

Human Ethology Newsletter

Editor: Glenn Weisfeld

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

VOLUME 8, ISSUE 2

ISSN 0739-2036

JUNE 1993

Published by the International Society for Human Ethology

SOCIETY NEWS ELECTION OF OFFICERS

The ballot for election of the following officers appears below: President, Vice-President/President-Elect, and Treasurer. Please complete it (or a photocopy), and send it to the ISHE Secretary, Nancy L. Segal, Dept. of Psychology, California State University, Fullerton, CA 92634 USA. Deadline is 1 Sept. Terms of office are three years. Where only one nominee appears, no other names were submitted. However, in such cases members are free to write in their selection.

NEW RULES FOR PAYMENT OF MEMBERSHIP DUES

Dutch banks now charge \$43 to cash a personal check, making it virtually impossible for us to continue to allow payment in this manner. Anyone wishing to pay in this way will have to add 30 Dutch guilders (not 10 as previously). If at all possible, payment should be made to Nancy Segal so we avoid the currency exchange costs of transferring money from The Netherlands to the US (where the newsletter is currently published). Nancy can now handle VISA and Master/Eurocard payments; send your account number and expiration date, and note the amount. You may prefer to send her a check in US funds. Payment by Eurocheque in Dutch guilders is still possible. It avoids the encashment cost, but it necessitates our paying to convert guilders into dollars. If you must, you can send her cash (US dollars only).



The infant Tawashi begs for food from his mother, Kame.

Photos by permission of the publisher of *The Last Ape: Pygmy Chimpanzee Behavior and Ecology*, by Takayoshi Kano, Stanford University Press, Mail Code 2235, Stanford, CA 94305 USA, \$45 (hdbk.).

NEW BOOK REVIEW EDITOR

Bill Bailey is retiring after seven years of faithful service as North American Book Review Editor. He wrote quite a few reviews himself, and arranged many others. We are very grateful for his contribution to the Newsletter.

Bill has recruited Linda Mealey to serve as his replacement. Her research interests include behavioral genetics, sleep, and reproductive strategies. Please contact her if you have an interest in reviewing any book whose original publisher is North American. Books whose main publishing office is in Britain (or which are published in Europe in English) should be reviewed through Stuart Laws. Addresses of all the book review editors appear below, under Editorial Staff.

HUMAN ETHOLOGY ABSTRACTS

John Ross has been attempting to edit *Human Ethology Abstracts* for the past several years. Previously these have been published in the journal *Man-Environment Systems*, and before that by ISHE. The last time was 1987; more recent compilations of abstracts of journal articles exist but have not been published. Further, John has been unable to contact the editor of *Man-Environment Systems*, Dr. Esser, although he believes the journal is still being published. John asks if someone else will take over the task of trying to find a journal to publish the abstracts that he has compiled, and of collecting new abstracts for future publication. Alternatively, ISHE might consider resuming publication, or a book publisher might be interested. *Human Ethology Abstracts* used to be published regularly, so it would be nice to resume this service and tradition before it is too late to catch up. A good start could be made by consulting the Current Literature section of the Newsletter for the past several years. For more information or to register any suggestions about this matter, please contact Dr. John A. Ross, Dept. of Psychology, St. Lawrence University Canton, NY 13617 USA.

BOOK REVIEWS IN PROGRESS

Reviews of the following books (among others) are being prepared: *Ethology and Human Development*; *Pursuit of Pleasure*; *The Ant and the Peacock*; *Theory of Human and Primate Evolution*; *Separate Lives*; *Sociobiology, Sex and Science*; *Nature of the Sexes*; *Theories of Rape*; *Human Universals*; *Merging of the Senses*; *Sexual Politics and Political Feminism*; and *Biology of the Naked Mole Rat*.

BALLOT FOR ISHE OFFICERS

President

William R. Charlesworth, Institute of Child Development, University of Minnesota, Minneapolis, MN USA

(write-in candidate; please include address)

Vice-President/President-Elect

Charles S. Crawford Department of Psychology, Simon Fraser University, Burnaby, BC, Canada

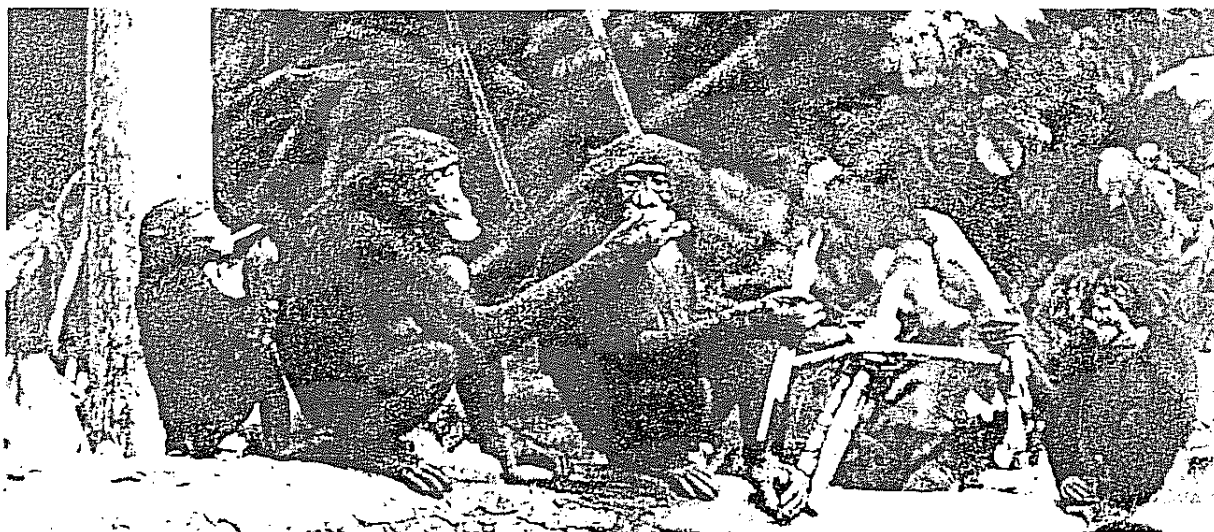
(write-in candidate; please include address)

Treasurer

Barbara F. Fuller, School of Nursing, University of Colorado, Boulder, CO, USA

(write-in candidate; please include address)

Please mail ballot to Nancy L. Segal, ISHE Secretary, Dept. of Psychology, California State University, Fullerton, CA 92634 USA by 1 September.



An adult female pygmy chimpanzee with an infant begs for food from another adult female with an infant. By contrast, food sharing is rarely seen between female common chimpanzees.

ARTICLES

WHAT IS THE BEST INDEX FOR STATUS?

By Barbara Hold-Cavell, Ahornweg 15, 8130 Starnberg 2, Germany

Why has visual regard as a measure of social status in groups of children or adolescents been much less accepted than dominance indices during the past 20 years? Even though many authors agree that dominance is only one aspect of social organization, visual regard has received little attention. Yet quite a number of studies demonstrate that attention structure is highly related to dominance (Abramovich, 1980; Hubener, 1976; Kalbermatten, 1979; LaFreniere and Charlesworth, 1983; Vaughn and Waters, 1980) and leadership behavior (Hold, 1976)--important aspects of the child's status in the group. As Pitcairn and Strayer (1984) stated, "Attention structure refers to a concept of status which is much wider than current views of agonistic dominance." For a comparison of three status indices (dominance, popularity and visual regard) and their relation to behavioral characteristics, see Hold-Cavell (1992).

In order to understand why visual regard did not become the favored status index, let us look at the criticism of Chance's (1967) concept of attention structure. Hinde stressed the *behavioral* aspects of

dominance relations, rather than *visual observation* of other group members: "[Social status] implies some sort of intermittent interaction between two people involving interchanges over an extended period of time. The interchanges have some degree of mutuality, in the sense that the behaviour of each takes into some account the behaviour of the other" (1979, p. 14). With regard to dyads he is right, but a newcomer joining a group will first *observe* the other children and thereby be influenced by previous behavior. Each child observes the outcome of fights by others, and therefore does not have to fight every possible opponent himself. In other words, visual regard of other group members is a major source of information about them.

Another problem that people have with attention structure is that attention can have numerous different meanings, which depend on the context as well as on concomitant facial signals. Looking around when sitting alone in a restaurant is part of our vigilance system and serves to collect information about the environment. Gazing at another person without any reason may be understood as a kind of threat, and the reaction would be rather hostile. Looking at another person together with eye contact would signal readiness for social interaction, and reciprocal looking at each other together with eye contact is a sign of sympathy and incipient attachment (whether between mother and child or between lovers). When looking at somebody, we are not only taking in information but also simultaneously communicating our attentiveness.

Rather than being a liability, however, the multitude of meanings of visual behavior is its strength. Looking at somebody means that I can *gain* some important information, and to be looked at by many people indicates that they expect me to *give* something that is valuable to them. To be the center of attention--being looked at by many people simultaneously--has a highly arousing effect. Shy people try to escape as quickly as possible, diverting the attention to somebody else, while self-confident and extroverted people may enjoy being the focus of attention and feel very much stimulated.

Another problem with attention structure concerns its function: how can it raise the fitness of the individual? Hinde (e.g., 1974) argued that attention is at best a consequence of existing dominance relationships and therefore is to be viewed as secondary, whereas dominance indices such as seizing an object or winning conflicts over objects are primary because the function of dominance is to get access to resources in order to enhance reproductive success. However, attracting the attention of other group members is a very important means for gaining influence--to make them do what I want them to do so that they contribute to my individual fitness. I cannot lead a group if I do not get their attention. Some may object that if leadership benefits the leader it might qualify as dominance. But dominance and leadership are not the same because they have the same function; rather, they refer to different styles of social influence. A dominant child is not necessarily the leader in the group and vice versa. As defined earlier by Gibb (1969), the dominant individual serves his personal interests without taking the group members into account, while the leader is followed voluntarily because his goals are the group's goals. The group as a whole may contribute to the leader's fitness as much as his dominant behavior may.

The following event which I observed in one of our research groups may illustrate my point. One day the children got a present from one of the visitors: a nice electric car. The teacher put it on the table, and within a few seconds the most dominant child had taken it away to play with. Even after one hour the child, named Sascha, did not show any sign of willingness to share, but all of the children, especially his friends, wanted to play with it. As they knew what kind of temper tantrum this child might throw if the car were taken away by force, they tried alternative strategies. First they asked him to let them play with the car; this met with no success. Then they concentrated on other play materials, commenting in loud voices what a stupid present the car was, totally boring and only for little children.

This did not help either. Then they complained to the kindergarten teacher: Sascha is not letting us play with the car. As we were in a nonauthoritarian kindergarten, she did not want to take away the car by force, but instead offered the following solution: "What do you think of letting every child play for half an hour with the car, and afterwards you get it back?" Sascha did not like this idea. Then the teacher proposed that the children play with the car in pairs. Reluctantly Sascha accepted this proposal and looked for the lowest ranking child in the group. He sat next to him and immediately began to issue commands. The low-ranking boy obeyed, and they played awhile. The other children were excluded and could only watch. After a while, Sascha again took the car. The other children turned away from him and criticized his behavior. Suddenly the boy with the highest regard proposed to destroy the car. This idea was accepted and together with his friends Sascha stomped on the car until it broke into many pieces, which he then distributed among his friends, keeping the motor for himself. He said, we destroyed the car because it was the reason for our struggle. When all the children had received one piece, Sascha and his friends played together happily. This example shows that a dominant child can control a resource but at the same time not be happy with it because he is excluded from the group. However, a child with high regard is supported by the group members because he shares with them.

There are two ways of gaining high status: we can try to intimidate, or dominate, other group members; or we can try to impress them, making ourselves interesting, which involves attention-seeking behavior. This latter behavior can be observed in all group members to different degrees of intensity and success (Hold-Cavell and Borsutzky, 1986). Whether or not attention-seeking behavior leads to high status in the group depends on the strategy as well as on correct timing: attention-seeking behavior (which I call "self-referencing behavior") is shown much more often when the status structure is not yet established or has been weakened (e.g., after holidays, when children have not seen each other for a while). Children compete for attention, and high-status peers react aggressively when low-status children show intensified self-referencing. When adults want to get attention, speaking is the most effective strategy. According to Sorrentino and Boutillier (1975), people are viewed as having leadership abilities when they talk a lot. When low-status people interrupt high-ranking ones, this is regarded as ignoring or violating the latter's status. Group members with high regard are most often the center of attention and are respected by peers.

Thus *attention structure* is not just one other possibility for ranking group members. We attend to peers we like as well as to those we fear, and also to those from whom we expect interesting information. Attention structure takes into account all the different aspects of status: dominance, popularity, competence, attractiveness, and authority. Just as the desire to dominate can be observed in quite a number of individuals, especially in males, we can observe a desire to get attention, whether from a few or many people. We have a need for recognition, and individuals that are constantly ignored become deeply depressed.

Dominance, on the other hand, is only one aspect of high status, and there are many difficulties with dominance indices. No single one would apply to every age or every situation, and definitions of dominance are often circular (for a discussion see Grammer, 1988 or Hold-Cavell, 1992). Furthermore, they never take into account different leadership styles or different group characteristics.

In the psychological literature the child's status in the group is measured by *popularity* among peers, but this too is only one aspect of status. Other aspects such as authority, leadership, competence, attractiveness and athletic ability contribute to an individual's social status, or "social success" (as Weisfeld et al. [1987] call it). The question is, which of these aspects contributes the most to high status? I would suggest that all of these components play different roles, depending on the age and sex composition as well as on the environment of the group. In young boys' groups, fighting and athletic ability may be more important than attractiveness and popularity, which are more esteemed in girls' groups. In mixed-sex groups of adults, competence and leadership abilities are more advantageous.

As dominance is related to the male hormone testosterone (Mazur, 1983), the significance of dominance is different for girls compared with boys. Boys are more aggressive and competitive than girls, who have different strategies for gaining access to resources. It is therefore not so astonishing that most *male* researchers value dominance more highly than attention structure, because dominance contributes directly to individual fitness. Female thinking, on the other hand, may be more group oriented (see Gilligan, 1982); cf. the leadership styles of top female managers. Women lead in a more democratic way; they are more ready to share success with group members, and are less dominant. Men are more

interested in their own careers, more conscious of hierarchies, and more authoritarian, something which I also observed in the kindergarten. Despite these differences in leadership styles, male and female managers are similar in their personal characteristics: they are relatively self-confident and ambitious, and are ready to take decisions and responsibility.

Is the concept of dominance prevailing because there are more male than female researchers, or are there other arguments speaking against attention structure or high regard?

Editor's Note: Comments addressed to the newsletter or to the author are welcome.

References

- Abramovitch, R. (1980). Attention structures in hierarchially organized groups. In D. R. Omark, F. F. Strayer and D. G. Freedman (Eds.), *Dominance Relations*. New York: Garland.
- Chance, M. R. A. (1967). Attention structure as the basis of primate rank orders. *Man*, 2:503-518.
- Grammer, K. (1988). *Biologische Grundlagen des Sozialverhaltens*. Wissenschaftliche Buchgesellschaft Darmstadt.
- Gilligan, C. (1982). *In a Different Voice*. Cambridge: Harvard University Press.
- Hinde, R. A. (1974). *Biological Bases of Human Social Behaviour*. New York: McGraw-Hill.
- (1979). Towards understanding relationships. In H. Tajfel (Ed.), *European Monographs in Social Psychology*, 18. New York: Academic Press.
- Hold, B. C. L. (1976). Attention structure and rank-specific behaviour in preschool children. In M. R. A. Chance and L. L. Larsen (Eds.), *The Social Structure of Attention*. London: Wiley.
- Hold-Cavell, B. C. L. (1992). Attention structure or visual regard as measurement of social status in groups of children. *World Futures*, 35:115-139 (available from the author).
- and Borsutzky, D. (1986). Strategies to obtain high regard: a longitudinal study of a group of preschool children. *Ethology and Sociobiology*, 7:39-56.

Hubener, J. (1976). Aggressives Verhalten in einer Spielgruppe. Unpublished paper, Padagogische Hochschule Bielefeld.

Kalbermatten, U. (1979). Handlung: Theorie--Methode--Ergebnisse. Dissertation, Universitat Bern.

LaFreniere, P., and Charlesworth, W. F. (1983). Dominance, attention and affiliation in a preschool group: a nine month longitudinal study. *Ethology and Sociobiology*, 4:55-67.

Mazur, A. (1983). Hormones, aggression and dominance in humans. In B. Svare (Ed.), *Hormones and Aggressive Behavior*. New York: Plenum.

Pitcairn, T. R., and Strayer, F. F. (1984). Social attention and group structure: variations on Schubert's "Winterreise." *Journal of Social and Biological Structures*, 7:369-376.

Sorrentino, R. M., and Boutillier, R. G. (1975). The effect of quantity and quality of verbal interaction on ratings on leadership ability. *Journal of Experimental Social Psychology*, 11:403-411.

Vaughn, B. E., and Waters, E. (1980). Social organization among preschool peers: dominance, attention and sociometric correlates. In Omark et al., op cit.

Weisfeld, G. E., Muczynski, D. M., Weisfeld, C. C., and Omark, D. R. (1987). Stability of boys' social success among peers over an eleven-year period. *Contributions to Human Development*, vol. 18.

REACTANCE THEORY AND DARWINISM: AN EXAMPLE OF THEORETICAL REDUCTION

Frans Roes, Lauriergracht 127 tweehoog, 1016
RK Amsterdam, The Netherlands.

One of the ideals usually embraced by scientists is theoretical reduction. This means explaining theories with a limited domain by

more general theories. The ultimate goal would be that all theories are embedded in a logical network. When one looks at social scientific theories, this ideal seems very remote from the actual state of affairs. Most social scientific theories seem completely unrelated. As evolutionary theory is undoubtedly the most general (and the most successful) theory about life, it may play an important role in explaining and integrating social-scientific theories. I will now present an example of an explanation of a social psychological theory by evolutionary theory. The theory to be explained is called the *reactance theory*, and it was first formulated by Jack Brehm in 1966. The theory deals with how people react to a loss of their freedom. Freedom is defined by Brehm as the *number of behavior alternatives* an individual possesses at a certain moment. A central hypothesis of the theory is:

- If one or more of the behavior-alternatives which an individual possesses are eliminated, or threatened with elimination, the individual will experience "reactance". "Reactance" is defined by Brehm as a psychological state, which results in an *increased attractiveness* of the behavior-alternatives which are eliminated, or threatened with elimination. This increased attractiveness of the behavior which is eliminated, or threatened with elimination, motivates the individual to defend or restore his freedom. If you have the possibility of drinking coffee or lemonade, and someone forbids you to drink the lemonade, the theory would predict that lemonade suddenly seems more attractive. You are then motivated to find a way to drink lemonade, and thus to restore your freedom of behavior.

I will return to this idea, after mentioning another central hypothesis of the theory:

The less freedom an individual has, the more reactance he or she will experience when one of the behavior-alternatives is eliminated, or is threatened with elimination. If you can drink only coffee or lemonade, and one of these alternatives is taken away, the reactance-emotion will be stronger than when you have the possibility of drinking coffee, tea, lemonade, beer, wine, milk, water, etc, etc. Brehm's theory can explain a wide range of phenomena, for instance why children sometimes do the opposite as they are told, or why propaganda frequently is ineffective, or why someone may dislike receiving a favour. Experimental testing has been quite successful (See for a rather old overview: Wicklund 1974).

Brehm has made but one remark about why people seem to behave as his theory describes. He wrote that the reactance-emotion may have "survival-value" (Brehm, 1966, p. 1-2). This explanation seems quite plausible. People and other organisms who are frequently in situations in which they can choose between different behavior alternatives are likely to have evolved a capacity for choosing what is most often best for their fitness. Moreover, creating, defending and restoring situations in which the individual is free to make a choice may in itself enhance fitness. Therefore, natural selection probably has favored individuals who not only perceive when their freedom is threatened, but also act so as to defend that freedom. Brehm has described the psychological mechanism by which people (and probably many other species) are motivated to defend their freedom. That is, the attractiveness of behaviors varies with the freedom an individual perceives to possess.

However, in my opinion Brehm has described only part of this mechanism. If someone's behavior-alternatives are drinking coffee or drinking lemonade, and the option of lemonade is eliminated, there are, logically speaking, two ways to motivate the individual to restore his freedom of choice. Brehm described the first: an increase of the attractiveness of the eliminated behavior--lemonade seems more attractive. The second way to motivate the individual is a *decrease* of the attractiveness of the behavior which is still available. If the possibility to drink lemonade is taken away, a sudden dislike of coffee increases the chance that the individual will try to find lemonade, and thus restore his freedom. It is interesting to note that in one of the first experiments conducted to test the reactance-theory (Hammock and Brehm 1966), this effect was unexpectedly found. As predicted by Brehm, the attractiveness of the behavior which was eliminated increased. But the behavior still available decreased in attractiveness, and this effect was even the strongest! Further testing seems desirable.

In this short article I have not given reactance theory the full attention it deserves. Instead, I have used this theory as an example of how a social scientific theory can be explained, and perhaps even corrected, by deducing it from evolutionary theory. In my view there are several socialscientific theories just waiting for a Darwin-

ist explanation. Theoretical reduction is an interesting subject over which evolutionary theoreticians and social scientists can meet.

References

- Brehm, J.W. *A Theory of Psychological Reactance*. New York: Academic Press, 1966.
- Brehm, J.W. *Responses to Loss of Freedom. A Theory of Psychological Reactance*. General Learning Corporation. 1972.
- Brehm, J.W. & Rosen, E. "Attractiveness of old alternatives when a new attractive alternative is introduced." *Journal of Personality and Social Psychology*. 20: 261-266. 1972.
- Brehm, J.W. & Mann, M. "Effect of importance of freedom and attraction to group members on influence produced by group pressure". *Journal of Personality and Social Psychology*, 31: 816-824. 1975.
- Brehm, S.S., & Brehm, J.W. *Psychological Reactance: A Theory of Freedom and Control*. New York: Academic Press. 1981.
- Brockner, J. & Elkind, M. "Self-Esteem and Reactance: Further Evidence of Attitudinal and Motivational Consequences." *Journal of Experimental and Social Psychology*. 21: 346-361. 1985.
- Gannon, L., Heiser, P., & Knight, S. "Learned helplessness versus reactance: The effect of sex-role stereotypy". *Sex Roles*, 12: 791-806.
- Hammock, T. & Brehm, J.W. "The attractiveness of choice alternatives when freedom to choose is eliminated by a social agent". *Journal of Personality* 34: 546-554. 1966.
- Minor, K.I. "Reactance and recidivism: Implications for probation policy and research". *Perceptual and Motor Skills*, 64: 1047-1050. 1987.
- Wicklund, R.A. *Freedom and Reactance*. Maryland: Lawrence Erlbaum Associates. 1974.

PROMOTE OUR NEWSLETTER

Please ask your university library to enter a subscription to the Human Ethology Newsletter. The institutional rate is given on the last page. Once you have done that, please show the newsletter to colleagues (students and faculty) who might be interested in joining ISHE.

BOOK REVIEWS

The Sociobiological Imagination, edited by Mary Maxwell. Albany, NY 12246 USA: SUNY Press, 1991; \$14.95 paper, \$44.50 hardcover.

Reviewed by Kevin MacDonald, Dept of Psychology, California State University, Long Beach, CA 90840 USA

This edited volume is intended to provide the reader with a sampling of recent evolutionary thinking on human behavior. The overall impression one gets in reading the volume is that in recent years evolutionary thinking has developed into an extremely powerful perspective for understanding human behavior. There are 18 papers in this collection covering a wide range of topics in the social sciences (including economics, management and conflict theory, anthropology, history, political science, sociology, linguistics), the humanities (religion, moral and political philosophy, philosophy of science, epistemology, aesthetics), psychiatry, and the law. The editor is to be congratulated for bringing together this very diverse group of highly qualified authors as well as for producing a volume that is highly readable to individuals who are non-specialists in the areas covered.

Indeed, I would suppose that the most useful function of the volume for readers of the *Human Ethology Newsletter* is to broaden their knowledge of work in what has become an increasingly fractionated set of fields. Researchers adopting evolutionary perspectives are typically poised between membership in traditional academic societies and membership in societies dedicated to understanding behavior from an evolutionary perspective. However, these latter groups are perhaps on the verge of becoming victims of their own success: the field of evolutionary applications to human behavior has become less comprehensible and unified as professionals who identify primarily with various traditional academic disciplines attempt to influence thinking in their own specialized areas. A

volume of this nature is therefore quite useful in providing a sense of overall progress in the field. Indeed, I would suggest similar undertakings every few years in order to provide an update on our progress.

Inevitably, evolutionarily minded researchers must confront the traditional problems of their "home" disciplines and attempt to show that evolutionary thinking can illuminate old problems and/or generate exciting new empirical data. As with any new theoretical approach, evolutionists tend to begin as a small minority in these fields and often face a difficult task in attempting to alter established opinion--a task often made even more difficult because of the general hostility which is still directed toward evolutionary approaches in many quarters and often for quite extra-scientific reasons.

In some fields progress has been virtually non-existent, but it is often not clear that evolutionists have in fact been able to produce a body of powerful theoretical and empirical work that would justify greater attention being paid to their paradigm. Pierre van den Berghe describes the rather virulent opposition to evolutionary thinking among many sociologists who remain "militantly and proudly ignorant" (p. 273) of biology. On the other hand, while van den Berghe chides sociologists for ignoring the relevance of evolutionary approaches for such fields as kinship, marriage, social class, and ethnicity, he does not point to any evolutionarily inspired work in these areas which *should* interest sociologists. I do not doubt that evolutionary approaches could be fruitfully applied to these areas, but the proof of the viability of an evolutionary approach must come from actual research.

Similarly, James R. Hurford notes that evolutionary theory has had almost no influence on linguistics, but there is no indication in his chapter of precisely how an evolutionary approach could make an impact beyond merely developing an ultimate level theory for the structure of the proposed language acquisition device as a domain-general human ability. Moreover, there is no indication in the chapter that evolutionary thinking will shed any light on the nature of the proximal mechanisms underlying language ability, and these mechanisms make up the basic problem set of the discipline. Minimally, the implication is that evolutionists must prove the utility of their approach to their colleagues in these areas.

In other disciplines there has been much more success in developing powerful evolutionarily

inspired empirical and theoretical work, although whether this work has influenced others from more traditional backgrounds is often questionable. For example, William Irons shows that evolutionarily inspired anthropologists have developed a powerful body of research on nepotism, paternity confidence, and the associations between cultural and biological success. Nevertheless, he also notes that the acceptance of the evolutionary paradigm among anthropologists remains rather low.

Regardless of the level of acceptance among traditionalists, the material collected here indicates that there has been considerable theoretical and empirical progress in many areas. Besides the work on evolutionary anthropology noted above, there are two chapters on psychology, by Douglas Kendrick & Robert Hogan and Charles Crawford, which indicate that evolutionarily inspired research may force psychologists to abandon at least some of their commitment to the domain-general structure of the human mind, particularly in the areas of social cognition, personality, and emotion. Charles Lumsden also proposes a set of evolved psychological mechanisms (epigenetic rules) which influence human aesthetic perceptions.

Several papers indicate that human group behavior is amenable to evolutionary analysis. Roger Masters convincingly demonstrates the usefulness of evolutionary thinking in the area of what he terms "biopolitics", including political theory, models of cooperation and competition, political socialization, and war. Johan van der Dennen reviews evolutionary perspectives on human conflict and proposes evolved cognitive-motivational mechanisms underlying group identification (the "we-they" distinction) and conflict between groups. In several fields, there have been attempts to show that traditionally influential models of behavior fit well with expectations derived from models of human evolution. For example, J. Gary Bernhard & Kalman Glantz show that important theories of human management mesh with interpretations of humans as having evolved in small groups based on a strong sense of group identification, reciprocity, and communal loyalty.

This brief sampling of the theory and research summarized in the volume shows only the barest glimpse of the power and creativity of evolutionary thinking in the human sciences represented here. On the basis of these writings, the sociobiological imagination appears to be alive and well and at least attempting to gain a hearing in all of these disciplines. The long-term prospects for this body of theory and empirical data are certainly bright, but their wider acceptance will hinge on the outcome of a great many small battles waged within a great

many specialized academic professional organizations. This is the case because academic resources such as faculty positions are ultimately distributed through these associations, and without these resources it is difficult to envision the success of evolutionary paradigms in the human sciences. I would like to suppose that success in these endeavors depends on the intelligence, creativity, and integrity of evolutionarily inspired work. Unfortunately, I have the feeling that such an assessment is rather wildly optimistic. Science, as any evolutionist should know, is at least partly a high stakes battleground among competing human interests.

Officers of the Society

President

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

Vice-President

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

Vice-President for Information

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

Secretary

Karl Grammer
Ludwig-Boltzmann-Institute for
Urban Ethology/Humanbiology
Althanstrasse 14
A-1090 Vienna, Austria

Treasurer

Herman Dieneske
Schelpenkade 35
2313 ZW Leiden
The Netherlands

Membership Chair

Nancy L. Segal
Department of Psychology
California State University
Fullerton, CA 92634 USA

Membership Renewals for 1993

It is time to renew your membership for 1993 if you have not already done so. Membership is by calendar year, so dues are to be paid by the first of the year. If the date on your mailing label is earlier than the current year, it is time to renew your membership. For economic reasons, renewal notices are not sent. No more than two warnings are given on the mailing label; thereafter you are removed from the membership list. Please report any errors, change of address, etc. to the editor.

Current dues and directions for payment are given on the last page.

Hands, by John Napier. Revised by Russell H. Tuttle. Princeton, NJ: Princeton University Press, 41 William St., Princeton, NJ 08540 USA, 1993, \$10.95 (ppr.).

Reviewed by W. C. McGrew

Department of Sociology and Anthropology
Miami University
Oxford, OH 45056 USA

John Napier's studies on the hand made a great impression on me in the late 1960's when I was learning human ethology. In trying to sort out the details of hand-use for an ethogram of preschool children, I especially called upon his work on precision and power grips. Imagine my delight (and surprise) to find a "new" book by him. (He died in 1987.) Princeton University Press has reissued Napier's 1980 volume as part of its Science Library ("...bringing the writings of leading scientists to a broad professional and general audience"), in an affordable paperback. It has been revised by Russell Tuttle, a most appropriate choice as he is an expert on the origins and expression of locomotion.

The book's eight chapters are divided into sets of four. The first set deals with the nature and evolution of the hand, stressing Napier's main areas of expertise: structure and function. The chapter on evolution brings in his paleo-anthropological links, for example, the description of *Homo habilis* (Handy Man), done with Louis Leakey and Philip Tobias. The second set covers social and cultural aspects of the hand, as exemplified by the topics of tool use, handedness, fingerprints, and gestures.

The quality of the content varies, with the second section being thinner. The chapter on gestures will disappoint an ethologist, being mostly superficial and fragmented. The chapter on fingerprints is fascinating but essentially popular journalism. More substantial is his proposal of an intermediate stage between tool use and tool making, that being tool modification, which Napier presents as the rubicon between hominoid and hominid technology. On the topical subject of handedness, he resurrects a key reference to hand preference in wild chimpanzees that has been missed by all recent reviews: Albrecht and Dunnett (1971) on grapefruit peeling.

The obvious question of a 13-years-on reissue is: How much has it dated? Tuttle has annotated liberally but barely changed the text, so it must stand up for itself as in 1980. Napier's anatomical insights seem secure as, more surprisingly, do many of his conclusions on great ape functional ecology, e.g., the importance of suspensory feeding. Some sore thumbs do stick out, however: "Pongo linguistics" is embodied only in Washoe, and there is no hint of the storm of criticism in the late 1970's that eviscerated the field. What is given is error-ridden: Allen (not Alan) and Trixie Gardner (she not of psychological origin, but a bona fide Tinbergian ethologist!) raised an infant (not adolescent) chimpanzee.

Napier's style is always entertaining, and the text is full of treats: why the scientific name for the middle finger is *impudicus*, why cartoon characters lack pentadactyly, why Desmond Morris's book should have been called *The Fatty Ape*, why only dead hands are lily white, etc. However, it sometimes verges on the provincial, having been written originally for a British readership. Few international readers will appreciate the significance of the "Harvey Smith" gesture or the prospect of left-handed Wykehamists.

In format, the text is friendly and the 58 illustrations are apt, but the references are curiously done. Many sources are cited in the text but not listed in the bibliography, and vice versa. About 40% of the references have been added by Tuttle, including plenty of his own.

Overall, Napier's book remains a gem, not to be read if one is interested in, for example, Kanzi the bonobo's latest lithic feats (Toth et al., 1993), but to be savoured as a valuable synthesis of evergreen material. It's a bargain!

References

Albrecht, H., and Dunnett, S. C. (1971). *Chimpanzees in Western Africa*. Munich: R. Piper.

Toth, N., Schick, K. D., Savage-Rumbaugh, E. S., Sevcik, R. A., and Rumbaugh, D. M. (1993). Pan the tool-maker: Investigations into the stone tool-making and tool-using capabilities of a bonobo (*Pan paniscus*). *Journal of Archaeological Science*, 20:81-91.

Newsletter Submissions

Anything which might be of interest to ISHE members is welcome: Society Matters, suggestions for Forum topics, essays for the Growing Points feature, Mini-Communications, Announcements of meetings, journals or professional societies, etc. These sorts of submission should be sent to the editor. Book review suggestions should go to the appropriate book review editor. Submission should be in English, on paper or on these disc formats: ASCII (preferred), Wordperfect (IBM), or Microsoft Word (MAC).

No material in the newsletter is selected by critical peer review and thus material is presented only to foster free and creative exchange of (even outrageous) ideas between scholars. The fact that material appears in the newsletter never implies the truth of those ideas, ISHE's endorsement of them, or support for any policy implications that might be inferred from them.

The Garbage Generation: The consequences of the destruction of the two-parent family and the need to stabilize it by strengthening its weakest link, the father's role, by Daniel Amneus. Primrose Press, 2131 S. Primrose Ave., Alhambra, CA, 91803 USA. 1990, 289 pp. (\$19.95 hardback; \$12.95 softback)

Reviewed by George Kocan, 27 W 179 Galusha Rd., Warrenville, IL 60555

According to Amneus, a matriarchy is a family unit in which the mother rules. His definition of matriarchy overlaps with that of matriliney, which means the society assigns kinship and the inheritance of property along the maternal line.

Goldberg (1973) holds that a matriarchy means government by women outside the home. His exhaustive review of the subject concluded that such a society has never existed.

If both these definitions are used, a society can be both patriarchal and matriarchal. Theoretically, a man can rule with a iron fist at the office and be henpecked at home. He may not be married to the mother of his children. He may not even know who his children are. This kind of matriarchy exists among the Iroquois and Hopi Indians, and in modern urban ghettos.

Nineteenth century anthropologists argued that patriarchy evolved out of matriarchy. They saw the mother-infant relationship as the fundamental unit of human social organization. This unit gave rise to patriarchy when humans discovered the role of the father in procreation. This knowledge formed the impetus for fathers to keep track of their biological children and pass along their property to their sons.

Marx and Engles (Tucker, 1978) made a lot out of this 19th Century anthropology. They believed in political matriarchy as well as in the matriarchy of the family unit, assuming perhaps that there was a necessary relationship between the two. They insisted that patriarchy is bad and matriarchy is good. Patriarchy gave rise to property, social classes, capitalism, marriage, the sexual oppression of women, and misery. Matriarchy was communal, sexually free, and happy.

Modern anthropology suggests that they have overstated their case. After all, matriliney includes the idea of inheritance in its definition. A society cannot have inheritance without something to inherit--property. Furthermore, private ownership of land has existed since the beginning of recorded history.

Yet, here, near the end of the 20th Century, some feminists and Marxists are saying exactly the same thing their intellectual patriarchs, so to speak, did. Amneus quotes them in abundance. "The appropriation by men of women's sexual and reproductive capacity," says Gerda Lerner, "occurred prior to the formation of private property and class society." She also associates promiscuity with high status in women. Writers Elizabeth Nickles and Laura Ashcroft extoll the virtues of the "rotational family" which will, they say, replace the "nuclear family". This "rotational family" represents a shift toward matriarchy, where men are peripheral.

In her 1983 book (not quoted by Amneus),

Fisher claims that the recent escalation in divorce statistics and illegitimacy represents progress for women. She means sexual freedom. Fisher (1987) goes even further with her views, putting together an explanation for why unstable marriages are the norm. Noting that divorce statistics around the world show peaks around the fourth year of marriage, she argues that the peaks are related to the time it takes for a child to mature enough to gain a minimal level of independence.

Rather than refuting the assumptions of 19th Century anthropologists and Marxists, Amneus accepts them. He accepts the idea that fatherhood, like patriarchy itself, is a social creation rather than a biological one. That is, various social institutions such as law and custom are needed to support the institution of fatherhood. The mother-child bond requires no such supports.

Amneus also does little to refute the idea that patriarchy somehow constitutes a prerequisite for the existence of private property and capitalism. Rather, he stands the Marxist argument on its head. Patriarchy, more than creating private property and capitalism, constitutes the necessary condition for civilization and all its blessings.

He shows this by examining what happens in a society where, under the influence of feminism, patriarchy is declining. For example, in the U.S., Amneus' "First Law of Matriarchy" operates. This law says that women have a right to control their own sexuality. He contrasts this law with his "Legitimacy Principle", which states that every child must have sociological father (who may differ from a biological father).

As Amneus put it, "if it were a medical condition rather than a social disorder, illegitimacy would be seen as one of the leading killers of children in America today." The resurgence of matriarchy has meant an increase of more than 450% of births out of wedlock in 30 years.

Amneus found a strong correlation between the single-parent (matriarchal) family and child abuse, truancy, substandard achievement in school, high unemployment and juvenile delinquency. For example, a child from a female-headed household has ten times the likelihood of being beaten or murdered than one from a patriarchal home. A survey of 108 rapists, according to Amneus, showed that 60% came from matriarchal homes.

Feminists typically blame men for the rise in

female-headed homes. World-wide surveys show that women tend to initiate divorces, not men. More divorces occur in matriarchal than in patriarchal families.

Such trends have led Amneus to conclude that "women don't like marriage and family life and would willingly do away with them if they could do so without forfeiting their benefits." That many women do profess allegiance to home and family serves as evidence, to the author, of their proper socialization by a patriarchal culture.

Matriarchy has staged its comeback within a patriarchal environment, because its practitioners have found a way to parasitize it. Through welfare, the government supports a woman with illegitimate children, thus making the biological father useless and irrelevant. For women that are employed, the feminists are demanding that the government provide child care. Both schemes depend upon the transfer of taxes from the patriarchal society to the growing matriarchal subcultures.

The government accomplishes the same thing through its divorce laws, which require husbands to subsidize their wives' independent life styles through alimony and child support payments. Feminists argue that such parasitism is a right and a matter of justice. Amneus' analysis exposes the parasitism in all its absurdity: "This woman has spend 20 or 30 years in a home she could probably not have provided for herself, enjoying a standard of living 73% higher than she could have earned, bestowed upon her by a husband who forfeited 42% of his own standard of living for her sake during marriage. What partner is entitled to compensation?"

Perhaps the book's main shortcoming to a student of human behavior is that it is a polemic. It is not only provocative but also "politically incorrect". It excoriates feminists and their sacred cows, the easy divorce laws and automatic custody of children to their mothers, while extolling the blessings of patriarchy.

But in making his case, Amneus marshals an respectable body of pertinent and compelling research. Prudence, naturally, would require the reader to reserve judgement on many of his conclusions. Amneus is not, in any formal sense, a human ethologist, his scholarly specialty being the works of Shakespeare. Nevertheless, his book is valuable for the questions he raises and for the corollary demonstration that human ethology and sociobiology matter.

References

Fisher, Helen 1983. *The Sexual Contract* 1987.

-- "The four year itch," *Natural History*, 96 (10):22

Gelb, Ignace J. 1985. in "Obituaries", Ignace J. Gelb, expert on ancient languages', *Chicago Sun-Times*, Dec. 24, 1985, p. 46.

Goldberg, Steven 1973. *The Inevitability of Patriarchy*. William Morrow, N.Y.

Tucker, Robert C. 1987. *The Marx-Engles Reader*, 2nd edition. W.W. Norton, N.Y.

Editorial Staff

Associate Editor

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

Current Contents Editor

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

North American Book Review Editor

Linda Mealey
Department of Psychology,
St. John's University
Collegeville, MN 56321 USA

British Book Review Editor

A. Stuart Laws
Department of Psychology,
The University
New Castle upon Tyne
NE17RU England

French Book Review Editor

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

German Book Review Editor

Ludwig Boltzmann Institute for
Urban Ethology/Human Biology
Althanstrasse 14,
A-1090 Vienna, Austria,

Spanish and Portuguese Book Review Editor

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

MINI-COMMUNICATION WALKING SPEED

Peter Wirtz announces that he will be chairing the marine biology department at the University of Madeira, Portugal, and is unlikely to continue work on walking speed. He invites anyone who is interested to follow up his work. Below is the abstract of an article to appear in *Behaviour* on this topic. It is coauthored by Gregor Ries and is entitled "The pace of life reanalyzed: Why does walking speed of pedestrians correlate with city size?"

In a much quoted study, Bornstein and Bornstein (1976) showed that the walking speed of pedestrians is positively correlated with the size of the city. They interpreted the higher walking speed of people in larger cities as a psychological response to stimulatory overload. We also found a positive correlation between walking speed and city size. In addition, we showed that--at least in our sample--larger cities had higher proportions of young males and lower proportions of people older than 60 years. Walking speed and momentary density did not correlate positively. Because walking speed is age- and sex-dependent, differences in population structure are likely to cause differences in average walking speed. The average walking speed predicted for each city according to its age- and sex-composition correlated positively with city size. The regressions of observed walking speed on population size and of walking speed predicted from age structure on population size did not differ significantly in their slopes ($p > 0.95$). It therefore seems unnecessary to invoke other factors in addition to age composition to explain differences in average walking speeds of pedestrians.

For further information, write to Dr. Peter Wirtz, Universidade da Madeira, Largo de Colegio, P-9000 Funchal, Madeira, Portugal.

ANNOUNCEMENTS

ESS Conference

The sixteenth conference of the European Sociobiological Society will be held in Amsterdam 19-21 August 1993. The topic will be "Sociobiology and the Arts." For further information contact Dr. Jan Baptist Bedaux, Free University, Faculty of Letters, De Boelelaan 1105, 1018 HV Amsterdam, The Netherlands, tel. 31-20-5483041, fax 31-20-6446436.

Delwart Foundation Seminar

The Jean-Marie Delwart Foundation of Human Ethology will conduct a seminar on 13-14 September 1993 in Louvain-la-Neuve, Belgium. The topic is "Rites and Ritualization: Present State of the Concept." Applications should be sent to: Raphaelle Holender, General Secretary of the J. M. Delwart Foundation, Chateau de Pellenberg, B-3212 Pellenberg, Belgium, tel. 32-16-46-04-03. Fee is (regular) 1000 Belgian francs (*f*20), students 500 francs.

Karl Grammer

Karl Grammer, ISHE Secretary, now heads the Ludwig-Boltzmann Institut für Stadethologie. The Institute specializes in ethological research on applied problems, especially as they regard urban living. His address is given in the box "Officers of the Society," below. His telephone number is 43-1-31336-1340, fax 43-1-31336-788, e-mail A8111DAL@AWIUNI11.

Frans Plooij

Frans X. Plooij, former editor of this newsletter, now chairs the Department of Psychology of the University of Groningen. The chair concerns problems related to stress, studied from an ontogenetic and ethological perspective. Initially, his research program will focus primarily on developmental transitions in infancy. His address is Department of Psychology, University of Groningen, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands, tel. 31-50-63-63-97, fax 31-50-63-63-04, e-mail F.X.Plooij@ppsw.rug.nl.

Addresses of Primate Societies

International Primatological Society: Deutsches Primatenzentrum, Kellnerweg 4, W-3400 Göttingen, Germany, tel. 49-551-38510.

American Society of Primatologists: c/o Dr. Jeffrey French, Department of Psychology, University of Nebraska at Omaha, Omaha, NE 68182 USA

Japan Monkey Centre: Inuyama, Aichi 484, Japan.

Wanted: Book Editor and Theme

The Society for Personality and Social Psychology is searching for an editor and theme for the 1996 *Review of Personality and Social Psychology*. The 1995 volume is being edited by Jeff Simpson and Doug Kenrick on the theme of "Evolutionary Personality/Social Psychology (sorry, deadline for chapter proposals was 1 July). To propose a theme, prepare a 3-5 page double-spaced proposal. Describe the sorts of chapters that might be included, and explain why it would interest the members of SPSP and other readers. Write to Margaret S. Clark, Dept. of Psychology, Carnegie Mellon University, Pittsburgh, PA 15213 USA.

CURRENT LITERATURE

June 1993

If you are interested in possibly reviewing one of the books below or some other book, please contact the appropriate Book Review Editor (see Editorial Staff box).

Aiello, L.C., & Dunbar, R.I.M. (1993). Neocortex size, group size, and the evolution of language. *Current Anthropology*, 34, 184-175. (Univ. London Univ. Coll., Dept. Anthropol., Gower St., London, WC1E 6BT, England)

Allott, R. (1993). Evolutionary aspects of love and empathy. *Journal of Social and Evolutionary Systems*, 15, 353-371. (5 Fitzgerald Pk., Seaford BN25 1AX, East Sussex, England)

- Bechtel, W. (1993). Decomposing intentionality: Perspectives on intentionality drawn from language research with 2 species of chimpanzees. *Biology & Philosophy*, 8, 1-32. (Georgia State Univ., Dept. Philosophy, Atlanta, GA 30303 USA)
- Benz, J.J. (1993). Food-elicited vocalizations in golden lion tamarins: Design features for representational communication. *Animal Behaviour*, 45, 443-455. (Psych. Dept., Univ. Nebraska, Kearney, NE 68849 USA)
- Betzig, L., & Weber, S. (1993). Polygyny in American politics. *Politics and the Life Sciences*, 12, 45-53. (Univ. Michigan, Evolution & Human Behav. Program, 100 Rackham, Ann Arbor, MI 48109 USA)
- Blake, J., Dolgoy, S.J. (1993). Gestural development and its relation to cognition during the transition to language. *Journal of Nonverbal Behavior*, 17, 87-103. (Dept. Psychol., York Univ., 4700 Keele St., North York, Ontario M3J 1P3 Canada)
- Burgess, R.L., & Molenaar, P.C.M. (1993). Human behavioral biology: Commentary on Lerner and Voneye sociobiology and human development - Arguments and evidence. *Human Development*, 36, 45-55. (Penn State Univ., Dept. Human Dev. & Family Studies, University Park, PA 16802 USA)
- Buss, D.M., & Schmitt, D.P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204-232. (Univ. Michigan, Dept. Psychology, Ann Arbor, MI 48109 USA)
- Carson, H.L. (1993). Human genetic diversity, a critical resource for man's future. *Biology & Philosophy*, 8, 33-46. (Univ. Hawaii, John A. Burns Sch. Med., Dept. Genet. & Molec. Biol., Honolulu, HI 96822 USA)
- Cashdan, E. (1993). Attracting mates: Effects of paternal investment on mate attraction strategies. *Ethology and Sociobiology*, 14, 1-24. (Univ. Utah, Dept. Anthropol., Salt Lake City, UT 84112 USA)
- Coe, K. (1992). Art: The replicable unit: An inquiry into the possible origin of art as a social behavior. *Journal of Social and Evolutionary Systems*, 15, 217. (NCI, Companeros Salud Canc. Res. Project, Bethesda, MD 20892 USA)
- Collier, J. & Stingl, M. (1993). Evolutionary naturalism and the objectivity of morality. *Biology & Philosophy*, 8, 47-60. (Univ. Melbourne, Parkville, Vic. 3052, Australia)
- Crosby, A. W. (1993). *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*. Cambridge University Press, Shaftesbury Road, Cambridge CB2 2RU, U.K.; 40 W. 20th St., New York, NY 10011 USA (\$11.95 ppr.). "...[t]he Europeans' displacement and replacement of the native peoples in the temperate zones was more a matter of biology than of military conquest." **Needs Reviewer**
- Davidson, I., & Noble, W. (1993). On the evolution of language. *Current Anthropology*, 34, 165-169. (Univ. New England, Dept. Psychol., Armidale, NSW 2351, Australia)
- Dwyer, P.D. & Minnegal, M. (1993). Are Kubo hunters show-offs? *Ethology and Sociobiology*, 14, 53. (Univ. Queensland, Dept. Zool., Brisbane QLD 4072, Australia)
- Eals, M., & Silverman, I. (1992). Selective lateralization effects for simple vs. complex apparent movement tasks: Implications for the earlier evolutionary emergence of right hemisphere functions. *Evolution and Cognition*, 2, 115-122. (Dept. Psychol., York Univ., North York, Ontario, Canada)
- Eaves, L.J., et al. (1993). Analyzing twin resemblance in multisymptom data: Genetic applications of a latent class model for symptoms of conduct disorder in juvenile boys. *Behavior Genetics*, 23, 5-20. (Virginia Commonwealth Univ., Med. College of Virginia, Dept. Human Genetics, POB 3, MCV STN, Richmond, VA 23298 USA)
- Eddy, T.J., Gallup, G.G., & Povinelli, D.J. (1993). Attribution of cognitive states to animals: Anthropomorphism in comparative perspective. *Journal of Social Issues*, 48, 87-103. (Reprint: Gallup, G.G., SUNY Albany, Dept. Psychol., Albany, NY 12222 USA)
- Ekman, P. (1993). Facial expression and emotion. *American Psychologist*, 48, 384-393. (Univ. Calif. San Francisco, Human Interaction Lab., 401 Parnassus Ave., San Francisco, CA 94143 USA)

- Esteves, F., & Ohman, A. (1993). Masking the face: Recognition of emotional facial expressions as a function of the parameters. *Scandinavian Journal of Psychology*, 34, 1-19. (Univ. Uppsala, Dept. Clinical Psychol., Box 1225, S-75142 Uppsala, Sweden)
- Fichten, C.S., et al. (1992). Verbal and nonverbal communication cues in daily conversations and dating. *Journal of Social Psychology*, 132, 751-770. (Dawson Coll., Dept. Psychol., Montreal, PQ, Canada)
- Gifford, R., & Sacilotto, P.A. (1993). Social isolation and personal space: A field study. *Canadian Journal of Behavioural Science-Revue Canadienne des Sciences du Comportement*, 25, 165-175. (Univ Victoria, Victoria, BC, Canada VBW 2Y2)
- Goertzel, B. (1993). Brain function as evolution. *Journal of Social and Evolutionary Systems*, 15, 399-430. (Univ. Nevada, Dept. Mathematical Science, Las Vegas, NV 89154 USA)
- Gore, M.A. (1993). Effects of food distribution on foraging competition in rhesus monkeys, *Macaca mulatta*, and hamadryas baboons, *Papio hamadryas*. *Animal Behaviour*, 45, 773-786. (Deutsches Primatenzentrum, Kellnerweg 4, D-3400 Göttingen, Germany)
- Griffin, D. R. (1993). *Animal Minds*. Univ. of Chicago Press, 11030 S. Langley Ave., Chicago, IL 60628 USA (\$24.95 hdbk.).
- Halberstadt, A.G., et al. (1992). Children's abilities and strategies in managing the facial display of affect. *Journal of Nonverbal Behavior*, 16, 215-230. (Dept. Psych., North Carolina State Univ., Raleigh, N.C. 26795-7801 USA)
- Haug-Schnabel, G. (1992). Daytime and nighttime enuresis: a functional disorder and its ethological decoding. *Behaviour*, 120, 232-261. (Institut für Biologie I, Universität Freiburg, 7800 Freiburg, Germany)
- Hauser, M.D., Evans, C.S. & Marler, P. (1993). The role of articulation in the production of rhesus monkey, *Macaca mulatta*, vocalizations. *Animal Behaviour*, 45, 423-433. (Animal Communication Lab., Dept. Zool., Univ. Calif., Davis, CA 95616-8761 USA)
- Hauser, M.D., et al. (1993). Food-elicited calls in chimpanzees: Effects of food quantity and divisibility. *Animal Behaviour*, 45, 817-819. (see above)
- Hays, D.G. (1992). The evolution of expressive culture. *Journal of Social and Evolutionary Systems*, 187-216. (25 Nagle Ave., Apt 3-G, New York, NY 10040 USA)
- Heath, A.C., et al. (1993). Testing hypotheses about direction of causation using cross-sectional family data. *Behavior Genetics*, 23, 29-50. (Washington Univ., School of Medicine., Dept. Psychiatry, 4940 Audubon Ave, St. Louis, MO 63130 USA)
- Hefner, P. (1993). Biological perspectives on the fall and original sin. *Journal of Religion and Science*, 28, 77-103. (Univ. Chicago, Lutheran School of Theology, 1100 E. 55th St, Chicago, IL 60615 USA)
- Herrmann-Pillath, C. (1992). The brain, its sensory order, and the evolutionary concept of mind: On Hayek's contribution to evolutionary epistemology. *Journal of Social and Evolutionary Systems*, 15, 145-186. (Univ. Duisburg, Dept. Econ., Lotharstr. 65, W-4100 Duisburg 1, Germany)
- Heschl, A. (1993). Physiognomic similarity and political cooperation: An exploratory investigation. *Politics and the Life Sciences*, 12, 61-69. (Univ. Vienna, Inst. Zool., Althanstr. 14, A-1090 Vienna, Austria)
- Hoacsu, N. & Ekinici, B. (1992). Children's reliance on situational and vocal expression of emotions: Consistent and conflicting cues. *Journal of Nonverbal Behavior*, 16, 231-247 (Dept. of Psych., Middle East Technical Univ., 06531 Ankara, Turkey)
- Hooks, B. L., & Green, P. A. (1993). Cultivating male allies: a focus on primate females, including *Homo sapiens*. *Human Nature*, 4, 81-107. (Reprints: Green, P. A., Dept. Sociol., Clemson Univ., Clemson, SC 29634-1513 USA)
- Hrdy, S. B., & Judge, D. S. (1993). Darwin and the puzzle of primogeniture. *Human Nature*, 4, 1-45. (Dept. Anthropol., Univ. California, Davis, CA 95616 USA)
- Isbell, L.A., Cheney, D.L. & Seyfarth, R.M. (1993). Are immigrant vervet monkeys, *Cercopithecus aethiops*, at greater risk of mortality than residents? *Animal Behavior*, 45, 729-734. (Dept. Anthropol., Univ. California, Davis, CA 95616 USA)

- Kendler, K.S., et al. (1993). A test of the equal-environment assumption in twin studies of psychiatric illness. *Behavior Genetics*, 23, 21-29. (Box 710, MCV Stn., Richmond, VA 23298 USA)
- Keyes, C.D. (1993). Ethical judgment and brain function: An interpretation of Paul D. MacLean Hypothesis. *Journal of Social and Evolutionary Systems*, 15, 371-387. (Duquesne Univ., Dept. Philosophy, Pittsburgh, PA 15282 USA)
- Lerner, R.M., & Voneye, A. (1993). Why Burgess and Molenaar just don't get it. *Human Development*, 36, 55-57. (Michigan State Univ., Inst. Children, Youth & Families, Unit 2, Paolucci Bldg., East Lansing, MI 48824 USA)
- LeVay, S. (1993). *The Sexual Brain*. MIT Press, 55 Hayward St., Cambridge, MA 02142 USA (\$22.50 hdbk.). "...examined biological basis of human sexuality, revealing the brain's role in behaviors from courtship to cross-dressing. Drawing on evolutionary theory, endocrinology, molecular genetics and cognitive psychology, LeVay explains why human beings reproduce sexually...; which brain mechanisms produce sexual behavior; how these mechanisms differ in women and men; and what role they play in determining sexual orientation."
- Lieberman, P. (1993). *Uniquely Human*. Massachusetts: Harvard University Press, Cambridge, MA 02138 USA.
- Macedonia, J.M., & Evans, C.S. (1993). Variation among mammalian alarm call systems and the problem of meaning in animal signals. *Ethology*, 88, 177-197. (Animal Communication Lab., Univ. Calif., Davis, CA 95616, USA)
- Manson, J.H., & Perry, S.E. (1993). Inbreeding avoidance in rhesus macaques: Whose choice? *American Journal of Physical Anthropology*, 90, 335-343. (Univ. Michigan, Dept. Anthropol., Ann Arbor, MI 48109 USA)
- Masters, R.D. (1993). The Gruter Institute for Law and behavioral research. *Politics and the Life Sciences*, 12, 109-111. (Dartmouth College, Hanover, NH 03755 USA)
- McGrew, W.C. (1992). *Chimpanzee Material Culture: Implications for Human Evolution*. Cambridge University Press, Shaftesbury Road, Cambridge CB2 2RU, U.K. (£40 hdbk., £16.95 ppr.); 40 W. 20th St., New York, NY 10011-4211 USA (\$79.95 hdbk., \$29.95 ppr.). "This book describes and analyses the tool-use of humankind's nearest relative, the chimpanzee. It focuses on field studies of these apes across Africa, comparing their customs to see if they can justifiably be termed cultural. It makes direct comparisons with the material culture of foraging peoples." **Needs Reviewer**
- McGrew, W. C. (1992). Tool-use by free-ranging chimpanzees; the extent of diversity. *Journal of the Zoological Society of London*, 228, 689-694. (Dept. Sociol. & Anthropol., Miami Univ., Oxford, OH 45056 USA)
- McKelvie, S.J. (1993). Gender differences in book-carrying: A controlled replication. *Perceptual and Motor Skills*, 76, 349-350. (Bishops Univ., Dept. Psychol., Lennoxville, PQ, J1M 1Z7 Canada)
- Mealey, L., and Segal, N. L. (1993). Heritable and environmental variables affect reproduction-related behaviors, but not ultimate reproductive success. *Personality and Individual Differences*, 14, 783-794. (Reprint: Segal, N. L., Dept. Psychol., California State Univ., Fullerton, CA 92634 USA)
- Miller, B. D. (Ed.) (1993). *Sex and Gender Hierarchies*. Cambridge Univ. Press, Shaftesbury Road, Cambridge CB2 2RU, U.K.; 40 W. 20th St., New York, NY 10011 USA)
- Mitani, J.C. & Nishida, T. (1993). Contexts and social correlates of long-distance calling by male chimpanzees. *Animal Behaviour*, 45, 735-746. (Dept. Anthropol., Univ. Michigan, Ann Arbor, MI 48109 USA)
- Money, J. (1991). *Biographies of Gender and Hermaphroditism in Paired Comparisons*. Elsevier Science, P. O. Box 211, 1000 AE Amsterdam, The Netherlands (Dfl. 140); P. O. Box 882, Madison Sq. Stn., New York, NY 10159 USA (\$60 ppr.). "A lovemap develops as a pattern or template in the brain and the mind....The years around age eight are critical...A lovemap registers the ideas and images of the idealized lover, the idealized love affair, and the idealized activities and practices that induce sexual arousal and lead to sexual climax." **Needs Reviewer**

- Montepare, J.M., & Zebrowitz, L.A. (1993). A cross-cultural comparison of impressions created by age-related variations in gait. *Journal of Nonverbal Behavior*, 17, 55-68. (Dept. Psychol., Tufts Univ., Medford, MA 02155)
- Morin, E. (1993). From the concept of system to the paradigm of complexity. *Journal of Social and Evolutionary Systems*, 15, 371-387. (CNRS, F-75005 Paris, France)
- Neeman, Y. (1993). Darwin, Nietzsche, and the Judeo-Christian Ethic. *Journal of Social and Evolutionary Systems*, 15, 347-353. (Tel Aviv Univ., Raymond & Beverly Sackler Fac. Exact Sci., IL-69978 Tel Aviv, Israel)
- Nishida, T. (1993). Left nipple suckling preference in wild chimpanzees. *Ethology and Sociobiology*, 14, 45-52 (Kyoto Univ., Dept. Radiat. Med. Human Evolut. Studies Lab., Kitashirakawa Oiwakecho, Sakyo KU, Kyoto 606, Japan)
- Norcross, J.L., Newman, J.D. (1993). Context and gender-specific differences in the acoustic structure of common marmoset (*Callithrix jacchus*) Phee calls. *American Journal of Primatology*, 30, 37-54. (Comparat. Ethol. Lab., Poolesville, MD 20837 USA)
- Papousek, H., Papousek, M., & Jurgens, U. (1992). *Nonverbal Vocal Communication*. Cambridge University Press, Shaftesbury Road, Cambridge CB22RU, U.K.; 40 W. 20th St., New York, NY 10011-4211 USA. "Speech differentiates humans from animals and yet links have been found between human and animal nonverbal communication. In this new book specialists from a range of disciplines review the present knowledge on communication, revealing the complexity of animal vocal signals and the level of human parental support for the development of communication in infants." **Needs Reviewer**
- Povinelli, D.J. (1993). Reconstructing the evolution of mind. *American Psychologist*, 48, 493-509. (Lab. of Comparative Beh. Biology, Univ. of Southwestern Louisiana, 100 Ave. D., New Iberia, LA 70560 USA)
- Preston, S.H. & Campbell, C. (1993). Differential fertility and the distribution of traits: The case of IQ. *American Journal of Sociology*, 98, 997-1019. (Univ. Penn., Ctr. Populat. Studies, 3718 Locust Walk, Philadelphia, PA 19104 USA)
- Richard, A.F., Rakotomanga, P., & Schwartz, M. (1993). Dispersal by *Propithecus verreauxi* at Beza-Mahafaly, Madagascar - 1984-1991. *American Journal of Primatology*, 30, 1-20. (Yale Univ., Dept. Anthropol., New Haven, CT 06520 USA)
- Rightmire, G. P. (1993). *The Evolution of Homo Erectus*. Cambridge Univ. Press, Shaftesbury Road, Cambridge CB2 2RU, U.K.; 40 W. 20th St., New York, NY 10011 USA (\$24.95 ppr.).
- Roese, N.J., et al. (1992). Same-sex touching behavior: The moderating role of homophobic attitudes. *Journal of Nonverbal Behavior*, 16, 249-260. (Univ. Western Ontario, Dept. Psychol., London, Ontario N6A 5C2 Canada)
- Russell, R.L., et al. (1993). The role of nonverbal sensitivity in childhood psychopathology. *Journal of Nonverbal Behavior*, 17, 69-83. (Dept. Psychol., Loyola University of Chicago, 6526 N. Sheridan Rd., Chicago, IL 60626 USA)
- Schroder, I. (1993). Human sexual behavior, social organization, and fossil evidence: A reconsideration of human evolution. *Homo*, 43, 263-277. (Univ. Kiel, Inst. Anthropol., Olshausenstr. 40, W-2300 Kiel 1, Germany)
- Settle, T. (1993). Fitness and altruism: Traps for the unwary, bystander and biologist alike. *Biology and Philosophy*, 8, 61. (Univ. Guelph, Dept. Philosophy, Guelph, Ontario N1G 2W1 Canada)
- Sicotte, P. (1993). Inter-group encounters and female transfer in mountain gorillas: Influence of group composition on male behavior. *American Journal of Primatology*, 30, 21-36. (Univ. Montreal, Dept. Anthropol., CP 6128, Succ. A, Montreal, Quebec, H3C 3J7 Canada)
- Simpson, M. (1993). Political power versus ecological evolutionary forces: What are the proximal sources of income distribution. *Social Forces*, 71, 797-806. (North Carolina Cent. Univ., Dept. Sociol., Durham, NC 27707 USA)
- Smith, D.D. (1993). Brain, environment, heredity, and personality. *Psychological Reports*, 72, 3-14. (POB 95, Lennoxville, PQ, J1M 1Z3 Canada)
- Smith, E.A. (1993). Sex ratio evolution and adult mortality: A commentary. *Ethology and Sociobiology*, 14, 39-44 (Univ. Washington, Dept. Anthropol, Seattle, WA 98195 USA)

- Smith, J. Maynard (1993). *The Theory of Evolution*. 3rd ed. "...reprints the text of the third edition..., adding a substantial new introduction covering recent developments in the laws of inheritance. A new forward by [Richard Dawkins]..." Cambridge Univ. Press, Shaftesbury Road, Cambridge CB22RU, U.K.; 40 W. 20th St., New York, NY 10011 USA (\$11.95 ppr.)
- Stoppard, J.M., & Gruchy, C.D.G. (1993). Gender, context, and expression of positive emotion. *Personality and Social Psychology Bulletin*, 19, 143-151. (Univ. New Brunswick, Dept. Psychol., Bag Serv. 45444, Fredericton, NB E3B 6E4 Canada)
- Thommen, E., Reith, E., & Steffen, C. (1993). Gender-related book-carrying behavior: A reexamination. *Perceptual and Motor Skills*, 76, 355-363. (Univ. Geneva, Fac. Psychol. & Sci. Educ., 9 route de Drize, CH-1227 Carouge, Switzerland)
- Tucker, J.S., & Friedman, H.S. (1993). Sex differences in nonverbal expressiveness: Emotional expression, personality, and impressions. *Journal of Nonverbal Behavior*, 17, 103-119. (Dept. Psychol., Univ. California, Riverside, CA 92521 USA)
- Vanhanen, T. (1993). *On the Evolutionary Roots of Politics*. Sterling Publishers, L-10, Green Park Extn., New Delhi 110016 India (\$15). "The idea of this book is to show how to apply evolutionary argumentation to the study of politics and how to explain regularities in human politics structures and behavioural patterns by the assumed evolutionary roots of politics."
- Vanhanen, T. (1993). *Politics of Ethnic Nepotism*. Sterling Publishers (see above) (\$10). "...traces the origin of ethnic conflicts not only in India but in all ethnically divided societies, to our assumed universal behavioural predisposition, shaped by natural selection, to favor kin over non-kin."
- Vochtelloo, J.D., et al. (1993). Effects of reducing the mother's radius of action on the development of mother-infant relationships in longtailed macaques. *Animal Behaviour*, 45, 603-612. (Psychological Laboratory, Dept. of Comparative & Physiological Psych., P.O. Box 9104, 6500 HE Nijmegen, The Netherlands)
- Wagner, H.L. (1993). On measuring performance in category judgment studies of nonverbal behavior. *Journal of Nonverbal Behavior*, 17, 3-20. (Dept. Psychol., Univ. of Manchester, Oxford Road, Manchester M13 9PL, England)
- Wagner, H.L., Buck, R., & Winterbotham, M. (1993). Communication of specific emotions: Gender differences in sending accuracy and communication measures. *Journal of Nonverbal Behavior*, 17, 29-53. (see above)
- Wagner, H.L., Lewis, H., Ramsay, S., & Krediet, I. (1992). Prediction of facial displays from knowledge of norms of emotional expressiveness. *Motivation and Emotion*, 16, 347-362. (see above)
- Wallman, J. (1992). *Aping Language*. Cambridge Univ. Press, Shaftesbury Road, Cambridge CB2 2RU, U.K.; 40 W. 20th St., New York, NY 10011 USA (\$44.95 hdbk., \$14.95 ppr.)
- Walsh, A. (1993). Love styles, masculinity/femininity, physical attractiveness, and sexual behavior: A test of evolutionary theory. *Ethology and Sociobiology*, 14, 25-38 (Boise State Univ., Dept. Sociol. Anthropol. & Criminal Justice, Boise, ID 83725 USA)
- Wirtz, P., & Ries, G. (1992). The pace of life reanalysed: Why does walking speed of pedestrians correlate with city size? *Behaviour*, 123, 77-83. (Universidade da Madeira, Largo do Colegio, P-9000 Funchal, Madeira, Portugal)
- Wrangham, R. W. (1993). The evolution of sexuality in chimpanzees and bonobos. *Human Nature*, 4, 47-79. (Peabody Museum, Harvard Univ., Cambridge, MA 02138 USA)
- Young, D. (1993). *The Discovery of Evolution*. Cambridge Univ. Press, Shaftesbury Road, Cambridge CB2 2RU, U.K.; 40 W. 20th St., New York, NY 10011 USA (\$24.95). "...retraces the steps of those who developed the theory of biological evolution from the seventeenth century through the present."
- Ziegler, T.E., et al. (1993). Detection of the chemical signals of ovulation in the cotton-top tamarin, *Saguinus oedipus*. *Animal Behaviour*, 45, 313-322. (Dept. Psychol., Univ. Wisconsin, Madison, WI 53706 USA)
- Zucker, E.L., & Clarke, M.R. (1992). Developmental and comparative aspects of social play of mantled howling monkeys in Costa Rica. *Behaviour*, 123, 144. (Loyola Univ., Dept. Psychol., New Orleans, LA 70118 USA)
- Zuckerman, M., & Miyake, K. (1993). The attractive voice: What makes it so? *Journal of Nonverbal Behavior*, 17, 119-130. (Dept. Psychol., Univ. Rochester, Rochester, NY 14627 USA)