

# Human Ethology Newsletter

Editor: Glenn Weisfeld

Department of Psychology, Wayne State University, Detroit, MI 48202 USA  
1-313-577-2835 (office) 577-8596 (lab), 577-2801 (messages), 577-7636 (Fax),  
393-2403 (home)

---

VOLUME 6, ISSUE 4

ISSN 0739-2036

DECEMBER 1991

---

*Published by the International Society for Human Ethology*

## MEMOIR

### Four Decades of Ethology - A Personal Perspective

By: **Irenäus Eibl-Eibesfeldt**,  
Forschungsstelle für Humanethologie, Von-  
der-Tann-Strasse 3-5, D-8138 Andechs,  
Germany



After the excellent essay by William Charlesworth I was reluctant to follow Glenn Weisfeld's invitation to present another essay on the historical development of Human Ethology. I felt much of the background was covered. In a letter to Glenn I expressed my concern. In his response he suggested that I make it rather personal and conversational, to mention my own teachers, how I got interested in ethology and what I hoped to accomplish when I began my work.

Now I am sitting here on Christmas eve in my Tyrolian mountain chalet, chewing the end of my pen, looking at the snowflurries drifting by the window and meditating on past decades. My involvement with ethology dates back to spring 1946, when I was a

student of zoology at the University of Vienna. The city was badly damaged by allied carpet bombing and by the street fighting in 1945, when Soviet troops occupied the town during the final weeks of war. Never-ending streams of refugees became stranded in our country, united by misery and hunger, but still we young people were optimistic; we had a vision of peace and a Europe growing from the rubble. After all, man has an astonishing capacity to retain for himself a reserve of happiness and normality in the most absurd situations.

I recently found a letter which Wolfgang Schleidt wrote to me in autumn 1944. We were classmates at school, and I was just 16 at the time, but we were both drafted as part of the "letzte Aufgebot" of the Third Reich. I was serving at an anti-aircraft gun and Wolfgang was at the eastern front in west Poland. In his letter to me he made a remark about a classmate of ours who, strongly influenced by Ernst Jünger, had once said in a discussion with us that only the front would shape a man's character. Wolfgang remarked, "I am not experiencing anything like that," and then he continued, as if life was just taking its normal everyday course, to describe the landscape in front of him, the birches and pines, the lanes with flowers. He ended telling me about the many fossils in the ground and asked me to write to the Kosmos Publishing House and ask whether they had any information about the geology and botany of this interesting countryside. Remember, this was in the very month of the collapse on all fronts. I think that most people likewise tend to preserve for themselves a sphere of hope, privacy and normality, particularly in times of turmoil and strain.

In postwar Vienna one source of happiness and hope was the Vienna Philharmonic Orchestra and the Symphony Orchestra concerts conducted alternately by Karajan and Furtwängler in the Musikverein-Saal, splitting Viennese society in favor of one or the other baton. I derived particular happiness from zoology in which the aesthetic appeal of a "scientia amabilis" is combined with the profound importance of this basic life science for man.

In spring 1946 I attended a seminar on "Verhaltensforschung" by a young ornithologist, Otto Koenig, a fresh, energetic personality. He had taken the initiative to occupy seven empty barracks, left over from a military installation in the Vienna Woods, opposite Castle Wilhelminenberg and turn them into a biological field station for behavioral research. Wolfgang Schleidt had told me about Otto Koenig's enterprise and, charmed by Koenig's personality, we joined his group and made ourselves at home in one of the barracks. In the three years which I spent on the Wilhelminenberg, I studied the behavior of amphibians and mammals, and learned the basics of observation and experimentation as well as the fundamentals of ethology from the writings of Konrad Lorenz. It was Otto Koenig who again and again emphasized how important it was to keep a diary of one's observations and in particular to describe the behavior observed. And indeed, if one tries to describe a behavioral event, one realizes how difficult it is to adequately record, and one is forced to look again and again to observe and describe the animal's behavior, and to seek answers to ever-new questions which arise. These were the years when I started to work on the ethogram of several species of anuran amphibians and mammals.

We also discussed Konrad Lorenz's works, which provided a good layout of a biology of behavior and which allowed us to recognize the relevance of the new approach for the understanding of human behavior.

In 1948 Konrad Lorenz returned to Vienna from a prisoner of war camp in Russia. He lectured to our small group at the Wilhelminenberg from a manuscript which he had written during his years in Russia on pieces of torn cement bags. (This manuscript was recently found and will be published.)

In December 1949 I received my degree in Zoology and Botany (Dr. Phil.) after I had passed my high school teacher's exam in Natural History and Physics. In the same year I also joined Konrad Lorenz, who was in the

process of establishing an ethological institute in his home in Altenberg, when the Max-Planck Society invited him to be the head of such an institute in Germany. Wolfgang Schleidt and I were invited to join him.

From 1951 to 1957 we were stationed in Buldern in Westphalia under fairly primitive conditions, an old mill and a bowling alley being our home and the initial institute building. But it was an enlightening and happy time. We had lively discussions with visitors like Niko Tinbergen, Bill Thorpe, Jocelyne Crane, Eckhard Hess and many others whom we won as friends. We lived informally like a large family.

In the early fifties the nature-nurture debate heated up and reached one climax in Daniel Lehrman's "Critique of Konrad Lorenz's Theory of Instinctive Behavior". It was a brilliant paper whose main point was that Lorenz had defined innate only in a negative way as "what is not learned." It denied the heuristic value of the deprivation experiment, the main argument being that one could never deprive an animal of all potential sources of experience, since it will always be in an environment that acts upon it. The experimental evidence backing this statement was, however, poor. He referred to Z-Y. Kuo, who claimed to have demonstrated that the pecking response, which every newly hatched chick performs, was actually learned in the egg, and to B. F. Riess, who supposedly demonstrated that nest-building was a learned behavior in rats. It was at this point that I entered the discussion with an experimental investigation of nest-building in rats and food hoarding and nut opening in squirrels. These and other studies of the ontogeny of behaviors under different deprivation schedules were based on the consideration that adaptations copy or in other ways depict features of the social or natural environment toward which they are moulded as adaptation. In order for this to occur, one has to assume that at some time an interaction between the adapted system and those features of the environment which are mirrored in the adaptation must have taken place. An organism must have informed itself about these features, so to speak. This process, as we know, can take place either during phylogeny as genetic trial and error or by individual learning in a variety of forms, such as trial and error, cultural tradition, etc. Since it is possible to deprive the growing organism of information relevant to the adaptation in question, the deprivation experiment indeed can demonstrate the presence or absence of phylogenetic adaptations. The theoretical

basis of the argument is of course the hypothetical (critical) realism which is the basis of biological epistemology, elaborated independently by Karl Popper and Konrad Lorenz.

Therefore, if one rears birds from the egg in soundproof chambers without any social model and the birds nonetheless produce their species-specific song, then this proves that the information concerning the patterning of the song must have been acquired during phylogeny regardless of any ontogenetic precursors, such as breathing, where learning may have entered in some yet unknown way. Every achievement of behavior, be it a specific way to perceive and respond to a stimulus or a motor output, is based on populations of neurons interconnected in a specific way and connected with receptor and effector organs so as to constitute a functional unit. Numerous experiments have demonstrated that such a system can grow to maturity according to the genetic recipe for development. How a brain is wired for its function is now known down to the neuronal level, and thus positive proof of phylogenetic adaptations was provided.

My contribution to this discussion was mainly experimental, demonstrating how the innate and learned interacted in building up functional units in mammalian behavior. I emphasized at this time that it certainly would be meaningless to ask whether complex behaviors such as "nest building" were innate or acquired. One has to be more specific and inquire into a given stimulus situation, motor patterns and the like and also search where and how learning enters.

Lehrman's critique inspired many discussions as well as experimental studies. Soon after his critique came out, we met in person and became friends. One of the reasons why there was - and for some still is - a strong reluctance to accept the fact of phylogenetic adaptations as codeterminants of man's behavior is the fear that it might foster fatalistic attitudes. If something is innate, it is believed by many that we would not be responsible for it and could do little to alter it. This is of course absurd. We again and again emphasized that man is by nature a cultural being. Nonetheless I think nobody would earnestly argue that sex lacks any innate basis even though we control our sexual activities in a responsible fashion according to norms provided by society.

As a second line of interest, I was involved in the comparative study of animal communication. This allowed me to study a

great variety of phenomena within one theoretical framework and proved particularly valuable when I was invited to join two diving expeditions organized by Hans Hass on board the sailing yacht "Xarifa". The first Xarifa expedition went through the Caribbean Sea to the Galápagos Islands. It took nine months. The second Xarifa expedition of 1957-1958 took eleven months, exploring the coral reefs of the Maldives, the Nicobar Islands and some Malaysian islands.

The invitation to the first Xarifa expedition took me by surprise. I got the message only three months prior to the start and I knew nothing of the art of diving, nor about reef fishes. When I first descended into the coral reefs of the Caribbean, I was at a loss among this multitude of fishes milling around. How would I find a problem to investigate and justify my trip? But it did not take long to find one and I soon hit upon the cleaning symbiosis of fishes, unknown at that time. I studied the phenomenon, coined the terms *cleaner* and *cleaning symbiosis*, and investigated in particular how the partners in this symbiosis communicated. Later on in the Galápagos Islands I was impressed by the ritualized ways marine iguanas fight each other and again I was able to fit this phenomenon into the theoretical framework of communication. In addition, I became aware of the problems of intraspecific aggression.

During the course of these expeditions I learned to pick out phenomena for investigation in an opportunistic way, in other words, to discover. On the Galápagos I also became aware that this "laboratory of evolution" was quite endangered by the activity of the settlers, and took the initiative to launch a nature conservation project, which led to the establishment of the Charles Darwin Station on the Galápagos.

All my papers in the fifties were about animal behavior, with emphasis on ontogeny and communication. Nonetheless, they provided the basis for my studies on human ethology. In 1957 our institute moved into new buildings in Seewiesen, Bavaria.

#### TO BE CONTINUED

**Editor's Note:** For a useful history of animal ethology and sociobiology, consult George W. Barlow, Has sociobiology killed ethology or revitalized it? in P.P.G. Bateson and P.H. Klopfer (Eds.), *Perspectives in Ethology*, Vol. 8: *Whither Ethology?* New York: Plenum Press, 1989. Barlow is at the Department of Zoology, Univ. of California, Berkeley, CA 94720 USA.

## BALLOT

An explanation of our election procedure may be in order at this point. Officers are elected to three-year terms [HEN 4(3)]. There is no limit on the number of terms that an individual may serve. Self-nominations are appropriate. There are to be at least two nominees per office [HEN 5(1)]; however, in the past there has occasionally been only one nominee. The candidate slate is to be balanced across continents [HEN 5(1)]. Under the old structure of the Society, which had an eight-person board of directors and no specific offices, representation of a variety of academic disciplines was mandated [HEN #30 (Summer 1980)]; this practice has generally been followed de facto since then.

The Newsletter Editor (Vice-President for Information) is appointed by the Board of Officers after nominations have been solicited from the membership; a performance review is conducted every two years [HEN 5(8)]. (The last few editors have served three-year terms.)

The following members have been nominated for the offices indicated, and have agreed to serve if elected. Please vote for one candidate for each office. Please send marked ballot or a copy to the editor by 31 March. Ballots are usually counted by the Secretary; however, since Gail is running for re-election, I will perform this function. In the past, new Board members have written statements for the Newsletter [HEN 4(2)]; I would appreciate receiving statements from the incoming officers this time.

### Secretary

\_\_\_\_\_Karl Grammer, Max-Planck Gesellschaft, Germany. Human Ethology. Interests: courtship, mimics and nonverbal behavior, strategies, urban ethology.

\_\_\_\_\_Irwin Silverman, York University, Canada. Psychology. Interests: cognition, family.

\_\_\_\_\_Gail Zivin, Thomas Jefferson University, United States. Psychology. Interests: development of species specific signals, affective development, conflict management.

\_\_\_\_\_Other: \_\_\_\_\_

### Membership Chair

\_\_\_\_\_Barbara Fuller, University of Colorado, United States. Nursing. Interests: infant responses to pain, acoustic discrimination of different situationally-defined types of infant cries.

\_\_\_\_\_Nancy Segal, California State University, Fullerton, United States. Psychology Interests: behavioral genetics, twin studies, child development.

\_\_\_\_\_Other: \_\_\_\_\_

## MEMBERSHIP RENEWALS

This is the last 1991 issue, so you may need to pay your ISHE dues. Please consult the space near your address to determine whether or not your membership is expiring with this issue. If the date is 1991, please remit your dues promptly. See instructions on last page.

For economic reasons, renewal notices are not sent. No more than two warnings are

given on the mailing label; thereafter you are removed from the membership list. Please report any errors, change of address, etc. to the editor.

The number of paid members held steady this past year, at about 330. This is a good time to recruit new members. While supplies last, new members will receive a copy of the Membership Directory.

# Eleventh International Congress of ISHE

## 26-31 July 1992

### Amsterdam

#### ■ Location and accommodations

The 11th congress of the International Society for Human Ethology will be held at the Royal Tropical Institute. This is located at the perimeter of the old City center adjoining a small park and at walking distance from historical places of interest. It is easily accessible by public and private transport.

The Tropical (anthropological) Museum is next-door and the Amsterdam Zoo *Artis* is on the other side of the road. Access to both will be free of charge for participants.

Accommodations are nearby. A maximum of 70 beds (in 35 double rooms) have been reserved in the Institute's International Center, a hotel on the premises of the Institute, where cheap lunches and dinners can be ordered. Rates per person are f55/night (appr. \$32) for double use. Single use of a double room costs f80/night (appr. \$45). Another 38 double rooms are available in hotel *Lancaster* opposite the entrance to Amsterdam Zoo *Artis* and 500 meters from the Institute. Rates per person are f83/night (appr. \$48) for double use. Single use of a double room costs f145/night (appr. \$83). A small number of single rooms is available for f105/night (\$60). Other hotels at greater costs and distance are also available, if booked well in advance. Students who register early will be given priority for the cheapest rates.

#### ■ Scientific program

The local organizing committee is responsible for the scientific program. Following is a list of events that will comprise the Program of the XIth Biennial Congress:

#### A. Invited Addresses

Four distinguished senior scientists will be invited to discuss their work during plenary sessions early in the morning. The invitations cover the following four topics:

- Stress and the diseases of adaptation
- The evolutionary theory of socialization
- Ethology and psychopathology
- Issues of survival and reproductive success

#### B. Papers

Oral papers will be presented in the late morning and during the afternoon. Presentations on all areas of human ethology are appreciated. The time allocated for each presentation is 20 minutes plus 10 minutes discussion. 35 mm slide projectors and overhead projectors are available. Instructions for submitting abstracts will be sent in a second circular.

#### C. Symposia

The Committee has reviewed symposium proposals submitted already and is initiating others in accordance with previous practice. Additional proposals can still be accepted.

#### D. Poster exhibitions

Posters will be presented by authors in one evening session in the centrally located marble hall of the Royal Tropical Institute. Instructions for submitting abstracts will be provided in a second circular. Guidelines for poster presentations will be sent following the acceptance of the abstracts.

## ELEVENTH INTERNATIONAL CONGRESS OF ISHE

### 26-31 July 1992 - Amsterdam, The Netherlands

TITLE	FAMILY NAME
<input type="text"/>	<input type="text"/>
	GIVEN NAMES
	<input type="text"/>
ADDRESS LINE 1	
<input type="text"/>	
ADDRESS LINE 2	
<input type="text"/>	
CITY/SUBURB	ZIP/POST CODE
<input type="text"/>	<input type="text"/>
COUNTRY	
<input type="text"/>	

#### First notice of interest

I would like to receive the registration forms	YES	NO
	<input type="checkbox"/>	<input type="checkbox"/>
I will be attending the Meetings	YES	NO
	<input type="checkbox"/>	<input type="checkbox"/>
I expect to be accompanied by (number of persons)		<input type="checkbox"/>
I am interested in a visit to:	YES	NO
Fishers Village by boat	<input type="checkbox"/>	<input type="checkbox"/>

### E. Film/Video session

Film/Video sessions will be scheduled during one evening. Instructions for submitting abstracts will be sent in a second circular. 16 mm film projectors and international VHS video players will be available. Other audiovisual aids will be available only upon advance request.

### F. Round tables

Proposals for voluntary organization of round tables will be greatly appreciated.

### ■ Social program

The social program will include an opening boat-ride Sunday evening, sightseeing the canals of Amsterdam, followed by the opening reception and a cold buffet in the Historical Museum in the old City Center.

Wednesday afternoon a boat-trip is planned on the *IJsselmeer* (a large lake) combined with a visit to an old Dutch fishers' village. The banquet will be held on Thursday evening in the Maritime Museum, overlooking the harbour of Amsterdam and the 17th century East Indiaman *Amsterdam*. This ship was formerly owned by the Dutch East India Company, the world's largest trading and shipping company in the period 1600 - 1800.

Various tours will be organized following or preceding the International Congress of Human Ethology (ICHE). Specific information, including costs, will be provided with registration forms.

### ■ Registration forms

Registration forms and more detailed information about accommodations, tours, registration fees, and the scientific and social programs will be sent in January 1992 to all who have indicated their interest in participating.

### ■ Registration fees

The registration fee will include the opening night reception, conference kit and program book, and entrance to all program activities. The boatrip on Wednesday and the congress banquet will be billed separately.

### ■ Organizers

Chair of the congress is Dr. Frans X. Plooiij. Members of the Local Organizing Committee are: Dr. Netty Bouhuys, Dr. Herman Dienske, and Dr. Anneke Vrugt. Dr. Plooiij may be addressed:

Psychosocial Stress Unit, Department of Pedagogical Sciences,  
University of Amsterdam,  
IJsbaanpad 9,  
1076 CV Amsterdam,  
The NETHERLANDS  
TELEPHONE: +31 20 6643321  
FAX: +31 20 6640371

### ■ DATES

The 11th International Congress of the International Society for Human Ethology (ISHE) will be held in Amsterdam from July 26-31, 1992.

The congress begins with an opening reception on Sunday, July 26, at 7 p.m. and closes on Friday, July 31, in the afternoon.

For participants who want to obtain discount weekend airfares and/or who want to enjoy the city of Amsterdam, it is possible to arrive on Saturday the 25th of July and/or leave on Sunday the 2nd of August.

July 26 (Sun.)	Registration/Welcome reception
July 27 (Mon.)	Day: Congress Evening: Film/Video
July 28 (Tue.)	Day: Congress Evening: Posters
July 29 (Wed.)	Morning: Congress Afternoon and evening: optional tour or free
July 30 (Thu.)	Day: Congress Evening: Banquet
July 31 (Fri.)	Day: Congress

AIR MAIL

ELEVENTH INTERNATIONAL CONGRESS OF ISHE  
c/o Dr. F.X. Plooiij  
Psychosocial Stress Unit  
Department of Pedagogical Sciences  
University of Amsterdam  
IJsbaanpad 9  
1076 CV Amsterdam  
The Netherlands

## Newsletter Submissions

Anything which might be of interest to ISHE members is welcome: Society Matters, suggestions for Forum topics, essays for the Growing Points feature, Mini-Communications, Announcements of meetings, journals or professional societies, etc. These sorts of submission should be sent to the editor. Book review suggestions should go to the appropriate book review editor. Submission should be in English, on paper or on these disc formats: ASCII (preferred), Wordperfect (IBM), or Microsoft Word (MAC). No material in the newsletter is selected by critical peer review and thus material is presented only to foster free and creative exchange of (even outrageous) ideas between scholars. The fact that material appears in the newsletter never implies the truth of those ideas, ISHE's endorsement of them, or support for any policy implications that might be inferred from them.

### Editorial Staff

**Associate Editor**

Laurence J. Stettner, Department of Psychology, Wayne State University, Detroit, MI 48202 USA, 1-313-577-2866

**Current Contents Editor**

Robert M. Adams, Department of Psychology, Eastern Kentucky University, Richmond, KY 40475-0937 USA

**American Book Review Editor**

William T. Bailey, Department of Psychology, Eastern Illinois University, Charleston, IL 61920 USA

**British Book Review Editor**

Ian Vine, Interdisciplinary Human Studies, University of Bradford, Bradford BD7 1DP England

**French Book Review Editor**

Peter LaFreniere, Université de Montreal, C. P. 6128, succursale A, Montreal H3C 3J7 Canada

**German Book Review Editor**

Karl Grammer, Forschungsstelle für Humanethologie i.d. Max-Planck-Gesellschaft, Von der Tann-Strasse 3-5, D-8138 Andechs, Germany

**Spanish and Portuguese Book Review Editor**

Eduardo Gudynas, c/o ASMER Regional Office, Casilla Correo 13125, Montevideo, Uruguay

## RUSSIAN ETHOLOGY GROUP

Eibl visited a group of five psychiatrists in the Crimea this past summer. The group wishes to establish contact with other ISHE members, so a brief description of the group follows.

The Department of Psychiatry of the Crimean Medical Institute has long opposed the views of the "new Moscow" school of psychiatry. This disagreement has concerned the latter's widening of the criteria for diagnosing schizophrenia. According to the Crimean group, this widening "has become a ground for using of psychiatry in political purposes" (Crimean Project on Ethology and Evolution of Human Behavior).

In order to provide a more objective basis for psychiatry, in 1982 Victor P. Samohvalov, an ISHE member, proposed a research program on the ethology of normal and pathological human behavior. Meetings have been held annually in the Crimea since 1985.

Participants have represented the fields of primatology, psychology, genetics, mathematics, computer science, and biology, in addition to psychiatry. Topics have

included hominid evolution, the historical development of human behavior, nonverbal communication, nonverbal diagnostic signs of psychiatric diseases, evaluation of newborn and child behavior for the prediction of schizophrenia, basic units of primate behavior, stress, aggression, sexual behavior, geographic factors in psychopathology, and myths as indicators of psychopathological conditions. Guest speakers have included William D. Hamilton and Eibl.

The Crimean project is aimed at developing a cross-cultural data base on normal and pathological behavior from an evolutionary perspective. The group is soliciting ideas and commentary on the project, and statements of interest in research collaboration. Correspondence should be addressed to:

Crimean Project on Ethology and  
Evolution of Human Behaviour  
c/o Dr. Vitaliy I. Egorov (an ISHE  
member)  
Department of Psychiatry  
Crimean Medical Institute  
Simferopol 333000, Russia

· CRIMEAN-GERMAN  
· SCIENTIFIC CENTER  
OF HUMAN ETHOLOGY



SOVINCON

INSTITUTE  
OF HUMAN ETHOLOGY,  
MAX-PLANCK UNIVERSITY

**INTERNATIONAL CONFERENCE**  
**"ETHOLOGY & EVOLUTION OF HUMAN BEHAVIOUR"**

Simferopol, Crimea  
11-15 may, 1992

The organizers of Conference has a pleasure to invite you to attend Conference specialists interested in coordination of studies of comparative cultural investigations of human behaviour in normal conditions and mental illness. We invite ethologists, biologists, psychiatrists, psychologists, anthropologists, primatologists, specialists in behavioural modelling.

**MAIN TOPICS:** Project on International Comparative Studies of Human Behaviour. Methods of Objectivization of Human Behaviour. Diagnostic Meaning of Behaviour Study in Psychiatry and Psychology. Evolution of Human Behaviour.

**OFFICIAL LANGUAGE:** English

**CONDITIONS AND LOCATION:** Conference will be held in the capital of the Crimean Republic - Simferopol, in May 11-15, 1992. Simferopol is located on a distance of 32 km from the Black Sea. The programme of Conference includes visit of the Crimean caves, signs of ancient civilizations. In the Crimea in different times numerous cultures, i.e. Greece, Romanian, Tatarian, Scyphian, Slavic, Gothic and others had been changed.

**PUBLICATIONS:** For book of abstracts please send abstracts (no more than one page). The abstract's form: title (large letters), author's name, affiliation. Please send your abstracts no later than 1st of March, 1992. But Registration Form no later than 15th of January, 1992 on address: Dr.Vitaliy I.Egorov, Dept. Psychiatry, Crimean Medical Institute, Simferopol 333000, USSR.

**REGISTRATION FEE:** Participants registered before February 1, 1992 pays - 60 US dollars, after 1st of February, 1992 - 70 US dollars, students - 30 US dollars. Registration Fee includes Book of Abstracts, coffee and tea break, excursions and trips on the Crimea. Payment in cash at arrival.

**HOW TO ARRIVE IN SIMFEROPOL**

By air from Moscow (International Airport "Sheremetjevo-2"); departure by air from Moscow to Simferopol (airport "Vnukovo").

More detailed information will be send in second announcement. Suggestions on organization of the Conference, sponsorship are mostly welcomed!



**REGISTRATION FORM**

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Cost of lodging 70 US dollars for single occupation (includes breakfast, dinner & supper) on \_\_\_\_\_ days (please note), 60 US dollars for double occupations for one person (includes breakfast, dinner & supper) on \_\_\_\_\_ days.  
Banquet - 10 US dollars. Payment in cash, at arrival.



---

## NATO SUMMER INSTITUTE

A NATO Advanced Study Institute, "Ethological Roots of Culture," will be held in Cortona, Italy, June 21 - July 3, 1992. The objective is to bring together active investigators in ethology and anthropology to examine methods and findings on the transmission of behavior in social groups and across generations. Topics of interest include behavioral variations across populations within a species, development of learning abilities, imitation and observational learning, socialization and teaching in mother-child interactions, and the spread of new habits.

Between 60 and 80 graduate student participants will be invited to attend this international meeting. However, most of the participants usually are senior investigators who can make a significant contribution to the discussions. To apply please send: a CV (2 pages at most) which includes a statement of the reasons for wanting to attend, and, if you wish to present a report, an abstract of the proposed contribution. A limited number of scholarships is available to cover a portion of travel and living expenses; please indicate your requirement for such support. There is no registration fee, but a \$100 deposit is required of accepted applicants to secure accommodations. Deadline for applications: March 2, 1992. Send to:

R. A. Gardner, Director  
NATO ASI/ERC  
Center for Advanced Study/296  
University of Nevada  
Reno, Nevada 89557 USA

For complete E-mail copies of the announcement, write to: [erc@equinox.bitnet](mailto:erc@equinox.bitnet) or [erc@equinox.unr.edu](mailto:erc@equinox.unr.edu).

Tentative and partial list of lecturers (\* denotes organizers):

Christophe Boesch, University of Basel, Switzerland. Nut-cracking with hammers: comparisons of chimpanzee populations from different geographical localities.

Hedwige Boesch, University of Basel, Switzerland. Mother-child teaching by wild chimpanzees.

Brunetto Chiarelli (\*), University of Florence, Italy. Evolutionary and neurological aspects of cultural transmission.

Roger Fouts, Central Washington University, USA (ISHE member). Transmission of human gestural language in a chimpanzee mother-infant relationship.

Deborah Fouts, Central Washington University, USA (ISHE). The use of American Sign Language by chimpanzees when no humans are present.

R. Allen Gardner (\*), University of Nevada, USA. Ethological roots of language.

Beatrix T. Gardner (\*), University of Nevada, USA (ISHE). Ethological roots of language.

Valerius Geist, University of Calgary, Canada. Culture and biology in the evolution of Ice-Age mammals.

Jane Goodall, Gombe Stream Research Center, Tanzania. Communicative signals, tool use, diet: comparisons between populations of wild chimpanzees.

Hubert Montagner, INSERM, Montpellier, France. Behavior and interactions systems of infants and young children.

Frans X. Plooi (\*), University of Amsterdam, Netherlands (ISHE). Mother-infant interactions in humans and chimpanzees.

P. J. B. Slater, University of St. Andrews, Scotland. Bird song learning: a model for cultural transmission.

Virginia Volterra, Istituto di Psicologia, Rome, Italy. Communicative gestures of human infants: effects of parental models.

Kunio Watanabe, Kyoto University, Japan. Precultural behavior of Japanese macaques: longitudinal studies of the Koshima troops.

---

## SOCIOBIOLOGY BIBLIOGRAPHY

A 48-page partially-annotated bibliography on interdisciplinary sociobiology (1986-1991) is available for \$6 from Biodiversity Unlimited, 307 Jefferson St., Arlington, IL 61721 USA. Also available, free upon request, is a copy of the National Science Foundation's 1991 Mosaic article (22:3-17) by Arthur Fisher, "A new synthesis comes of age: sociobiology, a special report." Questions can be addressed to Mr. Joe D. Pratt, telephone 1-309-392-2864 (evenings).

**Officers of the Society**

**President**

Irenaus Eibl-Eibesfeldt  
Forschungsstelle für Humanethologie i.d. Max-Planck- Gesellschaft  
Von der Tann-Strasse 3-5  
D-8138 Andechs, Germany

**Vice-President**

William R. Charlesworth  
Institute of Child Development  
51 East River Road  
University of Minnesota  
Minneapolis, MN 55455 USA

**Vice-President for Information**

Glenn Weisfeld  
Department of Psychology, Wayne State University  
Detroit, MI 48202 USA

**Secretary**

Gail Zivin  
Department of Psychiatry and Human Behavior  
3 Curtis Building  
Jefferson Medical College  
Philadelphia, PA 19107 USA

**Treasurer**

Herman Dienske  
Primate Center TNO  
P.O. Box 5815  
2280 HY Rijswijk  
The Netherlands

**Membership Chair**

Jay Feierman  
Presbyterian Behavioral Medicine Center  
1325 Wyoming Blvd, N.E.  
Albuquerque, NM 87112 USA

Bercovitch, F.B. (1991). Social stratification, social strategies, and reproductive success in primates. *Ethology and Sociobiology*, 12, 315. (Univ. Puerto Rico, Caribbean Primate Res. Ctr., POB 1053, Sabana Seca, PR, 00749, USA).

Bernstein, I. S. (1991). An empirical comparison of focal and ad libitum scoring with commentary on instantaneous scans, all occurrence and one-zero techniques. *Animal Behaviour*, 42, 721-728. (Dept. of Psychology, Univ. of Georgia, Athens, GA 30602, USA).

Berry, D.S. (1991). Attractive faces are not all created equal: Joint effects of facial babyishness and attractiveness on social perception. *Personality and Social Psychology Bulletin*, 17, 523-531. (So. Methodist Univ., Dept. of Psychology, Dallas, TX 75275, USA).

Borgerhoff Mulder, M. (1992). Women's strategies in polygynous marriage: Kipsigis, Datoga, and other East African cases. *Human Nature*, 3, 45-70. Univ. Calif. at Davis, Dept. Anthropol., Davis, CA 95616 USA.

Boulton, J.J. (1991). Partner preferences in middle school children's playful fighting and chasing: A test of some competing functional hypotheses. *Ethology and Sociobiology*, 12, 177-194. (Univ. Sheffield, Dept. Psychol., Sheffield S10 2TN, S. Yorkshire, England).

Bradbury, T.N., Fincham, F.D. (1991). The analysis of sequence in social interaction. In D.G. Gilbert & J. J. Connolly (Eds.) *Personality, Social Skills, and Psychopathology*, (p. 257). New York: Plenum Publishing Corp.

Burgoon, J.K., & Baesler, E.J. (1991). Choosing between micro and macro nonverbal measurement: Application to selected vocalic and kinesic indices. *Journal of Nonverbal Behavior*, 15, 57. (Univ. Arizona, Dept. Commun., Tucson, AZ 85721, USA).

Burstein, Z. (1991). A new concept of developmental and evolutionary adaptation. *Journal of Social and Biological Structures*, 14, 15-34. (5 Yehalel St., IL-64242 Tel Aviv, Israel).

**CURRENT LITERATURE**

**DECEMBER 1991**

Adams, R.M. (1991). Momentary and partial interval time sampling: A reply. *Behavioural Psychotherapy*, 19, 333-336. (Eastern Kentucky University, Dept. of Psychology, Richmond, KY 40475, USA).

Baenninger, R., & Greco, M. (1991). Some antecedents and consequences of yawning. *Psychological Record*, 41, 453-460. (Temple Univ., Dept. of Psy., Philadelphia, PA, 19122, USA).

Belsky, J., Steinberg, L. & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development*, 62, 647-670. (Penn State Univ., Coll. Health & Human Dev., University Park, PA, USA).

- Chisholm, J.S., & Burbank, V.K. (1991). Monogamy and polygyny in Southeast Arnhem Land: Male coercion and female coercion. *Ethology and Sociobiology*, 12, 291-314. (Univ. Calif. Davis, Dept. Appl. Behav. Sci., Div. Human Dev. & Family Studies, Davis, CA 95616, USA).
- Coie, J.D., Dodge, K.A., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development*, 62, 812-826. (Duke Univ., Dept. Psychol., Durham, NC., 27706, USA).
- Costabile, A., Smith, P.K., Matheson, L., Aston, J., Hunter, T., & Boulton, M. (1991). *Developmental Psychology*, 27, 881. (Univ. Calabria, Dipartimento Sci. Educ., Via Brodolini, 1-87030, Roges, Italy.)
- Cronk, L. (1991). Human behavioral ecology. *Annual Review of Anthropology*, 20, 25-54. (Texas A & M Univ. Syst., Dept. Anthropol., College Station, Texas, 77843, USA).
- Dawson, S.M. (1991). Clicks and communication: The behavioural and social contexts of Hector's dolphin vocalizations. *Ethology*, 88, 265-276. (Univ. Otago, Dept. Zool., POB 56, Dunedin, New Zealand).
- Dickemann, M. (1992). Phylogenetic fallacies and sexual oppression: A review article on Pedophilia: Biosocial Dimensions (J. Feerman, Ed.). *Human Nature*, 3, 71-87. 2901 Humphrey Ave., Richmond, CA 94804 USA.
- Easley, S.P., & Coelho, A.M. (1991). Is lipsmacking an indicator of social status in baboons? *Folia Primatologica*, 56, 190-201. (Southwest Fdn. Biomed. Res., Behav. Med. Lab, POB 28147, San Antonio, TX 78228, USA).
- Ebomoyi, E., Adetoro, O.O., & Wickremasinghe, A.R. (1991). Birthweight and sociobiological factors in Ilorin, Nigeria. *Journal of Biosocial Science*, 23, 417-424. (Tulane Univ., Med. Ctr., Dept. Appl. Health Sci., New Orleans, LA 70118, USA).
- Ekman, P. & O'Sullivan, M. (1991). Who can catch a liar. *American Psychologist*, 46, 913-920. (Univ. Calif. San Francisco, Human Interact. Lab, 401 Parnassus Ave., San Francisco, CA 94143, USA).
- Ellis, L. (1991). A synthesized (biosocial) theory of rape. *Journal of Consulting and Clinical Psychology*, 59, 631-642. (Minot State Univ., Div. Social Sci., Minot, ND, 58701, USA).
- Feldman, R.S. & Rime', B. (Eds.). (1991). *Fundamentals of Nonverbal Behavior*. New York: Cambridge University Press.
- Fridlund, A.J. (1991). Evolution and facial action in reflex, social motive, and paralanguage. *Biological Psychology*, 32, 3-100. (Univ. Calif. Santa Barbara, Dept. Psychol., Santa Barbara, CA 93106, USA).
- Friedman, H.S. & Millerherring, T. (1991). Nonverbal display of emotion in public and in private: Self-monitoring, personality, and expressive cues. *Journal of Personality*, 61, 766-775. (Univ. California, Riverside, Dept. of Psy., Riverside, CA 92521).
- Gibson, K. R., & Petersen, A. C. (Eds.) (1991). *Brain Maturation and Cognitive Development: Comparative and Cross-cultural Perspectives*. New York: Aldine de Gruyter.
- Goldsmith, T.H. (1991). *The Biological Roots of Human Nature: Forging Links Between Evolution and Behavior*. New York: Oxford Univ. Press.
- Gottlieb, G. (1991). *Individual development and evolution: The genesis of novel behavior*. New York: Oxford University Press.
- Hahlweg, K. (1991). On the notion of evolutionary progress. *Philosophy of Science*, 58, 436-451. (Bond Univ., Sch. Humanities & Social Sci., Dept. Philosophy, Gold Coast, Australia).
- Hemelrijk, C.K., Klomberg, T.J.M., Nooitgedagt, M.H., & van Hooff, J.A.R.A.M. (1991). Side-directed behaviour and recruitment of support in captive chimpanzees. *Behaviour*, 118, 89-102. (State Univ. Utrecht, Dept. Comparat. Physiol., Padualaan 14, 3508, TB Utrecht, Netherlands.)
- Hess, E.H. & Petrovich, S.B. (1991). Ethology and attachment: A historical perspective. In J.L. Gewirtz, & W.M. Kurtines (Eds.), *Intersections With Attachment* (pp. 55-68). New Jersey, USA: Lawrence Erlbaum.

- Hinsz, V.B., & Tomhave, J.A. (1991). Smile and (half) the world smiles with you, frown and you frown alone. *Personality and Social Psychology Bulletin*, 17, 586. (North Dakota State University, Dept. of Psy., Fargo, ND 58105, USA).
- Isbell, L.A., Cheney, D.L., & Seyfarth, R.M. (1991). Group fusions and minimum group sizes in vervet monkeys (*Cercopithecus aethiops*). *American Journal of Primatology*, 25, 57. (Univ. Calif. Davis, Dept. Anthropol., Anim. Behav. Grp., Davis, CA 95616, USA).
- Izkoff, S. W. (1991). *Human Intelligence and National Power: A Political Essay in Sociobiology*. Peter Lang Publishing, 62 W. 45th St., New York, NY 10036 USA.
- Jackson, L.A. (1991). *Physical appearance and gender: sociobiological and sociocultural perspectives*. New York: State University Press.
- Johnson, K.L., & Edwards, R. (1991). The effects of gender and type of romantic touch on perceptions of relational commitment. *Journal of Nonverbal Behavior*, 15, 43-56. (Reprint: Edwards, R., Louisiana State Univ., Dept. Speech Commun., Baton Rouge, LA., 70803, USA).
- Johnson, S.B., & Johnson, R.C. (1991). Support and conflict of kinsmen in Norse earldoms, Icelandic families, and the English royalty. *Ethology and Sociobiology*, 12, 211-220. (Reprint: Johnson, R.C., Univ. Hawaii, Pacific Biomed Res. Ctr., Behav. Biol. Lab., Snyder Hall, 115, 2538 The Mall, Honolulu, HI, 96822, USA).
- Knauft, B.M. (1991). Violence and sociality in human evolution. *Current Anthropology*, 32, 391-452. (Emory Univ., Anthropology, Athens, GA 30322).
- Korona, R. (1991). On the role of age and body size in risky animal contests. *Journal of Theoretical Biology*, 152, 165-176. (Jagiellonian Univ., Inst. Environm. Biol., UL Karasia 6, PL-30060 Krakow, Poland).
- Kosko, B. (1991). Equilibrium in local marijuana games. *Journal of Social and Biological Structures*, 14, 51-66. (Univ. So. Calif., Inst. Signal & Image Proc., Dept. Elect. Engn., Los Angeles, CA, 90089, USA).
- Kraemer, G.W., Ebert, M.H., Schmidt, D.E., & McKinney, W.T. (1991). Strangers in a strange land: A psychobiological study of infant monkeys before and after separation from real or inanimate mothers. *Child Development*, 62, 548-566. (Univ. Wisconsin, Harlow Primate Lab, Madison, WI, 53715, USA).
- Krauss, R.M., Morrelsamuels, P., & Colasanti, C. (1991). Do conversational hand gestures communicate? *Journal of Personality and Social Psychology*, 61, 743-754. (Columbia Univ., Dept. Psychol., Box 29, Schermerhorn Hall, New York, NY 10027, USA).
- Kummer, H. & Cords, M. (1991). Cues of ownership in long-tailed macaques, *Macaca fascicularis*. *Animal Behaviour*, 42, 529-550. (Anthrop. Dept., Columbia Univ., New York, NY 10027, USA).
- Lorr, M. (1991). A redefinition of dominance. *Personality and Individual Differences*, 12, 877-880. (Catholic Univ. Amer., Inst. Life Cycle, Ctr. Youth Family & Aging, Washington, D.C. 20064, USA).
- Lynch, M. (1991). Methods for the analysis of comparative data in evolutionary biology. *Evolution*, 45, 1065-1081. (Univ. Oregon, Dept. Biol, Eugene, OR 97403, USA).
- MacDonald, K. (1991). On the concept of limited polygyny: A reply to Frost. *Ethology and Sociobiology*, 12, 169-176. (Calif. State Univ., Long Beach, Dept. Psychol., Long Beach, CA. 90840, USA).
- Manning, J.T., & Chamberlain, A.T. (1991). Left-side cradling and brain lateralization. *Ethology and Sociobiology*, 12, 237. (Univ. Liverpool, Dept. Environm. & Evolut. Biol., POB 147, Liverpool L69 3BX, England).
- Manson, J.H., & Wrangham, R.W. (1991). Intergroup aggression in chimpanzees and humans. *Current Anthropology*, 32, 369-390. (Univ. Michigan, Evolut. & Human Behav. Program, 100 Rackham Bldg., Ann Arbor, MI. 48109, USA).
- Masters, R.D. & Gruter, M. (Eds.) (1992). *The Sense of Justice: An Inquiry into the Biological Foundations of Law*. Newbury Park, CA, USA: Sage Publications.

- McCullough, J.M., & Barton, E.Y. (1991). Relatedness and mortality risk during a crisis year: Plymouth Colony, 1620-1621. *Ethology and Sociobiology*, 12, 195-210. (Univ. Utah, Dept. Anthropol., Biol. Anthropol Lab 102 Stewart Bldg., Salt Lake City, UT, 84112, USA).
- McGregor, Alan (Ed.) (1991). *Evolution, Creative Intelligence and Intergroup Competition*. Institute for the Study of Man: Virginia, USA.
- McGuire, M.T. & Masters, R.D. (Eds) (1992). *The Neurotransmitter Revolution. The Gruter Institute*: Portola Valley, CA, USA.
- McHugo, G.J., Lanzetta, J.T., & Bush, L.K. (1991). The effect of attitudes on emotional reactions to expressive displays of political leaders. *Journal of Nonverbal Behavior*, 15, 19-42. (Dartmouth Coll, Dept. Psy., Gerry Hall, Hanover, NH, 03755, USA).
- Nesse, R. M. (1990). The evolution of repression and the ego defenses. *J. Amer. Academy Psychoanalysis*, 18, 260-286. Univ. of Michigan, Dept. of Psychiatry, Ann Arbor, MI 48109-0840 USA.
- (1991). What is mood for? *Psychology*, 2, issue 9.2.
- (1991). What good is feeling bad? The evolutionary utility of psychic pain. *The Sciences*, Nov./Dec., pp. 30-37.
- Noldus, L.P.J.J. (1991). The observer: A software system for collection and analysis of observational data. *Behavior Research Methods, Instruments, & Computers*, 23, 415-429. (Univ. Wageningen, Ctr. Business & Technol., Noldus Informat. Technol BV, Vadaring 51, 6702, EA Wageningen, Netherlands).
- Palmer, C.T. (1991). Kin-selection, reciprocal altruism, and information sharing among Maine lobstermen. *Ethology and Sociobiology*, 12, 221-236. (Mem. Univ., Newfoundland, Inst. Immunohaematol., St. Johns., Newfoundland, Canada A1C 5S7).
- Pavelka, M.S.M. (1991). Sociability in old female Japanese monkeys: Human versus nonhuman primate aging. *American Anthropologist*, 93, 588-598. (Univ. Calgary, Dept. Anthropol., 2500 Univ., Dr. NW, Calgary, Alberta, CANADA T2N 1N4).
- Pellis, S.M. (1991). How motivationally distinct is play? A preliminary case study. *Animal Behaviour*, 42, 851-853. (Dept. of Psychology, University of Lethbridge, Lethbridge, Alberta T1K 3M4, Canada).
- Petrovich, S.B. & Gewirtz, J.L. (1991). Imprinting and attachment: Proximate and ultimate considerations. In J.L. Gewirtz, & W.M. Kurtines (Eds.), *Intersections With Attachment* (pp. 55-68). New Jersey, USA: Lawrence Erlbaum.
- Plomin, R. (1991). The nature of nurture: Genetic influence on environmental measures. *Behavioral and Brain Sciences*, 14, 373-385. (Penn State Univ., Ctr. Dev. & Health Genet., University Park, PA 16802, USA).
- Power, M. (1991). *The Egalitarians, Human and Chimpanzee: An Anthropological View of Social Organisation*. New York: Cambridge University Press.
- Price, E.C. (1991). Competition to carry infants in captive families of cotton-top tamarins (*Saguinus oedipus*). *Behaviour*, 118, 66-88. (Jersey Wildlife Preservation Trust, Trinity, Jersey, England).
- Real, L.A. (1991). Animal choice behavior and the evolution of cognitive architecture. *Science*, 253, 980-985. (Univ. North Carolina, Dept. Biol, Chapel Hill, NC 27599, USA).
- Reifman, A.S., Larrick, R.P., & Fein, S. (1991). Temper & temperature on the diamond: The heat aggression relationship in major league baseball. *Personality and Social Psychology Bulletin*, 17, 580-585. (Res. Inst. Alcoholism, 1021 Main St., Buffalo, NY 14203, USA).
- Reissland, N., & Harris, P. (1991). Children's use of display rules in pride: Eliciting situations. *British Journal of Developmental Psychology*, 9, 431-436. (Univ. Heidelberg, Inst. Psy., Hauptstr 47-51, D-6900 Heidelberg, Germany).
- Rodseth, L., Smuts, B.B., Harrigan, A.M., & Wrangham, R.W. (1991). On the human community as a primate society: Reply. *Current Anthropology*, 32, 429-433. (Univ. Michigan, Dept. Anthropology, Ann Arbor, MI 48109, USA).

- Rosenblum, L.A., & Paus, G.S. (1991). Evolutionary and Environmental factors influencing attachment patterns in nonhuman primates. In J.L. Gewirtz, & W.M. Kurtines (Eds.), *Intersections With Attachment* (pp. 23-40). New Jersey, USA: Lawrence Erlbaum.
- Ruppenthal, G.C., Walker, C.G. & Sackett, G.P. (1991). Rearing infant monkeys (*Macaca nemestrina*) in pairs produces deficient social development compared with rearing in single cages. *American Journal of Primatology*, 25, 103-124. (Reprint: Sackett, GP, Univ. Washington, Primate Ctr. SJ50, Seattle, WA, 98195, USA).
- Santillandoherty, A.M., Diaz, J.L. & Mondragonceballos, R. (1991). Synergistic effects of kinship, sex and rank in the behavioural interactions of captive stump-tailed macaques. *Folia Primatologica*, 56, 177-189. (Inst. Mexicano Psiquiatria, Div. Neurociencias, Camino a Ochimilco 101, San Lorenzo Huipulco 14370, Mexico City, DF, Mexico.)
- Sereno, M.I. (1991). Four analogies between biological and cultural linguistic evolution. *Journal of Theoretical Biology*, 151, 467-508. (Univ. Calif. San Diego, La Jolla, CA 92093, USA).
- Smith, C.U.M. (1991). Kant and Darwin. *Journal of Social and Biological Structures*, 14, 35-50. (Univ. Aston, Fac. Life & Health Sci., Birmingham B4 7ET, W. Midlands, England).
- Smith, H.J., Archer, D., & Costanzo, M. (1991). Just a hunch: Accuracy and awareness in person perception. *Journal of Nonverbal Behavior*, 15, 3-18. (Reprint: Archer, D., Univ. Calif. Santa Cruz, Stevenson Coll., Santa Cruz, CA, 95064, USA).
- Smuts, B. (1992). Male aggression against women: An evolutionary perspective. *Human Nature*, 3, 1-44. (Univ. of Michigan, Dept. Psychol., Ann Arbor, MI 48109-1346 USA).
- Somit, A., & Wildenmann, R. (Eds.) (1991). *Hierarchy and Democracy*. Baden-Baden, Germany: Nomos Press; Carbondale, IL 62901, USA: Southern Illinois Press.
- Southwood, T.R.E., Harvey, P.H. (Eds.) (1991). *The Evolution of Reproductive Strategies*. New York: Cambridge University Press.
- Sperling, S. (1991). Baboons with briefcases: Feminism, functionalism, and sociobiology in the evolution of primate gender. *SIGNS, Journal of Women in Culture and Society*, 17, 1-27. (Chabot College, Div. of Social Science, Hayward, CA. 94541 USA).
- Springer, K., & Keil, F.C. (1991). Early differentiation of causal mechanisms appropriate to biological and nonbiological kinds. *Child Development*, 62, 767-781.
- Srivastava, A., Borries, C., & Sommer, V. (1991). Homosexual mounting in free-ranging female hanuman langurs (*Presbytis entellus*). *Archives of Sexual Behavior*, 20, 487-512. (reprint: Sommer, V., Univ. Gottingen, Inst. Anthropol., Burgerstr 50, D-3400 Gottingen, Germany).
- Stanford, C.B. (1991). Social dynamics of intergroup encounters in the capped langur (*Presbytis pileata*). *American Journal of Primatology*, 25, 35-48. (Univ. Michigan, Dept. Anthropol., Ann Arbor, MI, 48109 USA).
- Studd, M.V., & Gattiker, U.E. (1991). The evolutionary psychology of sexual harassment in organizations. *Ethology and Sociobiology*, 12, 249-290. (Nipissing Univ. Coll., Fac. Arts & Sci., POB 5002, N. Bay, Ontario, Canada, P1B 8L7).
- Walton, D. (1991). The units of selection and the bases of selection. *Philosophy of Science*, 58, 417-435. (Univ. of Chicago, Comm. Conceptual Fdn. Sci., 1126 E. 59th St., Room 207, Chicago, IL 60637, USA).
- Wilczenski, F.L. (1991). Facial emotional expressions of adults with mental retardation. *Education and Training in Mental Retardation*, 26, 319-324. (SUNY Buffalo, Dept. Counseling & Educ Psychol., Baldy Hill, Buffalo, NY 14260, USA).
- Williams, G. W., & Nesse, R. M. (1990) The dawn of Darwinian medicine. *Quarterly Rev. Biology*, 66, 1-22. Reprint: See Nesse, above.
- Wilson, E.O., Lumsden, C.J. (1991). Holism and reduction in sociobiology: Lessons from the ants and human culture. *Biology & Philosophy*, 6, 401-412. (Harvard Univ., Museum Comparat. Zool., Cambridge, MA 02138, USA).

Woehr, D.J., & Lance, C.E. (1991). Paper people versus direct observation: An empirical examination of laboratory methodologies. *Journal of Organizational Behavior*, 12, 387-399. (Texas A & M Univ. Syst., Dept. Psy., College Station, TX 77843, USA).

Zahn-Waxler, C., Cummings, E.M., & Iannotti, R.J. (Eds.) (1991). *Altruism and Aggression*. New York: Cambridge University Press.

## REMINDER!

PLEASE REJOIN ISHE  
NOW IF YOUR MEMBERSHIP  
HAS EXPIRED!

---

### LAW AND BEHAVIOR RESEARCH PROPOSALS

Volkswagen-Stiftung supports research projects, interdisciplinary meetings, guest scholars and research travel, graduate scholarships, and summer schools on the topic of law and behavior. Projects on non-German legal systems may be considered if they include, by way of comparison, German law in a behavioral context. Applications from elsewhere should describe plans for cooperation with scholars in Germany.

Project proposals are invited from all areas of jurisprudence, especially legal history and comparative studies of various legal cultures. Behavioral sciences relevant to law, such as psychology, sociology, ethology, anthropology, economics, political science, and history, will have equal weight. Priority will be given to research on: behavioral bases of law, effectiveness of law, how legal norms arise and change, steering functions of law, replacing law by other types of regulation of behavior, reducing the variety of legal norms to expand behavioral latitude, encounters between different legal and procedural systems, interdisciplinary procedural analysis, control exerted by law, behavioral processes of the acceptance of legal systems. For additional information, contact Volkswagen-Stiftung, P. O. B. 81 05 09, D-3000 Hannover 81, Germany, or Dr. Hagen Hof, telephone 511-83-81-256.

---