, 368 pp. ISBN: 0-19-920745-3

Lloyd, E. A. Science, Politics, and Evolution. Cambridge University Press, 2008, 275 pp. ISBN: 0-521-86570-0

Lockwood, C. The Human Story: Where We Come from and How We Evolved. Sterling Publishing Co., 2008, 112 pp. ISBN: 1-4027-5747-6

Morwood, M., & Oosterzee, P. V. A New Human: The Startling Discovery and Strange Story of the Hobbits of Flores, Indonesia. HarperCollins, 2008, 272 pp. ISBN: 0-06-089909-3

Rice, P. C. Introduction to Biological Anthropology. Allyn & Bacon, 2008, 496 pp. ISBN: 0-205-48043-8

Rice, P. C., & Moloney, M. Biological Anthropology and Prehistory: Exploring Our Human Ancestry. Allyn & Bacon, 2007, 576 pp. ISBN: 0-205-51926-1

Richmond, B. G., & Wood, B. Human Evolution: A Guide to Fossil Evidence. Westview Press, 2008, 500 pp. ISBN: 0-8133-4272-4

Sober, E. Evidence and Evolution: The Logic Behind the Science. Cambridge University Press, 2008, 392 pp. ISBN: 0-521-69274-1

Soligo, C. Primate Evolution and the Environment. S. Karger AG, 2007, 176 pp. ISBN: 3-8055-8393-1

Tolstikhin, I., & Kramers, J. The Evolution of Matter: From the Big Bang to the Present Day. Cambridge University Press, 2008, 536 pp. ISBN: 0-521-86647-2

Zuckerman, M. Sensation Seeking and Risky Behavior. American Psychological Assoc., 2007, 320pp. ISBN: 978-1-59147-7389 {under review}

For a list of books (in all European languages) on human ethology, sociobiology, evolutionary psychology, Darwinian psychiatry, biopolitics, hominid evolution and related disciplines visit:  
<http://rint.rechten.rug.nl/rth/ess/books1.htm>

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# ANNOUNCEMENTS

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Division 1 (General Psychology, President: Dr. Thomas J. Bouchard, Jr.) of the American Psychological Association will be emphasizing evolutionary psychological research in its 2008 program. This is a wonderful opportunity for researchers to showcase their findings. Individuals interested in submitting paper or posters, suggesting symposia or suggesting keynote speakers should contact the program Co-Chairs: Dr. Nancy Segal (nsegal@fullerton.edu, 1-714-278-2142) or Dr. Jason Young (jason.young@earthlink.net, 1-212-772-5566) by December 3, 2007.

The 2008 meeting will be in Boston, MA on August 14-17.

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**ISHE members seeking graduate students or postdoc's** are invited to submit material to inform and attract potential applicants for inclusion on the ISHE web site. Research interests, recent publications, etc. may be included, along with links to the person's department and personal or lab webpage. Such material can be sent to the ISHE Webmaster, Karl Grammer (see back cover).

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## **CALL FOR PAPERS** for a special session at ISHE08 in Bologna, Italy, 13 - 17 July 2008

ISHE member Jay R. Feierman invites submissions for a session at ISHE08 on *The Biology of Religious Behavior: A Human Ethology Perspective on Religion*. Of particular interest are human ethological studies of religious behaviors per se, where behavior is conceptualized as the movement of individuals. Can religious behavior be recognized by its form or structure, as can human courtship, maternal care, play, agonistic and other behaviors? Or, is religious behavior so influenced by culturally acquired components that it can only be recognized by its function? Or, in contrast, are these culturally acquired components of religious behavior just local variations on a more general theme? Submitted papers can address the phylogeny, ontogeny, proximate causes or mechanisms and the adaptive functions of religious behavior with the emphasis on behavior per se. Readers are also asked to contact Jay if they know someone who is not a member of ISHE but who might be a good contributor to this session. Respond to:

Jay R. Feierman, P.O. Box 57088, Albuquerque, NM 87187-7088 USA  
e-mail: jfeierman@comcast.net

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## **Linda Mealey Award for Young Investigators**

The International Society for Human Ethology has established a fund to maintain the **Linda Mealey Award for Young Investigators** in perpetuity. This award honors Linda, a past president and *HEB* book review editor, for her tireless work for ISHE, her outstanding scholarship, and her devoted mentoring of students. The Society seeded the fund with \$40,000 and Linda's father, George Mealey, matched that amount. The award is given to outstanding researchers at the graduate school level in Linda's field, human ethology, based on submissions to the biennial ISHE Congress. Awards consist of

a cash award and coverage of some of the recipients' travel expenses to the subsequent congress. Further details are available on [www.ISHE.org](http://www.ISHE.org).

**ISHE is soliciting additional contributions to the fund** to make the award more substantial and thereby further encourage and reward young researchers in human ethology. Mr. Mealey has kindly offered to match additional contributions by individuals, up to \$10,000. Donations should be sent to ISHE treasurer Dori LeCroy (see back cover for her address and payment information), made out to ISHE, and designated for the Linda Mealey Fund.

**Winners of the 2006 competition were announced in Detroit at ISHE06 and are listed in the *Human Ethology Bulletin*, 2006, vol. 21, #3.**

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## Human Ethology Listserv

Readers are reminded that the International Society for Human Ethology has established a listserv to facilitate communication among persons interested in human ethology and to attract new persons to the field. This listserv is intended to promote discussion, information distribution, criticism, and analysis of human ethology research. The listserv is named [Human-Ethology@yahoogroups.com](mailto:Human-Ethology@yahoogroups.com). The language is English. The listserv moderator is Jay R. Feierman.

Any interested person may participate. The listserv can be accessed by daily e-mails, a digest or summary folder sent once a day with all the e-mails of the past 24 hours, or through the web page of the group. Members are encouraged to submit drafts of manuscripts, etc. for comments, as well as published articles in PDF or other suitable formats, for circulation. Listserv members and not the list owner or moderator are responsible for not posting copyrighted material on the listserv without authorization from the copyright holder.

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Would you like to receive the *Bulletin* sooner? ... up to 4 weeks sooner! Wish you had an electronic version to allow easier searching of the *Bulletin's* contents and easier filing of back issues? Want to see full color, higher resolution photographs in the *Bulletin*? ... You can make your wish come true by requesting an electronic (PDF) version. Switching to an electronic version will get you the *Bulletin* faster and with full color photographs and working URLs. Of course, you can also feel good about this because an electronic subscription reduces the environmental impact of the *Bulletin* and saves ISHE the funds required for printing and mailing. To request an electronic copy in place of the printed version, members should simply send their full name and e-mail address to the Membership Chair (see back cover).

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## University of Connecticut Rohner Center Awards for Distinguished Contributions to Theory, Research, and Practice on Interpersonal Acceptance and Rejection

The Rohner Center [www.cspar.uconn.edu] is pleased to announce the creation of the **University of Connecticut Rohner Center Awards for Distinguished Contributions to Theory, Research, and Practice on Interpersonal Acceptance and Rejection**. Two \$1,000 awards are intended to encourage and recognize outstanding contributions in the field of interpersonal acceptance and rejection. Researchers, scholars, and practitioners worldwide are encouraged to submit theory, research, or practice-based manuscripts on any topic relevant to interpersonal acceptance and rejection. Such topics include, but are not limited to, issues dealing with parental acceptance-rejection, peer acceptance-rejection, teacher acceptance-rejection, acceptance-rejection among intimate adults, and others. Winners of the prizes will be given their Awards at the 2nd International Congress on Interpersonal Acceptance and Rejection to be held July 3-6, 2008 on the island of Crete, Greece (www.isipar08.org).

Further information can be found at: [http://www.isiparweb.org/index\\_files/Page1034.htm](http://www.isiparweb.org/index_files/Page1034.htm)  
or from Ronald P. Rohner, Ph.D., Professor Emeritus and Director, Ronald and Nancy Rohner Center for the Study of Parental Acceptance and Rejection, School of Family Studies, Unit 2058, University of Connecticut, Storrs, CT 06269-2058 USA. 1-860.486.0073 [phone]; 1-860.486.3915 [FAX]; email: [r.rohner@uconn.edu](mailto:r.rohner@uconn.edu)

A link to the **International Society for Interpersonal Acceptance and Rejection** also can be found at: [http://www.isiparweb.org/index\\_files/Page1034.htm](http://www.isiparweb.org/index_files/Page1034.htm). Applicants for an Award must be members of the Society at the time of application and at the time when the Award is presented.

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### *Human Nature*

Springer, the international academic and profession publishing house, has bought *Human Nature* from Transaction Publications. The Editor, Jane Lancaster, reports that this was an unexpected but very advantageous turn of events, providing *Human Nature* with a full-service publisher. Springer offers all the advantages of full electronic publishing, including complete electronic submission and handling of the review process, article-based submission and Online First publication for authors as soon as the final version has been accepted, greatly expanded international marketing, an online version available to most libraries in the US through a library consortium agreement, and access on line to all issues of *Human Nature* going back to Volume 1(1990). The journal will have a major expansion in distribution to both an international readership and to libraries. The transfer of the journal began with Volume 18(2) of 2007.

In 2006, *Human Nature* published a total of 21 articles in two general and two special issues (*Human Sperm Competition* edited by Todd K. Shackelford and Aaron T. Goetz, and *Human Fertility* edited by Jeffrey Schank). Special issues forthcoming in 2007 are *Evolutionary Cognitive Neuroscience* edited by Stephen Platek and *Human Behavioral Ecology: Public Policy and International Development* edited by Bram Tucker.

Springer offers a discounted subscription for 2008 to ISHE members. You can phone Springer at 1-800-Springer, e-mail [service-ny@springer.com](mailto:service-ny@springer.com), or go to the website [www.springer.com] to place a subscription order. Please identify yourself as an ISHE member. It is best to phone or email to identify the affiliation with ISHE.



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*Behaviour*, the journal Niko Tinbergen co-founded with W. H. Thorpe in 1948, is interested in publishing papers on human ethology. ISHE member **Marina Butovskaya** has joined the Editorial Board and reports that they are ready to accept one paper per issue on human subjects. For more information on *Behaviour*, see: [www.brill.nl/beh](http://www.brill.nl/beh)

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This issue represents the last one with **Todd Shackelford** serving as an Associate Editor. We thank Todd for his quick, reliable and professional contributions to the *Bulletin*.

With this, the final issue for 2007, I also want to thank the other members of the *Bulletin* staff and the many contributors over the course of the year. Special thanks go to Glenn Weisfeld who scrutinizes almost every issue prior to publication for errors and omissions.

[T.R.A.]

## Upcoming Conferences

### European Human Behaviour and Evolution Conference

2-4 April 2008 – University of Montpellier, France.  
[www.ehbes.com](http://www.ehbes.com)

### NorthEastern Evolutionary Psychology Society (NEEPS) conference

2-4 May 2008 – Southern New Hampshire University in Manchester, NH  
<http://www2.newpaltz.edu/~geherg/needs/>

### Association for Psychological Science (APS)

22-25 May 2008 – Chicago, IL  
[www.psychologicalscience.org/convention](http://www.psychologicalscience.org/convention)

### 20<sup>th</sup> Annual Meeting of the Human Behavior and Evolution Society

4-8 June 2008 – Kyoto University, Yoshida Campus in Kyoto, Japan  
<http://beep.c.u-tokyo.ac.jp/~hbes2008/index.htm>

### 2<sup>nd</sup> International Congress on Interpersonal Acceptance and Rejection

3-6 July 2008 – island of Crete, Greece  
[www.isipar08.org](http://www.isipar08.org)

### Biennial Congress of the International Society for Human Ethology (ISHE08)

13-17 July 2008 – University of Bologna, Italy  
(see details below and at [www.ISHE08.org](http://www.ISHE08.org))

### 4<sup>th</sup> European Conference on Behavioural Biology (ECBB 2008)

18-20 July 2008 – Dijon  
Plenary speakers include Redouan Bshary (Neuchâtel), Louis Lefebvre (Montréal) and Robert Poulin (Otago).  
[www.u-bourgogne.fr/ECBB2008/](http://www.u-bourgogne.fr/ECBB2008/)

### American Psychological Association (APA)

14-17 August 2008 – Boston, MA.

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# The XIX Biennial Conference of the International Society for Human Ethology (ISHE08)

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July 13 - 17, 2008 — University of Bologna, Italy  
[www.ISHE08.org](http://www.ISHE08.org)

The 19<sup>th</sup> biennial conference of ISHE (ISHE08) will be held in Italy at the University of Bologna. Readers are encouraged to review the **Call for Submissions** in this issue (see below). The program will feature four invited speakers, poster presentations, a variety of thematic sessions (symposia), and other talks. Various special events – including a banquet dinner, a welcome reception, and a guided tour of Bologna – will be offered; details can be found below. Many sightseeing attractions of Bologna are only a few minutes walk from the conference venue.

## About the XIX Biennial ISHE Conference

All conference talks will be presented at the Santa Lucia Hall (via dé Chiari, 23), an unfinished apse of a Jesuit church, now a lecture hall of the University of Bologna. The hall has air conditioning. Poster sessions will be held in San Giovanni in Monte, a former monumental monastery, 5 minutes walk from Santa Lucia Hall. Computers with Internet access will be available on site. There will be an invited address by a plenary speaker on each full day of the conference.

See separate information below for submission of papers and posters. Also see special information regarding ISHE's policy for financial subsidies for students having presentations accepted for the conference. You may register for the conference electronically by visiting the conference website: [www.ishe08.org](http://www.ishe08.org).

A **book exhibit** will be managed by the local conference organizers who may be contacted at [info@ishe08.org](mailto:info@ishe08.org)

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## Plenary Speakers:

- Prof. **Ernst Fehr**, University of Zurich, Switzerland – an evolutionary economist, who will speak on altruistic punishment
- Prof. **Eckart Voland**, University of Giessen, Germany – an evolutionary anthropologist and philosopher, who will speak on the evolution of morality
- Prof. **Polly Wiessner**, University of Utah, USA – a social and evolutionary anthropologist who will speak on warfare
- {1-2 additional plenary speakers TBA}

## About Bologna and its University

The origins of Bologna can be traced back to the Bronze Age. During the Iron Age, the population developed its own authentic culture and came to be known as the Villanovian Civilisation. Around 350 B.C., after two centuries of Galli Boi domination, Bononia, as it was once called, became a Roman colony. In 1088, the oldest university in Europe was founded in Bologna by the Master of Laws – Imerio. The high reputation of this university as one of the best schools in law in Europe, attracted many students from all around Europe to study in Bologna. Later on the city mainly developed around its famous university. Thomas Becket, Pico della Mirandola, Leon Battista Alberti, Nicholas Copernicus, Paracelsus, Albrecht Dürer and Torquato Tasso are some examples of famous students of the University of Bologna. On 18 September 1988 the rectors of 430 universities from all over the continent gathered in Bologna's Piazza Maggiore to validate the “Magna Charta Universitatum Europaeum” by which they marked the 900<sup>th</sup> anniversary of the University of Bologna and formally acknowledged it as the Alma Mater of all universities. The Magna Charta, which went on to be confirmed by another 400 rectors, reaffirms the autonomy of the university and the indissoluble bond between teaching and research, superseding the boundaries of “every geographic and political boundary”. The university now counts about 100,000 students.



**Bologna** has a medieval town centre that is among the best-preserved in Europe and which includes the seat of the historic university. The centre boasts a number of towers distributed among rows of porticoes and historical homes.



The University of Bologna

The heart of the city of Bologna mostly consists of buildings from XII to XVII century. ISHE Conference participants will have the chance to explore Bologna's great cultural heritage by visiting the historical center, museums, churches, as well as through a free organized tour that will be offered to all participants.

You can experience a virtual tour of Bologna by visiting: <http://www.comune.bologna.it/girabologna/>

For more information on Bologna tourist attractions visit: <http://iat.comune.bologna.it/iat/iat.nsf>

## Transportation

**Bologna Airport** is an international airport, the third most important in Italy, with daily nonstop flights to worldwide destinations ([www.bologna-airport.it](http://www.bologna-airport.it)). Public bus transportation (AeroBus) is offered every 15 minutes connecting the airport with the city center and railway station. Tickets (5 Euro one way) can be purchased on board. Forlì Airport ([www.forliairport.com](http://www.forliairport.com)) is situated about 80 kilometers east of Bologna and hosts mainly low budget flights. Forlì is connected to Bologna by train (about 1 hour). Bologna has very

good **rail connections**. For example you can reach Florence in 1 hour, Venice in 2 hours, and Rome in about 3 hours. The railway station is about 20 minutes on foot from the conference venue.

By **car**. The historical center of Bologna still retains its medieval structure with narrow and irregular streets. For this reason private cars are usually not allowed to enter the historical center. Only if you have an accommodation in a hotel in the historical center of Bologna are you allowed to enter the center and the conference venue with your own car. In this case you have to give your car registration number to the hotel reception. In all other cases you have to park outside of the historical center and reach the conference venue by bus.

## Registration

Participants are invited to register online on the conference website [www.ishe08.org](http://www.ishe08.org). Payments can be made with a credit card using PayPal. For those who do not have Internet connections or do not have a credit card it is possible to pay by bank transfer (Bank account IBAN code: IT16J020080248000010932397 Swift code: UNCRIT2BOM0 registered to XIX CONF. INT. SOC. HUMAN ETHOLOGY).

Part of ISHE's mandate is to enhance educational opportunities. There is a reduced registration fee for students. In addition, any student who is first author on a paper or poster accepted for the conference will have the fees for registration, accommodation, and the banquet waived. **Student status should be confirmed by sending a copy of a valid student I.D.** by fax to ++39 051 243086 (addressed to Dr. Marco Costa) in connection with the registration.

The registration fee includes all conference presentations, abstract book, welcome reception, coffee breaks. Early [before April 30] registration fees are 250 Euro for non ISHE members, 200 Euro for ISHE members, and 100 Euro for students/retirees. Late registration fees are 280 Euro for non ISHE members, 230 Euro for ISHE members, 130 Euro for students/retirees.

ISHE members for whom the Registration Fee represents a financial problem may request a reduced fee (Student/Retiree level or lower). Such requests should be addressed before online registration by sending an email to [info@ishe08.org](mailto:info@ishe08.org)

## Special Events and Outings

- Sunday, 13<sup>th</sup> July, evening. **Welcome reception**.
- Free **Guided Tour of Bologna** – a guide will take guests on a 3-hour tour of the main sightseeing attractions of Bologna historical center (*date TBA*).
- Thursday, 17<sup>th</sup> July. **ISHE Banquet** – to be held in a traditional restaurant in Bologna. Cost of the banquet will be 40 €.

## Lodging

A list of available hotels in Bologna, located near the Conference venue will be posted on the Conference website. There will be a limited

number of low budget rooms in university dormitories, only for students.



Conference Hall at the University of Bologna

### Other Attractions within 3 Hours of Travel from Bologna

**Ravenna**, the capital of mosaics, with eight monuments built over a period of 1500 years that have been added to the list of UNESCO World Heritage sites, is only 1:15 hours by train.

**Florence**, the more important artistic town in Tuscany, is only 1 hour by train from Bologna with hourly connections.

**Venice** is only 2 hours by train from Bologna.

**Rome**, the capital of Italy, is only 2:45 hours by train.

### Important Dates

- **March 15, 2008**: deadline for abstract submission;
- **April 15, 2008**: notification of abstract acceptance;
- **April 30, 2008**: end of early registration.

For **more information on ISHE08** go to the conference website: <http://www.ishe08.org> or contact local organizers at [info@ishe08.org](mailto:info@ishe08.org)

**We look forward to seeing you in Bologna!**



San Giovanni in Monte  
(location for ISHE08 poster sessions)

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## **Forthcoming in the *Human Ethology Bulletin***

### **Book Reviews**

- ***Beyond War: The Human Potential for Peace*** (Oxford University Press, 2007) by **Douglas P. Fry** – reviewed by Judith L. Hand
  - ***Comparative Vertebrate Neuroanatomy***, 2<sup>nd</sup> Ed. (2005) by **Ann B. Butler & William Hodos** – reviewed by Glenn Weisfeld
  - ***Evolution and the Social Mind*** (Psychology Press, 2007) edited by **J. P. Forgas, M. G. Haselton, & W. von Hippel** – reviewed by Rick O’Gorman
  - ***From Monkey Brain to Human Brain*** (MIT Press, 2005) edited by **S. Dehaene, Jean-Rene Duhamel, M. D. Hauser & G. Rizzolatti** – reviewed by Claudio Cantalupo
  - ***The Omnivore’s Dilemma: A Natural History of Four Meals*** (Penguin Press, 2007) by **Michael Pollan** – reviewed by William F. McKibbin and Todd K. Shackelford
  - ***Sexual Conflict*** (Princeton University Press, 2005) by **Göran Arnqvist & Locke Rowe** – reviewed by Aaron T. Goetz
  - ***Sperm Competition in Humans*** (Springer Science, 2006) edited by **Todd K. Shackelford & Nicholas Pound** – reviewed by Shannon L. Nickerson
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**ADDRESS CHANGES:** Members wishing to make address changes or other changes in their membership information should send their requests to the ISHE Membership Chair, Astrid Juette, at [astrid.juette@kli.ac.at](mailto:astrid.juette@kli.ac.at), or use the Chair’s postal address as shown on the back cover of this issue.

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