

HUMAN ETHOLOGY NEWSLETTER

JOAN S. LOCKARD, EDITOR
JUNE, 1981

VOLUME 3
ISSUE 2

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

COMMITTEES:

In order to involve our new Executive Board members in the day-to-day happenings of our Society, as well as to call on the experience of older Board members, new committee chairpersons have been assigned. Our appreciation is certainly extended to the individuals who served in the past. To those of you who would like to become more active in our Society, please volunteer. The two committees most in need of additional persons are Membership and Abstract, although input and feedback to the other committee chair's are encouraged as well. I wish to thank our members who responded to my plea to serve on the Book Review Committee. Sharing the task assures a greater literature coverage and a variety of views.

Nominations and Elections: Chair, Cheryl Travis, Dept of Psychology, University of Tennessee, Knoxville.

International and Alternative National Meetings: Chair, Gail Zivin, Psychiatry and Human Behavior, Thomas Jefferson Medical College, Philadelphia. Ronald Weigel (affiliation given below) will also continue to assist.

Book Review: European theater-- William McGrew, University of Stirling, Scotland, and Ian Vine, Interdisciplinary Human Studies, University of Bradford, England; U.S.-- William Bailey, Dept of Psychology, Tulane University, Ron Weigel, Human Ethology Laboratory, Neuropsychiatric Institute, University of California-Los Angeles, Brian Gladue, Dept of

Psychiatry and Behavioral Science, SUNY at Stony Brook, Bruce Ambuel, Dept of Psychology, University of Illinois-Champaign, and Edward Korber, Dept of Psychology, Queens College, Flushing NY.

Human Ethology Abstract: Chair, Wade Mackey, Div of Social Sciences, Iowa Wesleyan College.

Membership: Chair, Gordon Burghardt, Dept of Psychology, University of Tennessee, Knoxville.

Recent Literature: Chair, Robert Adams, Dept of Psychology, Eastern Kentucky University, Richmond.

Long Term Goals: This is a much needed focus, co-chaired by William Charlesworth, Institute of Child Development, University of Minnesota, Minneapolis, and I. Eibl-Eibesfeldt, Forschungsstelle für Humanethologie, Max Planck Institut für Verhaltensphysiologie, Seewiesen.

HUMAN ETHOLOGY ABSTRACTS IV

We are indebted to Larry Stettner who has assembled (with great effort) and recently submitted for publication to Man and Environment Systems, the collection of abstracts we sent him last year covering the period June 1979-June 1980. Larry, as Cheryl Travis (Vol. 1) and Bob Adams (Vols. 2 and 3) before you, we thank you for an enormous task well executed! An announcement as to when Volume IV will appear in print will be made in our next Newsletter. In the meantime, all of you out there may begin the process once more by sending your abstracts of recent studies, articles, papers and presentations to our new compiler, Wade Mackey who has been persuaded to give generously of his time to this end. For those of you who have altruistic tendencies, please volunteer to assist Wade, the chairperson of the Abstract Publication Committee, in this endeavor. Abstract contributions and pledges of assistance may be forwarded to Wade at the Division of Social Sciences, Iowa Wesleyan College, P.O. Box 369, Mount Pleasant IA 52641.

ARCHIVES

Our appreciation to Donald Omark for providing the missing early issues of the Human Ethology Newsletter. Also a thank you to all others who offered their help. We now have a complete set of newsletters that will be placed in archives at the University of Washington.

Several members have expressed an interest in a paper-bound collection of our newsletters that could be purchased for a nominal cost. After looking into printing and binding costs, it was found that Volume 1 (Issues 1-17, 1973 to 1977) and Volume 2 (Issues 18-31, 1977 to 1980) could be sold for \$15/set. I would need 100 prepaid orders before going ahead with the project. I welcome your comments. Any additional funds emanating from more orders would be used for ISHE endeavors.

TO LOGO OR NOT

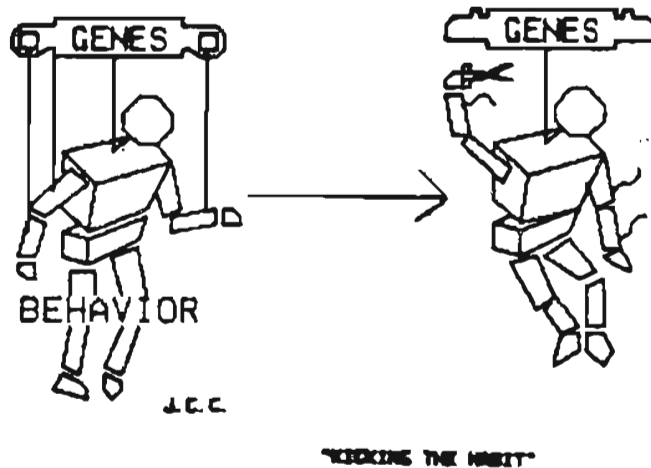
Although the intent to stimulate interaction among our members was implicit in the initiation of a logo format for our Newsletter, I was surprised by the response which the first effort achieved. Like an ink blot, there was not a singular interpretation forecasted, but as it turned out two possible meanings emerged. The first, of course, is the one I had in mind in designing the logo, namely, try as we might to deny the role of genes in our behavior, if we go too far we may well end up a blob on the ground (i.e., symbolized by cutting the last string). It was the inseparable interaction of heredity and environment that I had hoped to portray, only to discover that just the opposite meaning was equally likely. For example, Glenn and Carol Weisfeld suggested that the masthead cartoon seemed "...to imply that genes are bad for you." In a distinct but consistent vein, Sidney Perloe indicated that "...the picture communicates the view that behavior is to be seen as either totally constrained by genes or totally free of genetic constraints, with an apparent preference for the latter alternative. To my delight, Sidney then presented a modified version of the logo (below) as an exam question in one of his classes (see the course outline in the section FORUM UPDATE). The quotations to follow (next page) are the responses of two of his students.

It was just this sort of communication I had hoped to initiate, and as is obvious by inclusion of the present logo I have not been dissuaded, but rather encouraged to continue the masthead. The one topping this issue is again one of mine, so I strongly urge you to get your ideas submitted in order to end this monopoly. The esthetic rendition of the logo is by Jocelyn D. Penner, another very talented young artist. For those of you who have a flair for the obscure, set your fancy in a line drawing on graph paper, with two-dimensional coordinates defining the essential points of each line. The computer will take it from there. If you are more inclined to muse than to create, send in your interpretation of the present logo. In any event, let me know if you prefer to logo or not.

Exam Question:

A recent issue of a research newsletter contained the cartoon shown below.

- a) What does the cartoon imply about the theoretical choices facing scientists raising questions about the relation between genes and behavior?
- b) Why is this conception inadequate?
- c) Describe a more adequate conception, using concepts we discussed in class.



Student A:

The cartoon implies two choices. In the first frame, behaviour is entirely controlled by genes, like a marionette controlled by the masterful patterns of DNA. The second frame shows a bare, tenuous connection (a single thread) of causation, in fact) between genes and behavior. Although I do not know how to illustrate my own position pictorally, both of the cartoon views have a real weakness.

Behavior is not and cannot be purely a matter of genes or purely a matter of anything else. In the simplest sense, both genes and environment must exist for behaviors to occur. No animals can live in a vacuum, and no environment can create behavior without organisms. Instead, a complex interaction exists between the two. Imagine a marionette which can make many motions on its own, but whose (genetic) strings stop some motion, and make some motions far more likely.

Alcock provided a helpful lead into different types of behavior by splitting behavior into four categories: 1) rigid instinctive behavior, 2) flexible instinctive behavior, 3) controlled learning,

and 4) flexible learning. Different behaviors in different animals are under different degrees of genetic control. To return to the previous problem, while a happy face seems a behavior characteristic of the human species (category 1), many different stimuli can elicit that reaction (category 4).

Perhaps the most difficult categories to understand are the middle two. Lorenz described the various kinds of learning that go on within instinctive behaviors as: 1) filling in the blanks, 2) narrowing the range of stimuli, 3) better coordinating reactions, and 4) expanding the reaction to completely new stimuli. Obviously, these kinds of learning are not genetically controlled. Just as obviously, genetic constraints exist upon what can be learned.

Much of the work described in the article by Bolles shows that different animals have different genetic constraints upon their learning. (The dogs and ovals vs. circles, the Garcia-Koelling experiment, the experiment with right and left legs of dogs in relation to different tones in different positions around them.) Animals have genetically programmed limits upon what they can learn in a given situation. But animals with any complexity still have a great many possibilities for behavior. They are not mere robots controlled by genetic programming.

Student B:

The cartoon represents a rather hard-lined reaction to the old instinct theories which adduced all behavior to genetically encoded instructions. The first figure (left) portrays the older theories which regarded behavior as completely dependent on genetic instructions. The second (right) figure depicts the scientific community freeing itself completely of this older mind-set, and rejecting the role of genes in controlling behavior. The deficiency of this cartoon is that the complete rejection of the play of genes, which the pictures seem to glorify, is just as narrow a view as the exclusively genetic approach. Lining up with either extreme in the nature/nurture controversy is to regard only one part of the picture in what controls behavior. A more reasonable figure might show "Behavior" suspended and controlled by two puppeteers: genes and environment.

Genes undoubtedly place constraints on the behavior of species and individuals alike. These genetic constraints can be seen by the fact that members of species are limited in the variety of responses which they can make to a given situation, and in the responses they can be conditioned to make. Environment also clearly plays a role in the development of the behavior of organisms, through both experience and actual learning. Organisms with the same genotypes can develop quite differently under different conditions, both as a result of the material resources available, which affect growth and development and hence, indirectly, behavior, and as a result of specific learning situations, which directly alter or develop response patterns (Alcock).

In short, genes provide a general blueprint, with some degree of latitude for the physical and behavioral development of the organism. The environment provides the materials for the materialization of the organism. It is the interplay of both genes and environment which produce the phenotype, and to deny the role of either, as does the cartoon, is to close one's eyes to part of the picture.

LET'S HAVE YOUR VOTE

The following letter is the third in a recent series of correspondence with David Alan Munro. Since his retirement in 1968 he has been interested in psycholinguistics and particularly ethology in the European theater. He attended the 1977 International Ethological Conference in Bielefeld and spent the last academic year in Europe, mostly in France. He is now assisting Hubert Montagner with the English translation of L'Enfant et la Communication. Professor Munro would appreciate input from our membership on his idea as expressed in the letter below. Although I am less than enthusiastic about the matter, others may well feel differently. Please send your reactions to me for collation. The outcome of the "Vote" will be reported in the next issue.

April 27, 1981

Dear Joan Lockard:

Thank you for your thoughtful letter of April 23, as well as the opportunity to be heard.

My suggestion was that the time is ripe for human ethology to go public and for the ISHE membership to be invited to contribute to a popular journal that could well be called Ethology Today, modeled on and at the intellectual level of Psychology Today.

You replied that:

"It has been my personal experience that when you take a science that is striving to be quantitative and popularize it with a semi-lay publication, no matter how well intended the publisher or editor may be, it tends in time to reflect "softly" on the individuals who contribute to it. I am under the current impression that human ethology is having a hard time being accepted by overlapping disciplines. Participating in such a magazine may well add to our burden. However, I am open to persuasion and would like to be kept abreast of your progress in this regard..."

The further relevant background, of course, is that we had our period of pop ethology (with about 20 books by Ardrey, Lorenz, Morris, Tiger, Fox). And of it you may take your choice of:

- 1) That it didn't cut the mustard because it was "too pop," and
- 2) That it did a superb job of introducing concepts but was (temporarily) set back by the intervention of extra-academic forces.

I think we are at a dead-center point when progress awaits a push, a galvanic event. Hence my suggestion of a pop-ethology magazine. It could be the spark. But so could a book I have in progress called Ethological Man (working title). In both cases the objective is not to argue fine points within academia, but to show how ethological ideas are already eroding the old conceptual-ideological foundations of key institutions in our national life. For example, psychoanalysis, after Harlow and then Bowlby, has effectively destabilized its own oral-anal-phallic, etc. system with an ethological schema. Education is even more tradition-encrusted but after years and years of failures, due to ignorance, in teaching deaf children to talk, these teachers have now discovered that language-learning is an imprinting behavior -- and have begun to act accordingly.

I could go on. The basic point is that this is no mild or parochial scientific revolution. It affects all decision making based on "man's concept of man" and thus it permeates our major institutions. Lorenz targeted the institution of war, and Eibl-Eibesfeldt has not shirked his obligation here, I'm glad to note.

No doubt the rise of ethology creates intramural problems, but are they not petty? Lots of people now comfortably on tenure may be revealed to be teaching pure nonsense. But there is nothing new about this condition, is there? It's always been with us. Nor do I think it is the major consideration here -- though it could get you personally declared a pariah among your colleagues in "overlapping disciplines." The major consideration is how is ethology to be used in the wider world. As the more powerful social science it must take on the larger responsibilities.

Certainly, I'd like to know how ISHE members feel about writing articles on "The impact of ethology on" The market is not good at present, but I expect it to be excellent in the future.

Sincerely,

David Alan Munro (signed)

P.S.: Chapters I've written so far are titled: "Chomsky's Plausible Alternative," "What Every Mother Knows," "Johnny and the Critical Period," "The Faith and Dr. Freud," "The War on War on War," and "The Structure of Street Violence."

SUMMER FORUM: Please respond by July 15

Gordon Burghardt, one of our new Executive Board members, is the coordinator of the Summer Forum on "Human Ethology and Animal Rights." He proposed the following questions for your consideration. Please respond in writing to him: Dept of Psychology, University of Tennessee, Knoxville TN 37916.

1) What, if any, contribution could or should human ethology make to the debate on treatment and use of nonhuman animals in research?

2) Is it important for human ethologists to support behavioral research on all animals and in all contexts or should they mainly be concerned with primates, field studies, painless "experiments," or qualify their support in other ways?

3) How do the issues of "animal" and research ethics relate to the conservation and study of endangered nonhuman and human populations?

SPRING FORUM

Since we had addressed the "State of Human Ethology" in the Winter Forum, it was not surprising to have a dearth of response to our Spring Forum topic as to whether Sociobiology has reached its zenith. The two questions were very similar and perhaps we had already said what was to be said at this time. And as it so happened, fortuitously, the latter question was interestingly bundled in a current review by S.L. Washburn of Kenneth Bock's recent book. The forgoing, by permission of the publisher, is a reprint verbatim of the review for your interest and consideration.

DESIGNER GENES

HUMAN NATURE AND HISTORY: A RESPONSE TO SOCIOBIOLOGY. by Kenneth Bock. Columbia University Press. 241 pp.

Reviewed by S.L. Washburn, Professor of Anthropology
University of California, Berkeley

--Reprinted with permission from The New York Review of Books.
Copyright 1981 Nyrev, Inc. 28(6), 39-40, 1981.

Useful working relations between biology and the social sciences have proved exceedingly difficult to maintain. This may seem surprising because of their common interests. The social sciences deal with the behavior of human beings, and biology

contributes to the understanding of the way human beings function. Demography and the health sciences have both biological and social roots. Modern psychiatry is both biological and social. A large and fundamental part of modern science involves the use of laboratory animals to aid in the solution of human problems.

The difficulties in the relations of the biological and the social are not of a general nature. They are specifically related to the interpretations of the history of human cultures. Kenneth Bock, a professor of sociology, believes that the wide diversity of human cultures and the rapid pace of human history both show that human actions have constructed the histories and that the explanation of these actions cannot be found in "the supposedly tougher realities of organic control."

Most social scientists probably thought that social and historical analysis was freed from evolution, biological analogy, racism, and eugenics many years ago. Recently, however, sociobiology has claimed to explain much of human behavior and has vigorously attacked the idea of a largely independent social science. In Human Nature and History Kenneth Bock has replied to that attack by showing the way human actions make history and by demonstrating again and again that this history cannot be explained by genetic or other biological factors. For example, in less than two hundred years there has been a revolution in methods of transportation. The history of trains, automobiles, and airplanes helps us to understand the human actions which led to this rapid transformation. Changes in technology certainly affect the way people live, but we would learn nothing from biology about the causes of these changes.

The same point may be made when we consider the human ability to speak. Even our closest ape relatives cannot learn to speak, but human beings learn to speak so easily that it is only in the rarest cases that learning to do so is prevented. Parts of the brain have evolved to make this learning easy, and human beings can learn any language. But compared to biology, languages change very rapidly, and the humanist is well advised to consider linguistic history and the differences among languages without feeling that the evolution of the brain has much to contribute to these subjects. Indeed, it is clear that part of the confusion between biology and history lies in the nature of the questions being investigated. Biology is essential in the study of human origins: bipedalism, tool using, hunting, brain size, and ways of life hundreds of thousands of years ago. Biology also is essential to understanding the way the body works. But there is no evidence that biological change caused the historical events of the last few thousand years, or in the much shorter time spans in which there are rich records of human history.

As Bock points out, sociobiologists seem upset that their new formulations have not received an enthusiastic reception from historians, social scientists, and philosophers, and his book shows why this is the case. A large part of the reluctance to accept

sociobiology is owing to the fact that it appears to repeat the errors of the past. It is important to remember that biological explanations of human behavior have been used to justify slavery, imperialism, racism, genocide, and to oppose equal rights or ERA. The appalling misuse of biology in recent human history is reviewed in Stephan Chorover's From Genesis to Genocide (1979). Anyone who reads that book will have a vivid picture of why one should be extremely careful before accepting a new biological explanation of historic facts. For example, nothing is gained by substituting modern pseudobiology for Galton's ideas on racial inferiority.

Bock sees several major factors which make it highly unlikely that humanists will find sociobiology useful. Sociobiologists maintain that a science that is useful in the study of nonhuman social behavior must also be useful in the study of human social behavior. Here the issue is that biologists and humanists are studying different kinds of problems. In Wilson's elegant studies of insect societies, social behavior is largely genetically determined, has existed for very long periods of time, and is usefully regarded as the product of natural selection. In marked contrast, human ways of life are very recent from an evolutionary point of view, are learned, and may change rapidly. In this country, for example, attitudes on slavery changed drastically in less than one hundred years -- but the so-called slaves in insect communities have no way of altering their social situation.

Many sociobiologists attribute the unwillingness of humanists to accept biological solutions of human history to the desire to keep the brutes at a safe distance. Sociobiologists seem to feel that they are delivering a repugnant message that is being repudiated for subjective reasons. But Bock shows at some length that notions about the relations of human beings and other animals have a long tradition in European history. At different times animals have been regarded as superior, inferior, or some strange mixture of the two, but the idea of a chain of being connecting all the various forms of life has taken many forms and goes back to Aristotle. There is nothing new in insisting on a connection between human beings and other animals.

Lately, sociobiologists and some of the more traditional biologists have urged a return to Darwinism, and have insisted in no uncertain terms that the study of human social behavior should follow a Darwinian model. Bock describes "a note of true exasperation" among sociobiologists when this advice is not followed. However, he shows that "the idea of social and cultural development was shared by Darwin and humanists of his day, and it should be clear that Darwin received the idea from the humanists, and not the reverse." Cultural evolutionists supplied the evidence for natural selection in human history, and Darwin simply relied on the works of such men as E.B. Taylor, J.F. McLennan, and Sir John Lubbock. There has never been an idea of fixity in social and historical studies, and the nineteenth century was committed to the idea of change and progress.

The contradiction may be illustrated by the contrast of Darwin's contributions to biology and his use of the history of his day. When Darwin added the idea of natural selection to biology he supported it by detailed evidence. He provided a concept which revolutionized much of biology and has continued to be useful to the present day. Concerning social evolution he provided nothing new, and the concepts he borrowed have proven useless. The building of supposedly evolutionary sequences was under way before Darwin, and it took a major effort to remove these misunderstandings and found modern social science on real history and social facts.

In short, Darwin made major biological contributions that are still useful. In historical understanding, he was a typical Englishman of his day. He believed that the English were biologically and morally superior, that barbarians were incapable of higher morality or a sense of beauty. He accepted the idea that every trait in the sequence of savagery, barbarism, and civilization could be found in contemporary peoples, and so an evolutionary order could be constructed. Darwin believed that the order savage-woman-boy-man represented biological reality, a hierarchical order of the intellect. As Bock points out, in Darwin's time many humanists "realized the futility of biological accounts of cultural difference and were looking, at this time, for historical explanations for the rise of civilizations." The roots of what would develop into modern social science were well established by Darwin's time -- he simply paid no attention to them.

It is clear why Darwin's social evolutionary thoughts represented no advance over those of many of his contemporaries. Not only do they offer no foundations for the further development of the understanding of human history, but even on the biological side Darwin provides no firm foundation unless his ideas are qualified in major ways. For example, evolution as a result of use and disuse is now described as "Lamarckian," but Darwin believed in the evolutionary effects of use and disuse. Darwin described how the jaws and teeth of our early ancestors were reduced as a result of disuse, "as we may feel almost sure from innumerable analogous cases." The urge to return to Darwin is based on a very selective reading of the works of a great nineteenth-century biologist. It is easy to see why the return appeals to sociobiologists because they recommend the same methods of evolutionary reconstruction and do not seem to be disturbed by sexism, biological bias, or the racist implications of their theory.

Turning from the Darwinian heritage and nineteenth-century problems, Bock states that "it seems clear, in any event, that the core elements of sociobiological theory that distinguish it from older human-nature studies are the arguments 1) that human nature consists, to some important extent, in a set of genetic components that control social behavior, and 2) that the components are the products of natural selection." People act for their own reproductive advantage, that is for the survival of their own genes or the genes of their relatives -- what is called "kin selection."

This in turn provides a basis for a genetic explanation of altruistic behavior and is seen as an advance over earlier formulations of natural science.

The fundamental problem with this formulation of sociobiological theory is that no genes are known for altruism, aggression, or other categories of behavior. As a genetic theory without genes, sociobiology has great difficulty in presenting any substantial evidence for its numerous explanations. The ability to learn would, presumably, be much more advantageous to human beings than a limited ability to learn altruism. An example might make the issues clear. E.O. Wilson (1977) has suggested that there might be genes for homosexuality and that these could be selected, according to the theory of kin selection, if people possessing the genes helped their relatives. But it would certainly come as a surprise to the clients of the gay bars in San Francisco that they are spending their time helping relatives. Homosexual behavior is common in many cultures and its frequency depends on customs, not genes. Sociobiological explanations of human behavior are often ingenious, but, unless the suggestions are tested, natural selection becomes sort of a parlor game.

Stressing that the function of human social behavior is to increase the representation of one's own genes in the coming generations may justify racism, social hierarchy, class structure, and slavery. In no case does acting to preserve one's own genes lead to altruistic acts for those who are far apart from one another, whether in space or in society. It must be remembered that the whole concept of kin selection depends on social activities taking place with one's kin. As populations become larger and larger and individuals more mobile, kin selection becomes less and less important. Sociobiology is built on a rapidly disappearing base.

Historians, social scientists, and those concerned with understanding human social behavior try to understand the events of recent history and the difference between various cultures. The differences between Iran and the US, for instance, are seen as the products of human actions in different circumstances. Sociobiologists argue that the differences might be due to some unknown genes, and that great effort should be made to discover the genes which predispose to cultural differences. Since there is overwhelming evidence -- admitted by most sociobiologists -- that cultural differences are recent, rapidly changing, and learned, the search for predisposing genes seems futile.

Further, sociobiologists argue that the differences among cultures are unimportant. Wilson has suggested that visitors from another planet, far more intelligent and sensitive than ourselves, might find us uninteresting, just a variant of a basic mammalian theme. They might then "turn to study the more theoretically challenging societies of ants and termites." The intelligent and sensitive, in short, would share Wilson's earlier biological

interests and would not be particularly drawn to the study of human behavior. It is true that if people are uninterested in history and cultural difference and are unable to see much importance in the difference between a Bushman hut and New York City, then humanists and social scientists will have no subject matter. Obviously, the person who denies that social science has a useful subject matter cannot be expected to understand social facts or the differences between history and pseudo-evolutionary reconstructions. Sociobiologists have limited the subject matter they are willing to consider in such a way that no bridge exists between their genetic theory and recent human history.

Bock points out that "we can compare the histories of cultures only if we are aware that cultures exist." He describes the long intellectual history which led to abandoning the explanation of social and cultural phenomena by biology, race, or environment. He clearly shows why sociobiology is in essence a retreat to these earlier positions. Bock concludes by stressing that history is the record of actions which resulted in the various courses of actual history; they took the actions which led to technical progress and social change. We are not aided in understanding the events of history by theories of human nature, genetic theory, or human biology.

Bock's historical arguments are clear and vigorously presented, and are supported by an appendix of thirty pages of references and notes. Some of his points are difficult to summarize, and another reviewer might have chosen different examples. However, I think there would be no confusion over the main issue. Human history cannot be understood without studying the actions and thoughts of human beings. The universals of biology or genetic theory cannot account for recent history or the differences between cultures. It is in uniquely human history that the clues to human nature reside. Any understanding we may have of the social problems of the world today must come from studying human actions, not from postulating genes to replace the postulated instincts of many years ago.

Chorover, S. From Genesis to Genocide. MIT Press, 1979.

Wilson, E.O. Biology and the social sciences. Daedalus, Fall 1977, 127-140.

| |
|--|
| <u>FORUM UPDATE:</u> <u>PREVIOUS TOPIC</u> |
|--|

Course Offering:

AGGRESSION

Sidney Perloe, Dept of Psychology, Haverford College

(Note: Recommended but not required readings are enclosed within parentheses.)

I. Introduction (Week 1)

1. Harrison, A. Surviving the journal article. (This is a useful little paper about how to read articles in psychological journals; you should read it early in the semester.)

II. Defining Aggression (Week 1)

1. Classify situations on handout and bring written definition to class. Do this before reading the assignment. Go over your classification and definitions after reading the assignment and note any changes you think are necessary.
2. Bandura, A. Aggression: A social learning analysis. Chapter 1, pp. 1-11 (up to section on Theoretical Analyses of Aggression).
3. (Moyer, K.E. Kinds of aggression and their physiological basis. Photocopy from Communications in Behavioral Biology, Part A. Vol. 2, 1968, 65-87. This is a relatively advanced article. It is the source of part of the lecture.)
4. Paul, L., Miley, W. and Baenninger, R. Mouse-killing by rats: The roles of hunger and thirst in its initiation and maintenance. J. Comparative and Physiological Psychology, 1971, 76, 242-249.

Note: There are several purposes in assigning this article. First, it is relevant to the distinction between predatory aggression and some other kind of aggression. Which other kind of aggression do you think is involved? How separate is it from predatory (i.e. hunger related) aggression? Second, the article illustrates variation in aggressive behavior that is related to both the genotypes of the animals involved and to their experiences. Third, it describes experiments fairly completely. Most of your other readings will contain only abbreviated descriptions of experiments. Try to identify the independent and dependent variables, and the controls in the studies. If you have read Harrison's paper before this article, it might be easier going.

III. Overview of Theories of Aggression (Week 2)

1. Baron, R. op.cit., chap. 1, pp. 15-38.
2. (Eibl-Eibesfeldt, I. Love and Hate, chap. 5, pp. 63-89.)

3. (Bandura, A. Aggression, chap. 1, pp. 39-59, starting with section entitled "Social Learning Theories.")

Note: The two recommended readings represent endpoints of a dimension along which one can arrange explanations of aggression. There are several positions falling between the two. We will deal with the details of each position along the continuum at various points during the semester. There are no disinterested overviews of all the positions. Baron presents a misleading account of Freud's views. Bandura presents an overview in an unassigned part of his first chapter which misrepresents the ethological view and selects evidence to support his view. More polemical presentations of the ethological instinct position can be found in the writings of Robert Ardrey, especially in African Genesis. Similarly, polemical presentation of the opposite extreme view can be found in Ashley Montague's books, especially The Nature of Human Aggression. It is too early for you to come to conclusions about these positions. By the end of the semester you should be able to decide which, if any, of them best represent the imperfect state of our understanding of aggression.

IV. Biological Aspects of Aggression (Weeks 2-4)

Note: Our examination of the biological aspects of aggression begins with the theory of evolution because it is the framework out of which grow all modern biological approaches to behavior. We move on to some speculations about how humans might have evolved in a way which made them more likely to act aggressively or altruistically in certain contexts. These apparently opposite forms of behavior may be seen as complementary parts of the same adaptive strategy, at least in humans. Then we get into some of the details of classical ethology described briefly by Eibl-Eibesfeldt in the readings of the previous unit.

Next we turn to data illustrating the genetic transmission of behavioral tendencies relevant to aggression and to a modern theoretical approach to the general process of the genetic transmission of behavioral tendencies. This examination of behavior genetics will help us to assess the validity of the claims made by the classical ethologists and kindred spirits.

Finally, we will look at some of the bodily structures and processes involved in the production of aggressive behavior. Whatever effect genes have on aggressive behavior is most likely mediated by these structures and their operation. There is disagreement about the extent to which this physiological information supports any particular theory of aggression.

Many ideas and observations will be repeated in the various parts of this unit and will overlap concerns in the previous unit. This is because the evolutionary theorists, the ethologists, the behavior geneticists and the physiological psychologists are all wrestling with the same set of questions. By the time you get to the end of this unit you should be able to state these questions and see the relationships among the several approaches represented in the readings.

Evolutionary Theory

1. (Darwin, C. On the Origin of the Species, chap. 3, pp. 60-79, chap. 4, pp. 80-90, up to illustration section. Note: If you are already familiar with Darwin's theory, you can skip this reading. If not, it should help you in appreciating some aspects of the lectures and the next reading.)
2. Alcock, J. Animal Behavior, chap. 1, pp. 1-17.
3. (Fishbein, H.D. Evolution, Development and Children's Learning. Chap. 1, pp. 1-10; chap. 2, pp. 21-45. This is a difficult reading, but it is well worth the effort. It provides a fuller introduction to evolutionary theory than the assigned reading.)

The Evolution of Aggression and Altruism

1. Van den Berghe, P. Bringing beasts back in: Toward a biosocial theory of aggression. American Sociological Review, 1974, 39, pp. 777-778. (Contrary to Van den Berghe, recent evidence indicates that chimps are territorial, with small groups of males defending a common territory and making occasional trips into neighboring territories where they attack (and sometimes kill) resident males.)
2. Bigelow, R. Relevance of ethology to human aggressiveness, in L. Tiger (Ed.). Understanding aggression, International Social Science Journal, 1971, 23, pp. 18-26. (A fuller version of the same thesis may be found in Bigelow, R. The evolution of cooperation, aggression and self-control. From J.R. Cole and D.D. Jensen (Eds.) Nebraska Symposium on Motivation, 1972.)
3. Wilson, E.O. Human Decency is Animal. N.Y. Times Magazine, 1975.

Classical Ethology

1. Bermant, G. and Alcock, J. Three perspectives on animal behavior. From G. Bermant (Ed.) Perspectives on Animal

- Behavior, chap. 1. Read pp. 20-45. This interesting reading compares three approaches to animal behavior, the ethological, physiological and psychological. It provides a good framework for understanding the differences among the approaches, partly by describing the history of each approach and partly by describing current concepts. It also tries to integrate the three into a unified approach.
2. Eibl-Eibesfeldt, I. "Ontogenetic and maturational studies of aggressive behavior". From C. Clemente and D. Lindsley (Eds.) Brain Functions V: Aggression and Defense, pp. 57-71. (Dr. Eibl-Eibesfeldt is Lorenz' successor. He applies the classical ethological concepts to aggressive behavior, with many examples.)
 3. Alcock, J. op. cit. chap. 3, pp 50-103.
 4. Burghardt, G.M. "Instinct and innate behavior: Toward an ethological psychology". From J. Nevin (Ed.) The Study of Behavior, chap. 9, pp. 323-400. This long, detailed chapter provides an excellent summary of concepts involved in the study of genetic patterning of behavior. It is tough going, but worth the effort for those interested in the zoological approach to behavior.)

Behavior Genetics

1. Gray, J. The Psychology of Fear and Stress, chap. 4, pp. 35-52. (This chapter is extremely valuable in three ways. First, it deals with the concepts involved in studies of genetic determinants of behavior. Second, it deals with problems of measuring psychological variables. Third, it shows how theoretical formulations help us to discover new relationships we might never have tried to find without the theory.)
2. Alcock, J. op. cit., chap. 2, pp. 18-49.
3. Murphey, R.M. Genetic correlates of behavior. From G. Bermant (Ed.) Perspectives on Animal Behavior. Read pp. 72-83; skim 83-94, read 94-101. (This chapter presents some complex ideas about how one should think about the nature-nurture controversy. It emphasizes the pitfalls in generalizing from studies which illustrate the effects of genetic variation on behavior and takes for granted the effects of ignoring the effects of genetic variation. Try to be sensitive to both sets of dangers. How should one formulate questions about the importance of genetic and environmental influences on some behavior in which you are interested, e.g. aggression.)

Physiological Aspects of Aggression

1. Baron, R. op. cit., chap. 5, sec. B from pp. 213-222.
2. Hutt, C. Males and females, chap. 4, pp. 45-63, chap. 8, pp. 106-117.
3. Gray, J. op. cit., chap. 7, pp. 83-96.
4. (Mark, U. and Ervin, F. Violence and the Brain. Chaps. 2,7, pp. 13-25, 92-110.)

V. Emotion (Weeks 4-5)

Note: This topic might be seen as a continuation of the examination of the biological aspects of aggression and behavior in general, yet it is particularly psychological as well. Try to tie the concepts here with the operation of the phylogenetic adaptations discussed by the ethologists.

The Expression of Emotion

1. Gray, J., op. cit., chaps. 1-3, pp. 1-34.
2. Hebb, D. Emotion in man and animal: An analysis of the intuitive processes of recognition, Psychological Review, 1946, 53, pp. 88-106.

The Production of Emotion

1. Cofer, C. Motivation and Emotion, chap. 4, pp. 56-73.
2. Gray, J., op. cit., chap. 5, (6), pp. 53-67, (68-82).

VI. Learning (Weeks 6-8)

Basic Phenomena

1. Rachlin, H. Introduction to Modern Behavior, chap. 2, pp. 57-102.

Rachlin's book is an excellent high level introductory presentation of the basic phenomena of learning as well as an introduction to the "radical behaviorist" (Skinnerian) approach to psychology. For a fuller taste of the latter, you might want to read the section of the last chapter on self-control. Viewed conventionally, self-control seems to demand explanation in terms of internal processes such as will, ego-strength, etc. Rachlin shows that this might not be necessary and that stupid pigeons apparently can demonstrate self-control. Chapter 1 provides a brief history of the development of psychology from the time of the

Greek philosophers to the advent of Behaviorism. It is a good concise account.

2. Rachlin, H. op. cit., chap. 3, pp. 103-133, chap. 5 (section on stimulus control), pp. 184-196, chap. 6 (section on dysfunctional behavior), pp. 196-101.
3. Hoffman, H. and DePaulo, P. Behavioral control by an imprinting stimulus. American Scientist, 1977, 65, 58-66.

The Problem of Avoidance

1. Rachlin, H. op. cit., chap. 3 (section on punishment), pp. 133-150
2. Gray, J. chap. 11, pp. 162-180.

Learning in an Evolutionary Context

1. Rachlin, H. op. cit., chap. 4.

In the first edition of his book, Rachlin's main attempt to place learning in an evolutionary framework was the paragraph found on page 75. Here he wrote that learning evolved because it helped animals to adapt to short-term environmental changes. From that point on he, like other students of learning, examined learning...

[Several paragraphs of elucidation of the last statement have been omitted because of their length.]

Lest this comment seem too critical of Rachlin, it should be recognized how easy it would have been for him to maintain his theoretical orientation by omitting the embarrassing data in chap. 4. It is greatly to his credit as a scientist and teacher that he presents the unwelcome evidence in so clear and unbiased a fashion.

2. Bolles, R. The comparative psychology of learning: The selective association principle and some problems with "general" laws of learning. In G. Bermant (Ed.) Perspectives on Animal Behavior, pp. 288-306.

Bolles, like Rachlin, is a behaviorist who studies animal learning. However, instead of reluctantly admitting the importance of the research described by Rachlin, he is an enthusiastic convert to the neo-Darwinian position supported by this research. Instead of tacking some problem raising studies to a conventional treatment of animal learning, he has created a new view of one aspect of animal learning, namely avoidance learning. His position is controversial -- as are all positions in this period of major reorientation of psychology.

3. (Testa, T.J. Causal relations and the acquisition of avoidance responses. Psychological Review, 1974, 61, pp. 491-503.

This difficult paper is another step in the direction of reorganizing learning theory in light of recent evidence on the impact of species-typical behavior tendencies on learning. It is important because it provides a way of integrating much conventional theory into the new approach. It discusses how non-specific learning mechanisms, of the sort usually seen in instrumental and classical conditioning, might have evolved. It also discusses the conditions under which these general mechanisms are brought into action by organisms. Perhaps the approach taken by Testa will provide the synthesis of the old and the new in the study of learning. If you can digest the paper, you will have reached a higher level of understanding of the evolutionary context of learning that was conceivable only a few years ago.)

MIDTERM EXAM

SPRING VACATION

(Week 10)

1. Buck, R. Aggression, chap. 5. Human Motivation and Emotion. (The whole chapter provides a good review of various explanations of aggression, but the part directly relevant to this unit is found on pp. 163-178.
2. Baron, R. op. cit., pp. 98-111, section on Exposure to Aggressive Models.

U.II. Psychoanalytic Theory (Weeks 10-12)

Unconscious Processes

1. Brenner, C. An Elementary Textbook of Psychoanalysis. Chap. 1, pp. 1-14, Chap. 6, pp. 127-141.

Drives and Instincts

1. Brenner, op. cit., Chaps. 2-3, pp. 5-56.

Defenses and the Ego

1. Brenner, op. cit., Chaps. 4,5,7, pp. 57-126, 149-170.

We will not discuss Freud's theory of dreams or symptom formation in class, but the material is assigned because it provides the major application of Freud's theory. One cannot understand the theory without understanding these

applications. It is probably best to read these chapters before going on to Civilization and its Discontents.

Freud on Aggression

1. Freud, S. Civilization and its Discontents. Chaps. 2,3, pp. 21-45, Chaps. 5-7, pp. 55-80, last section of Chap. 8, pp. 86-92.

Freud's style is more discursive than true of the other readings you have done. He discusses frustration and aggression, his theory of instincts and philosophical considerations simultaneously. For this reason, it might be helpful to give you an idea of the issues in each chapter which are relevant to our interests. This should help you to organize the material...

[The issues, chapter-by-chapter, were excluded for space reasons.]

UIII. Motivation (Weeks 12-13)

Homeostatic Theories of Motivation

1. Review lecture and reading notes about ethological model of how fixed action patterns occur.
2. Cofer, C. Motivation and Emotion, chaps. 1-3, pp. 1-55.

Incentive Theories of Motivation

1. Cofer, C., op. cit., chaps. 5-7, pp. 74-134.
2. Moyer, K. Psychology of Aggression, chap. 1, pp. 1-22. This chapter presents the central neural system theory of emotion and motivation to which we referred earlier this semester. Although Moyer is primarily interested in how the theory applies to aggression, you should see how it provides a general way of thinking about the effects of drives and incentives.

IX. Frustration and Conflict (Weeks 14-15)

Defining Frustration

Neal Miller's Conflict Model

1. Gray, J. op. cit., chaps. 9-10, pp. 115-161. (We interrupt our discussion of frustration to discuss conflict because conflict is one of the most important sources of frustration. Although Miller did not apply the model in trying to explain the effects of frustration on aggression, it has been used this way by other theorists. Specifically,

it is used to explain the way in which the tendency to make an aggressive response and the tendency to inhibit an aggressive response combine.

The Frustration-Aggression Hypothesis

1. Baron, R.A. op. cit., pp. 77-98, pp. 203-208.

X. Controlling Aggression (Week 15)

1. Baron, R.A. op. cit., pp. 208-213, chap. 6, pp. 225-275.

BOOK REVIEWS

THE ORIGINS AND RISE OF ETHOLOGY. by W.H. Thorpe. London: Heinemann, New York: Praeger. 174 pp. (1979)

Reviewed by W. C. McGrew, Department of Psychology
University of Stirling, Scotland

Doubtless all of us are interested in our scientific roots -- we can only fully grasp our present circumstances by knowing from whence we came. This is especially true for a young discipline such as human ethology, which is both an offshoot (of studies of non-human species) and a hybrid (with cross-fertilizations from anthropology and psychology). The problem is, however, that it is hard enough to keep up with new developments, much less delve into the archives.

W.H. Thorpe's new book provides a timely solution: In this slim volume can be found all of the facts needed to inform the newcomer, as well as enough new twists to amuse the old-timer. Both types of reader will admire the synthesis, especially the drawing together of European strands which English-speaking ethologists may have failed to appreciate because of linguistic limitations. The book is an excellent reference work to which to send undergraduates in need of historical perspective. Similarly, it should be required reading for graduate students starting research careers in human ethology.

As the title suggests, the book is divided into halves. The first starts with natural history, but moves quickly into the systematic study of animal behavior, and surprises soon follow. Ethology began in France, and its founder was C.G. Leroy. Spalding's neglected work on chicks is given proper credit, but Lloyd Morgan is perhaps overly-lionized. The American entomologist, Wheeler, is given credit for being the first to use

"ethology" in its present sense. However, it is the 30-page chapter on ethology in continental Europe which most impressed me. The Big Three of Van Frisch, Lorenz, and Tinbergen are treated with due respect but not reverence, and some of the best anecdotes occur here.

The second half of the book deals less with persons and more with concepts and research groups. Most of the classical terms are clearly defined and succinctly discussed, from "reflex" to "social releaser." A chapter of almost 40 pages attempts to present the current position of ethology across the board -- a formidable task. Given that, it is not surprising that a reviewer is bound to disagree at some points: Otto Kohler is given credit for demonstrating numerical abilities in birds, though it seems likely that his findings can be more simply explained. The rise of "pongo-linguistics" is treated uncritically, as if the capacities of Washoe and Co. were clear. There is a strange misunderstanding about sociobiology, purporting that it attempts to deal only with "social" species. Certain figures are neglected, e.g., Lehrman is given only a single passing mention. However, these are trivial in terms of the scale of the book as a whole.

Some points about form (rather than content) deserve making: The references are listed after each chapter instead of in an overall list at the end; surely this inconvenience is unnecessary in such a short book. The index is of minimal use, except for names of persons: There is no entry for "stickleback" or "honey bee," nor for "sign-stimulus" or "Umwelt." However, there are some charming portraits of founding-father-figures; even Heinroth seems close to breaking into a smile.

DARWINISM AND HUMAN AFFAIRS. by R.D. Alexander. Seattle:
University of Washington Press. 317 pp. (1979)

Reviewed by Clara Jones, Department of Psychology
Laboure Junior College, Boston

For a decade or so, Richard Alexander has been a major spokesman for the young discipline of "sociobiology." Many recent Ph.D.'s in the United States were first introduced to the "genetical theory of social behavior" through Alexander's manuscripts in unpublished form, most notably his papers on the evolution of social behavior and sex ratio. His own students (or, his "phenotypic offspring" as Alexander once referred to them at a meeting), include scientists whose theoretical and experimental work have advanced the understanding of social evolution. Mary Jane West-Eberhard and the late Jasper Loftus-Hills come first to mind.

In his new book, Darwinism and Human Affairs, Alexander analyzes human behavior in sociobiological terms, in particular arguing that the various aspects of culture (patterns of kinship, law, etc.) have evolved by Darwinian processes (selection, mutation, etc.) resulting in differential survival and reproductive success ("fitness") of individuals. The first chapter provides a review of Darwinian theory and its history, including a defense of evolution addressed to its current critics, "philosophers and other academic and intellectual nonbiologists." Those readers familiar with evolutionary theory and its extensions by sociobiologists may choose to skip this chapter; but, it is worth note that Alexander has apparently modified his earlier position that predation is a necessary factor for the evolution of groups.

Chapter one, like later ones, suffers from the complexity of the author's dual purpose, to provide at once a theory of human cultural evolution and a defense of that point of view. It is at times a rigorous task to separate Alexander's two lines of argument, and some readers may put the book aside in bafflement. I hope that does not happen

Chapter two, in particular, deserves to be read and digested. Alexander attempts to logically demonstrate a relationship between organic and cultural evolution, critically comparing the mechanisms of each. In a form that some will label paradigmatic, others, circular, the author attempts to show that cultural and genetic processes are interdependent and that culture derives from the same processes that form other organisms' phenotypes and ontogenies. In Alexander's words, culture "is itself a product of selection; it appeared because those genes that reproduced via phenotypes outsurvived their alternatives in the environment of history." The author may intend to say, "via particular phenotypes," for one wonders by what other manner than phenotypes genes manifest themselves.

Chapter three discusses various cultural patterns (e.g., incest avoidance), interpreting these in terms of ultimate (i.e., evolutionary) effects. Chapter four is visionary, a broad discussion of "evolution, law, and justice."

It is upon chapter two that I wish to focus in order to consider Alexander's hypothesis, similar to one mentioned by Skinner several years ago in Beyond Freedom and Dignity, that the behavioral mechanism of social learning "couples" genotypes and the "environment of symbols, rules, traditions, and other products of human inventiveness" known collectively as culture. At some length, Alexander argues that cultural patterns are the consequence of (social) "environmental consistency" suggesting to this reader that culture is a function of exogenous factors. Alexander goes on to say, however, that culture, or at least the "capacity" for culture, is genetically derived to whatever degree socially learned behavior is not a tabula rasa. Surely it is an understatement to suggest that Alexander "begs the question" with these ideas. To what

extent, one might implore, is socially learned behavior not a blank slate? How can this question be investigated empirically? What does "capacity" mean physiologically? Alexander's view of the "capacity" for culture seems equivalent to that proposed for human linguistic performance. It is, according to this argument, the ability to manipulate learned "symbols and rules" that is heritable; which specific symbols and rules are learned will be determined proximately.

Alexander's elaboration of these ideas is inadequate, I think resulting in part from an unclear explanation of the learning process itself. On the one hand, he speaks of learning as "phenotypic flexibility" for "adaptation to immediate contingencies" (a psychological view of learning); while, on the other, he states that "the commands given by genes are for the production of given phenotypic responses in given environments" (a biological view of phenotype). He does not resolve this contradiction which sounds like a neoteric version of the nature-nurture fallacy.

Learning may be viewed as a process of pairing stimuli encountered through experience to responses which are themselves unlearned but may be modifiable according to principles of imprinting, sensitive periods, combination and recombination of motor patterns, and physical environmental factors (e.g., humidity and food quality). Human phenotypes, then, may be "shaped" (as per instrumental conditioning) by the association between (relatively invariant) "action patterns" and (relatively variable) exogenous stimuli. As Alexander points out, shaping will occur by the process of social learning according to the laws of conditioning and reinforcement (primary and secondary). It might be added that human phenotypes are also shaped by habituation, classical and observational and insight learning, and concrete and formal operational thought. Since it is conventional evolutionary theory to assume that the phenotype is the genotype's range of expression in interaction with different environments, learning processes in humans and animals can be viewed simply as mechanisms of environmental interaction.

Alexander suggests repeatedly that human phenotypes evolve in response to social and physical selective forces. Yet, he makes this curious statement: "the important point...is that in the absence of learning one expects social responses, and the phenotypes which are their objects, to be singular and uniform, never individualized, among all the members of a population or species." Is Alexander thinking of inbred animals? is he conceptualizing a "singular and uniform" genotype "among all the members of a population or species," in particular, humans? In what manner might this condition have evolved, particularly if physical environmental factors have been important for humans evolutionarily?

Despite confusing assertions, Alexander holds most consistently that the phenotype is a result of the interaction between genotype and environment (physical and social) and suggests that the

consequences of interaction are finite but not deterministic. Thus, a variety of genotypes in interaction with the environment may produce a variety of phenotypes or uniform phenotypes; and, uniform genotypes in interaction with the environment may produce a variety of phenotypes or uniform phenotypes. Presumably, the likelihoods of given outcomes are quantifiable to the extent that endogenous and exogenous factors may be measured and to the extent that the inhibiting and facilitating effects of their various interactions may be described.

These and other essential ideas arise from a reading of Darwinism and Human Affairs. As the poet, Auden, wrote "science, like art, is a plaything with truths." The "art" in the "science" of human sociobiology entails the most confident reconstruction of hominid evolution that is consistent with demonstrated "truths" of ethology and behavioral ecology. Alexander is to be applauded for identifying the nature and direction of such a reconstruction, even if he has revealed more puzzles than he has solved.

MINI COMMUNICATION

This new subsection to our Newsletter is enjoying instant success with your help. Two such communications have been submitted, one of which appears below and the other is scheduled for our summer issue. The prospects for interaction that these preliminary papers will afford should more than outweigh any feelings of vulnerability that may arise. Let's see that pilot study, idea, concept or theory you have had incubating. The objective is short, succinct papers which inform and would benefit from the input of peers. The present Mini Communication is a laudible example. Vocal intonation is certainly a difficult subject to address methodologically but of seemingly great importance in social exchanges. The author would appreciate your comments and suggestions; write directly to him.

Ethogram for Vocal Intonation Accompanying Speech

Ronald M. Weigel
Human Ethology Laboratory
Neuropsychiatric Institute
University of California-Los Angeles

Vocal intonation patterns accompanying speech appear to have important communicative significance. A command delivered with a harsh, loud, low-pitched tone of voice is likely to elicit a different response than the same words delivered in a soft, high-pitched tone of voice.

Presented below is a classification system for 14 identifiable frequent vocal intonation patterns accompanying speech in peer

interactions among preschool children. Distinctions among categories are made on the basis of the physical properties of the speech utterances, along nine dimensions: 1) volume, 2) stress patterns on individual words, 3) abruptness of onset of utterance, 4) abruptness of offset, 5) pitch, 6) pitch variation within utterance, 7) speed at which utterance is delivered, 8) clarity of sound (i.e., presence or absence of overtones), and 9) smoothness (versus choppiness) of interword (or intersyllable) transition. These physical properties of sound have also been identified in studies of animal vocalizations (e.g., Marler 1955; Rowell and Hinde 1962; Andrew 1963) and studies of human vocal intonation (e.g., Crystal 1969), and appear to reflect differences in motivational and functional qualities of vocal signals.

(1) HARSH: loud, uniformly hard stress on all or most words, with abrupt onset and offset, low pitch, slight overtones, and choppy interword transition. Speaker appears tense, and verbalization has a piercing, "invasive" quality.

(2,3) EMPHATIC: loud, with some words stressed, low pitch, clear tonal quality, and choppy interword transition. Fast emphatic and slow emphatic are differentiated on the basis of speed of delivery. Similar to harsh, but lacking the uniformly hard stress, overtones of harsh.

(4) YELP: loud, with some words stressed, abrupt onset, high pitch, fast speed of delivery, clear tonal quality, and choppy interword transition. Similar to fast emphatic, except pitch is high instead of low. Similar to excited, except interword transition is choppy, not smooth.

(5) WAUER: characterized by drawn-out syllables, with more than one note per syllable. Pitch variation is high, and interword transition is slurred. Often accompanies other tonal categories within the same sentence, particularly slow emphatic.

(6) WHINE: low volume, soft stress pattern, gradual onset and offset, high pitch, slow speed of delivery, overtones, slurred interword transition, and a nasal quality to the sound delivered. Whine differs from crying in having soft stress (versus hard) and slurred (versus choppy) interword transition.

(7) BOUNCY: low to moderate volume, with some words stressed, gradual onset and offset, high variation in pitch, all in the high pitch range, some cyclicity in pitch variation, clear tonal quality, and smooth interword transition.

(8) HIGH: low volume, soft stress pattern, gradual onset and offset, high pitch, slow speed of delivery, clear tonal quality, and smooth interword transition.

(9) EXCITED: loud, with hard stress pattern, gradual onset and offset, high pitch (usually), a fast delivery (usually), clear tonal

qualities, and smooth interword transition. Speaker appears to be "out of breath."

(10) CRYING: loud volume, moderate stress, abrupt onset, slow speed of delivery, overtones, and choppy interword transition.

(11) SHOUT: very loud, uniform moderate stress, gradual onset and offset, low pitch, very low pitch variation, clear tonal quality, and smooth interword transition. Differs from squeal in having low (versus high) pitch, and from squawk in lacking overtones.

(12) SQUEAL: very loud, moderate stress, abrupt onset, high pitch, clear tonal quality, and smooth interword transition.

(13) SQUAWK: very loud, with moderate stress, low pitch, overtones, and smooth interword transition.

(14) SCREAM: very loud, with moderate stress, high pitch, overtones, and smooth interword transition. Similar to squeal, except that it contains overtones, and to squawk, except that it has a high (versus low) pitch.

A tentative assessment of these categories suggests the following. The majority of these categories occur in agonistic situations. Harsh, (fast and slow) emphatic, waver, and squawk appear to be aggressive or assertive. Yelp, whine, crying, and scream appear to indicate fear or submissiveness. In contrast, the remaining categories (bouncy, high, shout, squeal) appear to be primarily playful or friendly.

Reliability testing is currently in progress. This is not an easy system to learn, but the major problems appear to be associated not with understanding the basic physical properties of each category. Rather, since the physical properties of sound tend to vary along continuous dimensions, it is difficult at times to define the boundaries of each category (e.g., how much "stress" is needed to consider a statement "emphatic"). However, test-retest reliability by the author has been around 88 percent, in the scoring of audiotapes of children's naturally occurring conversations.

Andrew, R.J. The origin and evolution of the calls and facial expressions of the primates. Behaviour, 1963, 20, 1-109.

Crystal, D. Prosodic Systems and Intonation in English. New York: Cambridge University Press, 1969.

Marler, P. Characteristics of some animal calls. Nature, 1955, 176, 6-8.

Rowell, T. and Hinde, R.A. Vocal communication in the rhesus monkey (Macaca mulatta). Proc. Zool. Soc. Lond., 1962, 138, 279-294.

RECENT LITERATURE

Books:

- Alexander, R.D. and Tinkle, D.W. (Eds.) Natural Selection and Social Behavior: Recent Research and New Theory. New York: Chiron, 1981.
- Bernstein, I.S. and Smith, E.O. (Eds.) Primate Ecology and Human Origins: Ecological Influences on Social Organizations. New York: Garland, 1979.
- Burghardt, G.M. and Bekoff, M. (Eds.) The Development of Behavior: Comparative and Evolutionary Aspects. New York: Garland, 1978.
- Dawkins, M.S. Animal Suffering: The Science of Animal Welfare. New York: Methuen, 1980.
- Dickson, W.P. (Ed.) Children's Oral Communication Skills. New York: Academic Press, 1981.
- Erickson, J.G. and Omark, D. (Eds.) Communication Assessment of the Bilingual, Bicultural Child: Issues and Guidelines. Baltimore: University Park Press, 1980.
- Gilmour, R. and Duck, S. (Eds.) The Development of Social Psychology. New York: Academic Press, 1980.
- Heymer, A. Ethological Dictionary: English, German and French. New York: Garland, 1978.
- Lehner, P.N. Handbook of Ethological Methods. New York: Garland, 1979.
- Lumsden, C.J. and Wilson, E.O. Genes, Mind, and Culture: The Coevolutionary Process. Cambridge: Harvard, 1981.
- Malerstein, A.J. and Ahern, M. A Piagetian Model of Character Structure. New York: Human Sciences Press, Sept. 1981.
- Markl, H. and Feldman, M. (Eds.) Evolution of Social Behavior: Hypotheses and Empirical Tests. Dahlem Workshop Report held in Berlin, February 18-22, 1980. Life Sciences Research Report 18. Deerfield Beach, FL: Verlag Chemie International, 1980.
- Mayr, E. and Provine, W.B. (Eds.) The Evolutionary Synthesis: Perspectives on the Unification of Biology. Cambridge: Harvard, 1981.
- Morbeck, M.E., Preuschoft, H. and Gomberg, N. (Eds.) Environment, Behavior, and Morphology: Dynamic Interactions in Primates. Deerfield Beach, FL: Verlag Chemie International, 1979.

- Morse, D.H. Behavioral Mechanisms in Ecology. Cambridge: Harvard, 1980.
- Pettman, R. Biopolitics and International Values. Elmsford, NY: Pergamon, 1980.
- Roy, M.A. (Ed.) Species Identity and Attachment: A Phylogenetic Evaluation. New York: Garland, 1980.
- Seagram, G. and Lendon, R. (Eds.) Furnishing the Mind: A Comparative Study of Cognitive Development in Central Australian Aborigines. Sydney, Australia: Academic Press, 1980.
- Warren, N. (Ed.) Studies in Cross-Cultural Psychology. New York: Academic Press, 1980.

Articles:

- Albury, W.R. Politics and rhetoric in the sociobiology debate. Social Studies of Science, 1980, 10, 519.
- Alexander, R.D. Evolution, social behavior, and ethics. In H.T. Englehardt, Jr., and D. Callahan (Eds.) Knowing and Valuing: The Search for Common Roots. Hastings-on-Hudson, NY: The Hastings Center, 1981.
- Aronfreed, J. Constraint and freedom in the evolution of human nature. Hastings Center Report, 1980, 10, 31-35.
- Capella, J.N. Mutual influence in expressive behavior: Adult-adult and infant-adult dyadic interaction. Psychological Bulletin, 89, 101-132.
- Caplan, A.L. Of mice and men: The human sciences and the humanities. Hastings Center Report, 1980, 10, 38-39.
- Ciolek, T.M. and Kendon, A. Environment and the spatial arrangements of conversational encounters. Sociological Inquiry, 1980, 50, 237-271.
- Donovan, W.L. and Leavitt, L.A. Physiologic correlates of direct and averted gaze. Biological Psychology, 1980, 10, 189-199.
- Egeland, B. and Vaughn, B. Failure of "bond formation" as a cause of abuse, neglect and maltreatment. American Journal of Ortho-psychiatry, 1981, 51, 78-84.
- Eibl-Eibesfeldt, I. Human ethology: Concepts and implications for the sciences of man. Behavioral and Brain Sciences, 1979, 2, 1-57. Followed by commentary and response in the same issue, and in 1980, 3, 615-636.

- Eibl-Eibesfeldt, I. Strategies of social interaction. In R. Plutchik and H. Kellerman (Eds.) Emotion: Theory Research, and Experience. New York: Academic, 1980.
- Ekman, P., Friesen, W., and Ancoli, S. Facial signs of emotional experiences. Journal of Personality and Social Psychology, 1980, 39, 1135-1151.
- Ellyson, S.L., Dovidio, J.F., Corson, R.I. and Uinicur, D.L. Visual dominance behavior in female dyads: Situational and personality factors. Social Psychology Quarterly, 1980, 43, 328-336.
- Fugita, S.S., Hoguebe, M.C., and Wexley, K.N. Perceptions of deception- perceived expertise in detecting deception. Personality and Social Psychology Bulletin, 1980, 6, 637-643.
- Gaulin, S.J.C. and Schlegel, A. Paternal confidence and paternal investment: A cross cultural test of a soc-bio hypothesis. Ethology and Sociobiology, 1980, 1, 301-309.
- Goodwin, C. Restarts, pauses, and the achievement of a state of mutual gaze at turn-beginning. Sociological Inquiry, 1980, 50, 277-302.
- Goodwin, M.H. Processes of mutual monitoring implicated in the production of description sequences. Sociological Inquiry, 1980, 50, 303-317.
- Heeschen, U., Schiefenhouel, W. and Eibl-Eibesfeldt, I. Requesting, giving, and taking: The relationship between verbal and nonverbal behavior in the speech community of the Eipo, Irian Jaya (West New Guinea). In M.R. Key (Ed.) The Relationship of Verbal and Nonverbal Communication: Contributions to the Sociology of Language. The Hague: Mouton, 1980, 139-166.
- Hiatt, L.R. Polyandry in Sri Lanka: A test case for parental investment theory. Man, 1980, 15 583-602.
- Hold, B. Attention-structure and behavior in G/wi San children groups. Ethology and Sociobiology, 1980, 1, 275-290.
- Houston, A. Godzilla versus the creature from the black lagoon: Ethology versus psychology. In F.M. Toates and T.R. Halliday (Eds.) Analysis of Motivational Systems. London: Academic, 1980.
- Hughes, A.L. Preferential first-cousin marriage and inclusive fitness. Ethology and Sociobiology, 1980, 1, 311-319.
- Hutchinson, G.E. Random adaptation and initiation in human evolution. American Scientist, 1981, March-April, 161-165.

- Konner, M.J. Evolution of human behavior development. In R.H. Munroe, R.L. Munroe, and B.B. Whiting (Eds.) Handbook of Cross-Cultural Human Development. New York: Garland, 1981.
- Kurland, J.A. Kin selection theory: A review and selective bibliography. Ethology and Sociobiology, 1980, 1, 255-274.
- Maccoby, E.E. Sex differences in aggression: A rejoinder and reprise. Child Development, 1980, 51, 964-980.
- McAndrew, F.T., Ryckman, R.M., Horr, W., and Solomon, R. The effect of invader placement of spatial markers on territorial behavior in a college population. Journal of Social Psychology, 1978, 104, 149-150.
- McCain, R.A. Critical reflections on sociobiology. Review of Social Economy, 1980, 38, 123-139.
- McCall, R.B. Nature-nurture and the two realms of development: A proposed integration with respect to mental development. Child Development, 1981, 52, 1-12.
- McGuire, M.T. and Polsky, R.H. Ethological assessment of stable and labile social behaviors during acute psychiatric disorders: Clinical applications. Psychiatry Research, 1980, 3, 291-306.
- Mackey, W.C. A cross-cultural analysis of recruitment into all male groups: An ethological perspective. Journal of Human Evolution, 1981, 10 1-12.
- Mackey, W.C. A sociobiological perspective on divorce patterns of men in the United States. Journal of Anthropological Research, 1980.
- Polsky, R.H., and McGuire, M.T. Observational assessment of behavioral changes accompanying clinical improvement on hospitalized psychiatric patients. Behavioral Assessment, 1980, 1, 207-223.
- Polsky, R.H., and McGuire, M.T. Social ethology of acute psychiatric patients: The influence of sex, hospital environment, and spatial proximity. Nervous and Mental Disorders, 1981, 169, 28-36.
- Pugh, G.E., Rose, S.P. The biological origin of human values. Aggressive Behavior, 1980, 6, 235-238.
- Ravin, A.W. Natural selection and human choice. Hastings Center Report 1980, 10, 30-31.
- Rosenfield, A. Sociobiology stirs a controversy over the limits of science. Smithsonian, September, 1980.

- Rossi, A.S. Life-span theories and women's lives. Signs, 1980, 6, 4-32.
- Scollay, R.A. and DeBold, P. Allomothering in a captive colony of Hanuman Langurs. Ethology and Sociobiology, 1980, 1, 291-300.
- Slater, P.J.B. The ethological approach to aggression. Psychological Medicine, 1980, 10, 607-610.
- Tieger, T. On the biological basis of sex differences in aggression. Child Development, 1980, 651, 943-693.
- Tiger, L. Sociobiology and politics. Hastings Center Report, 1980, 10, 35-37.
- Willis, F.N. and Rinck, C.M. A personal log method for investigating interpersonal touch. Paper presented at the annual meeting of the Southeastern Psychological Association. Atlanta, March, 1981.
- Wilson, E.O. The ethical implications of human sociobiology. Hastings Center Report, 1980, 10, 27-29.

Foreign Language Literature:

- Heymer, A. Analyses D'Ouvrages. Vie Milieu, 1978-1979, Vol. 28-29, fasc. 1, ser. C, pp. 169-175. (A collection of book reviews) In French.
- Riedl, R. Die Ordnung des Lebendigen, Systembedingungen der Evolution (L'ordre du vivant, conditions d'un systeme de l'evolution). Hamburg und Berlin: Verlag Paul Parey, 1975.
- Harrer, H. Die letzten Funfhundert -- Expedition zu den Zwerqvolkern auf den Andamanen (Les derniers cinq cents, une expedition chez les Pygmees des iles Andaman). Verlag Ullstein, 1977.
- Harrer, H. Unter Papuas -- Mensch und Kultur in ihrer Steinzeit. (Chez les Papous -- L'homme et la culture a l'age de pierre). Umschau Verlag, Frankfurt, 1976.
- Nance, J. Tasaday -- Steinzeitmenschen in philippinischen Regenwald. (Les Tasaday, Hommes paleolithiques de la foret vierge de Mindanao). Paul Parey Verlag Munchen, 1977. Anglais: The Gentle Tasaday. New York: Harcourt Brace Javanovich. London: Victor Gollancz.
- Koenig, O. Urmotiv Auge, neuentdeckte Grundzuge menschlichen Verhaltens. (L'oeil en tant que motif fondamental -- Aspects nouveaux du comportement humain). Munchen und Zurich: R. Piper and Co., 1975.

- Heymer, A. Bayaka-Pygmies (Central Africa) -- Heterosexual Social Grooming (Delousing) between Adolescent Girls and Boys. Sonderdruck aus: Homo, 30. Band, 3. Heft. pp. 202-210, 1978. In German with English summary.
- Heymer, A. Bayaka-Pygmies (Central Africa) -- Social Grooming in Women and Girls and Grooming Rivalry. Sonderdruck aus: Homo, 30. Band, 3. Heft. pp. 196-202, 1978. In German with English summary.
- Heymer, A. Introduction to Human Ethological Films on Bayaka Pygmies from Central Africa. Sonderdruck aus: Homo, 30. Band 3. Hef. pp. 193-195, 1978. In German and English.
- Heymer, A. Schnelles Brauenheben als „Ja“ zum sozialen Kontakt bei einem Kleinkind. UMSCHAU 79 (1979) Heft 14, S.454-455. (Bayaka Pygmy infant reaction to stranger) In German.
- Prodon, R. Analyses D'Ouvrages. Vie Milieu, 1978-1979, Vol. 28-29, fasc. 1, ser. C, pp. 175-177. (A collection of book reviews) In French.
- Le Louarn, H. et M.C. Saint Girons. Les Rongeurs de France. Faunistique et Biologie. Paris: INRA, 1977.
- Coineau, Y. Comment realiser vos dessins scientifiques. Paris: Gauthier-Villars, 1978.

Readers are invited to send references that they would like included in RECENT LITERATURE to: Robert Adams, Dept of Psychology, 145 Cammack Bldg, Eastern Kentucky University, Richmond KY 40475.

| |
|-----------------------|
| BULLETIN BOARD |
|-----------------------|

A call for more manuscripts has been recently issued by The Behavioral and Brain Sciences (BBS), an international journal now in its fourth year of publication. Researchers in any area of psychology, neuroscience, behavioral biology or cognitive science are encouraged to submit. Papers are circulated to a large number of specialists who provide substantive criticism, interpretation, elaboration, and pertinent complementary and supplementary material from a full cross-disciplinary perspective. Article and commentaries then appear simultaneously with the author's formal response. BBS is published quarterly by Cambridge University Press. Editorial correspondence to: Stevan Harnad, Editor, BBS, P.O. Box 777, Princeton NY 08540.

Of the book Genes, Mind, and Culture: The Coevolutionary Process (1981) listed in RECENT LITERATURE, the authors respond to Time

magazine's statements with the following: "It is unfortunate that Time chose to intimate [Jan. 26] that our forthcoming book, Genes, Mind, and Culture, which is primarily a technical monograph, might somehow justify eugenics and racism, even indirectly. To suggest that unpleasant forms of human behavior such as racism have a partial genetic basis is not to recommend them. Quite the contrary. By analyzing the biological basis for this conduct, we can provide better procedures for avoiding destructive behavior, in the same way that we can circumvent diabetes and hereditary enzyme deficiencies."

American Journal of Primatology. This is a new quarterly journal devoted to primatology. Although not officially affiliated with the American Society of Primatologists, members of ASP receive a 60% discount on subscription rates. For information contact: Dr. J. Erwin, Editor, American Journal of Primatology, P.O. Box 96, Honeydew CA 95545 (707) 629-3389.

Developmental Review: Perspectives in Behavior and Cognition. Academic Press (New York) announces a new quarterly journal that publishes articles on issues of psychological development. Appropriate papers include: 1) theoretical statements, 2) reviews of literature, 3) summaries of programmatic research, 4) empirical findings that are provocative and of particular relevance for developmental theory, 5) integrated collections of papers on a single theme, 6) analyses of social policy as it affects human development, 7) historical analyses, 8) essays on major books, and 9) analyses of method and design. Subject matter may be from the disciplines of psychology, sociology, education, or pediatrics, may be basic or applied, and may be drawn from any species or age range. General editor is Grover J. Whitehurst.

Garland Press announces a 20% discount on STPM Ethology titles for members of the Animal Behavior Society.

Brand new (never used) DATAMYTE 904-16 portable electronic data collector (for direct input to computer memory), with special delay program, battery charger, spare battery, and output cable, with inspection by the factory upon purchase and full guarantee from the manufacturer, available at one thousand dollar discount from list price of \$2,497. Contact G. Schubert, 640 Porteus Hall, University of Hawaii-Manoa, 2424 Maile Way, Honolulu HI 96822; Tel. (808) 948-7536.

Michael Figler, Dept of Psychology, Towson State University, has published Research in Human Ethology: A Bibliography. This 284 item bibliography of mostly primary research is available from the Order Department (JSAS), American Psychological Association, 1200 17th St., N.W., Washington DC 20036. The manuscript (no. 2134) is available in paper (\$7) or fiche (\$3).

ISHE member Dr. Heiner Ellring of Max-Planck-Institut für Psychiatrie in Munich co-publishes a newsletter entitled Video-Informationen. The Spring issue (Vol. 4, No. 2) lists

numerous international meetings and some German-language publications. Essays in the newsletter are primarily in German. In this issue appeared an essay in English by Angela B. Summerfield, Dept of Psychology, Birkbeck College, London, of which a portion is excerpted below. The title is "Video Feedback: A Public or Private Experience?"

"Unfortunately video feedback is not always a pleasant experience for the person concerned. It can be both a shock and an embarrassment to see oneself performing, with obvious faults apparently magnified, and the subsequent dissection of the performance in public can be positively painful. The tacit assumption on the part of many trainers that participants will always cooperate with the training methods can produce a social pressure on participants to conform, which raises several ethical issues. Ought trainees to be quite clear as to the aims and procedures involved in using video feedback on their course, and given a clear opportunity to consent or not to being filmed? Subsequently, ought trainees to be offered a choice between public or private review and analysis? My view is that they should, and further that any consent procedure should extend to any subsequent showing of the recording to third parties (other course members), plus a clear policy on the retention/destruction of the recording once it has met its purpose. And these principles should be applied in all contexts where video feedback is used."

The Journal of Comparative Ethology Zeitschrift für Tierpsychologie contains original articles from all over the world. They provide the reader with a comprehensive picture of the wide diversity of behavior research. Descriptions of the behavior of animals are the basis of discussions concerning their adaptability as well as onto- and phylogenesis. The function and interplay of their sense organs, neural and hormone systems are examined, resulting in valuable contributions towards a better understanding of the mechanisms underlying certain behavior patterns. Reviews of articles in other journals and books are included in each issue. Research articles are published in English, German or French with summaries in English and German. Approximately 85% of all contributions are in English. Edited by E. Curio, Ruhr University Bochum; Konrad Lorenz, Institute of Comparative Ethology, Altenberg; Peter R. Marler, Rockefeller University, New York; and Wolfgang Wickler, Max-Planck-Institute of Behavioral Physiology, Seewiesen.

Infant Communication, a special issue of Infant Mental Health Journal will be issued in June, 1981 by the Human Sciences Press in New York. Editor is Norma Ringler.

IPS NEWS is a new bulletin published by the International Primatological Society in spring and autumn each year. For membership information, contact Herman Dienske, Primate Center TNO, Lange Kleiweg 151, P.O. box 5815, 2280 HU Rijswijk, The Netherlands. In issue no. 1, 1981, Herman discusses the

distribution of IPS membership: "...No less than 83% of the IPS-members live in countries where monkeys originally were absent, whereas only 5% live in countries where there are native populations of nonhuman primates. The remaining 13% of the IPS members live in Japan, where primatologists and monkeys have established an exemplary coexistence."

Jim Gray's recent paper "An evolutionary explanation for the lack of estrus in the human female" (submitted to Archives of Sexual Behavior) received recognition in a byline by Barbara Ford in the January, 1981 (Vol. 3, No. 4) of Omni. She wrote of his work, "According to James L. Gray, of the State University of New York at Stony Brook, women are unique among female mammals in that they keep their own period of fertility a secret, not only from their mates but also from themselves. In the course of evolution, Dr. Gray believes, women adopted hidden fertility, because it encourages faithfulness in their mates and thus helps them maximize their chances of evolutionary success. Speaking to the Animal Behavior Society, in Fort Collins, Colorado, Gray said that males and females are counted successful in evolutionary terms if they rear many offspring to maturity...By choosing hidden ovulation, Gray explained, a woman reduces a man's chances of making her pregnant to about 1 in 30 for each copulation, since she ovulates only once a month. To ensure offspring, he has to copulate with her repeatedly over a period of time. Once this investment is made, the best way for a man to ensure survival of the resulting progeny is for him to stay around...Evolutionary success doesn't imply total faithfulness, Gray added, but women's secret fertility means a successful man has to restrict most of his attentions to only a few mates."

UPCOMING MEETINGS

NATO Advanced Study Institute "Aggression in Children and Youth" conference will be held June 17-28, 1981 in Maratea, Italy. For information, contact Robert A. Kaplan, Dept of Community Medicine M-022, University of California, San Diego, La Jolla CA 92093.

1981 World Congress on Mental Health will be held July 27-August 1, 1981 in Manila, Philippines. Contact World Federation for Mental Health, 2352 Health Sciences Center Mall, The University of British Columbia, Vancouver, B.C., V6T 1W5, Canada.

8th World Congress of Social Psychiatry will be held August 16-22, 1981 in Zagreb, Yugoslavia. Among others, a symposium on Audio-visual media in social psychiatry. Contact Dr. M. Stojanovic, University Hospital, Zagreb, Vinogradska 29, Yugoslavia.

The Third Annual Conference of the Cognitive Science Society will be held August 19-21, 1981, at the University of California, Berkeley. In addition to submitted papers, there will be major addresses by:

Robert Abelson, Dept of Psychology, Yale University; Manfred Bierwisch, Central Institute for Linguistics, Academy of Sciences (GDR); Thomas Kuhn, Dept of Philosophy, M.I.T.; and William Labov, Dept of Linguistics, University of Pennsylvania. Four state-of-the-art symposia include: Affect; Cognition and Perception; Mental Models of Physical Phenomena; and Goals. For information contact: Nomi Feldman, Conference Coordinator, 3770 Tansy, San Diego CA 92121.

Asiatic Extension of the 8th World Congress of Social Psychiatry Multicongress will be held September 6-10, 1981 in Macau, Portugal. For information, write to the multicongress at Apartado 4121, 1502 Lisboa Cedex, Portugal.

International Conference on the Human/Companion Animal Bond will be held October 5-7, 1981 in Philadelphia. There will be a least 3 ethology papers: one by Aubray Manning, University of Cambridge; one by William Mason, University of California; and a third by Sharon Smith, University of Pennsylvania, and member of the Center for the Interaction of Animals and Society. Contact conference chairman Aaron Katcher, M.D., School of Veterinary Medicine, University of Pennsylvania, 3800 Spruce St., Philadelphia PA 19104.

Meeting of the American Society of Zoologists will be held December 27-30, 1981, in Dallas, Texas. Symposia will be held on such topics as: optimization of behavior; and the interface of quantitative genetics, life-history evolution, and whole organism ontogeny. Deadline for abstracts is **August 28, 1981**. Abstracts will be published in American Zoologist 21(4). For information contact Mary Wiley, ASZ, Box 2739 California Lutheran College, Thousand Oaks CA 91360 (805) 492-3583.

International Symposium on the Conservation of the Lion-tailed Macaque. will be held May 19-22, 1982 in Baltimore, Maryland. The Baltimore Zoological Society hosts the symposium. All scientific sessions will be held at the Baltimore Zoo. Field trips are planned to the National Zoo (Washington D.C.), the Front Royal Conservation Center, and the Patuxent Conservation Center on Saturday, May 22. For information contact: Robert Johnson, c/o Baltimore Zoological Society, Druid Hill Park, Baltimore MD 21217 ph. (301)467-4387.

2nd International Symposium on Marine Biogeography and Evolution in the Pacific will be held July 5-17, 1982 in Sydney, Perth, Melbourne Australia. Sponsors are The Western Society of Naturalists (U.S.), The University of Sidney, The Australian Museum, and The Western Australian Museum. The success of the 1st International Symposium on Marine Biogeography and Evolution in the Southern Hemisphere held in July, 1978 at the University of Auckland, New Zealand, has encouraged the convenors to propose a second symposium, increasing the scope to the entire Pacific. This heterogeneous group of geologists, paleontologists, botanists and zoologists provided for a degree of interaction between marine scientists not usually encountered at symposia. The first week will involve meetings in

Sydney, the second week is spent on field trips to either Melbourne or Perth. For information contact: The Western Society of Naturalists, Prof. David Montgomery, Biological Sciences Dept, California Polytechnic State University, San Luis Obispo CA 93407. Phone (805) 546-2446/Telex-658-451.

*International Human Ethology Meeting. Agreement has been reached with the executive boards of the International Primatological Society and the American Society of Primatologists for ISHE to hold an international meeting conjointly with these societies in Atlanta, Georgia in August, 1982. Details of submission of abstracts, proposals for symposia, exact dates, accommodations, etc., will follow soon. We strongly urge you to make plans to attend this meeting, since international communication among human ethologists has been a rare event. For more information, contact Ron Weigel, Box 33, Neuropsychiatric Institute, UCLA, Los Angeles CA 90024. Phone: (213) 825-0705.

Ron Weigel and Gail Zivin
Co-Chairmen
Committee for an International
Human Ethology Meeting

Meeting Reminders:

Further information on these meetings is given in Vol. 3, Issue 1 of the Human Ethology Newsletter.

The Annual Convention of the American Psychological Association. August 24-28, 1981 in Los Angeles. There will be a symposium August 25 on "Comparative Psychology in Zoological Parks" and a group discussion on August 27. Sponsored by the Los Angeles Zoo, a "West Coast Workshop on Zoo Research", will be held on August 26.

International Ethological Conference. September 1-9, 1981 in Oxford, England.

Animal Behavior Society highlights of the June 22-26, 1981 annual meeting at the University of Tennessee, Knoxville include:

Symposium: Issues in the ecological study of learning; organized by T. Johnston and A. Pietrewicz (June 22).

Invited paper sessions: (1) Applied and companion animal ethology; organized by E. Banks and P. Borchelt (June 25). (2) Early experiences and their influence on species identifications; organized by M. A. Roy (June 23). (3) Stress and social adaptation: applied research in primate and human ethology; organized by T. Hay (June 24).

Workshops: (1) Communicating with VIPs: your audience, your editor, your prospective employer; organized by W. Aspey (June 23). (2) Advanced analyses of complex social interaction; organized by G. Stephenson, N. Mankovich, and S. Riechert (June 25).

Keynote Speaker: Prof. I. Eibl-Eibesfeldt (Max-Planck Institute), "Human Ethology".

Other Activities: ABS Business Meeting (June 24), **HUMAN ETHOLOGY ROUNDTABLE and SOCIAL HOUR (June 23)**, film sessions, Mountain music social (June 25), informal talk with I. Eibl-Eibesfeldt (June 25), discussions with representatives of NSF (June 23), field trips (June 26, 27). Banquet: Will feature music of East Tennessee and the Scopes Evolution Trial, by the Morgans (June 24).

For information on the ABS program, contact Terry Christenson, Dept of Psychology, Tulane University, New Orleans LA 70118 or Gordon Burghardt, Dept of Psychology, University of Tennessee, Knoxville TN 37916.

Joan S. Lockard (RI-20)
Dept of Neurological Surgery
University of Washington
Seattle WA 98195
U.S.A.

FIRST CLASS