

Human Ethology Newsletter

Editor: Frans X. Plooij
Paedological Institute of the City of Amsterdam
IJsbaanpad 9, 1076 CV Amsterdam, Netherlands (20) 643321 or (2963) 4197

VOLUME 5, ISSUE 1

ISSN 0739-2036

MARCH, 1987

Published by the International Society for Human Ethology

Officers of the Society

President

*Irenäus Eibl-Eibesfeldt
Max-Planck-Institut, D-8131
Seewiesen, West Germany*

Vice President for Information

*Frans X. Plooij
Paedological Institute
Amsterdam, Netherlands*

Secretary

*Gail Zivin
Jefferson Medical College
Philadelphia, PA, USA*

Treasurer

*Herman Dienske
Primate Center
Rijswijk, Netherlands*

Membership Chair

*Jay Feerman
Vista Sandia Hospital
Albuquerque, NM, USA*

SOCIETY MATTERS

Thanks Bob

It is only just to start this first issue of a new volume of the newsletter with expressing our gratitude to the outgoing editor, Bob Adams. Having prepared this first issue, I now realize to the fullest extent what an enormous investment of time and energy goes into the Newsletter. And Bob did much more. For one thing, he was treasurer as well. Now two Dutchmen

are needed to do the work that Bob did all alone. So he was playing a Dutch concert, really. We owe Bob a great debt for the marvelous job he has done. Thank you Bob. And although he will take a well-earned rest from his work as editor, he will remain an influential member of the Society and he may even remain in office as the new Vice-President. And that brings me to the ballot in this issue.

Ballot in this Issue

Inside the back page of this issue, under the bulletin board, there is a ballot for your vote on the election of Bob Adams as the new Vice President.

Why this ballot? This needs some explaining. Even after the request in the Newsletter issue of September 1986, Bob Adams still is the unanimous nominee for Vice President. The bylaws say that there will be two nominees per position and that the candidate slate should be balanced across continents. Playing it by the letter of the book could have unpleasant consequences for the additional nominees. Therefore we suggest to have this vote, simply to affirm or deny Bob Adams as Vice President.

Please clip (or photocopy), indicate your approval or disapproval, and mail to the Newsletter editor.

Call for Book Review Editors

Together with Bob Adams two of the three book review editors are stepping down after years of dedication to the newsletter: Bill McGrew and Ian Vine. They have done more than their share for over three years to make the newsletter the success it is up till now. Thank you very much Bill and Ian. As the reader can see from this issue, Bill Bailey, the North-American book review editor, is still going strong and I hope he will continue to do so for some time to come.

Both European book review editors gave me some pretty good advice in their resignation letters. One advice was to search for review editors who can be responsible for books in other languages than English. I think this is a good idea for several reasons:

1. It makes people not speaking those languages aware of what is going on outside the Anglo-American literature. Of course, the review has to be written in English.

2. More people who *do* speak or read those languages may become interested in the membership of the ISHE and in reading the Newsletter. That would make the Society even more international than it is already.

Obviously, one has to restrict oneself. It makes sense to select languages that are spoken in large parts of the world such as Spanish (Portuguese) and French. On the other hand German has always been an important language in the ethological literature.

Luck was on my side, so far. Eduardo Gudynas and a colleague of his are willing to consider handling the literature in Spanish and Portuguese (the latter because of the active research programmes in Brasil). At the moment we are corresponding about it. As for the German language, I think I can handle that myself.

So far I have not been able to find a book review editor for the literature in the French language who is willing to write English reviews. Thus, I would like to place a **Call for a French Book Review Editor**. Would anyone interested in that job be so kind to contact me?

Change in payment of dues

by: Herman Dienske, Treasurer

Formerly, dues were paid to the Newsletter Editor, Bob Adams, who exquisitely served the Society in handling both the Newsletter and the Society's money. The next 3 years, these two tasks are split over two Dutchmen.

It appears that cashing personal checks in The Netherlands costs no less than 35% of \$ 10, which is a waste. Therefore, U.S. and Canadian *personal checks* are to be sent to

Dr. J.R. Feierman
Membership Chair, ISHE
Vista Sandia Hospital
501 Alameda Blvd. N.E.
Albuquerque, NM 87113
U.S.A.

All other payments should be directed to the Treasurer. An easy and cheap way to do this is to order your bank to pay an equivalent of \$ 10 in Dutch guilders (Dfl.) to the account of the Society:
Treasurer International Society for Human Ethology
Herman Dienske
Algemene Bank Nederland
Account number 56.64.00.561
Breestraat 81
Leiden
The Netherlands

The Post Giro number of the Algemene Bank Nederland, Leiden is 9013. Please give the bank account number and the Society's name. An alternative is to send a check or International Money Order to the Treasurer ISHE, Herman Dienske, Primate Center TNO, Lange Kleiweg 151, 2280 HV Rijswijk,

The Netherlands. Checks preferably should be in Dutch currency; we are charged for exchange. It is convenient if dues are paid for more than one year. Indicate clearly for which year(s) dues are.

Emergency! Membership (Renewals) Requested

Going through the membership list I was startled by the number of membership renewals that are still due for 1986 and even 1985 and 1984. Please, renew your membership *now*. We need your money to produce and mail this newsletter. Renewal notices are not sent for economic reasons. If the date on your mailing label is earlier than 1987, it is time to renew your membership.

Even if everybody would pay his/her dues neatly in time, we are still short of cash for producing and mailing the newsletter. We hate to raise the membership dues, though. I am afraid we will have to do just that if all of us do not come up with two things quickly:

1. Overdue payments;
2. New members.

In the September 1981 issue Joan Lockard argued that it would be desirable to have 350-400 members in order to sustain our organization. At that time we had 226 members. At the moment it is little more. Apparently, the number of members has been stable over the years.

So, I repeat Joan's plea to become evangelistic. At the end of the newsletter is a membership form. If each of us were to ask one colleague to join ISHE, we could double our membership by the next issue.

Changes in the Newsletter

There is a change in appearance of the Newsletter with this issue. This is the inevitable result of a change of editor and the accompanying change in resources available for producing the Newsletter. In trying to maintain the high standard of typesetting which Bob Adams developed and, in the same time, to cut down the costs (incredible how Bob did such a wonderful job with so little money. His university must have been very kind to us), I took my refuge to desk-top-publishing. Another way of saving money is to send submissions on floppy disk. We can handle papers written in McWrite on the Macintosh.

As for the contents of the Newsletter, what features/sections of the Newsletter would you like to see altered, added, or deleted? What about a new section on "Growing points in human ethology"? A few examples of the growing points mentioned in the last plenary session at the Tutzing conference are:

1. The history of human ethology has to be written in order to guarantee the spread of ideas without loss in translation.
2. Behavior genetics.

3. The study of ontogeny.
4. A focus on the practical relevance and benefits of the ethological approach in various fields of application. For instance, at the Tutzing conference, a family therapist said that family therapy and ethology can help each other.

Another idea that was mentioned to me was to start a section on pathological behaviour. Wouldn't it be nice if special interest groups were started? They could have their own section in the newsletter.

Please, if you have any specific comments and suggestions, mail to the editor. Thank you.

MINI COMMUNICATIONS

The objective of this section is short empirical or theoretical papers which inform and would benefit from the input of peers. If readers wish to comment, write directly to the author(s).

From an Ethologist's Journal

by: William T. Bailey, Dept. of Psychology, Tulane University, 2007 Percival Stern Hall, New Orleans, LA 70118, U.S.A.

A group of researchers in Japan have been studying infant-mother attachments for some time now. Their reports indicate that they have been finding a disproportionate number of "C" (i.e. "insecure") babies - relative to U.S. samples (Miyake, Chen, & Campos, 1985; Takahashi & Miyake, 1984). Several comments on this seem appropriate.

1. I have felt for sometime that it would have been preferable to maintain the labels (A,B,C) which Ainsworth assigned in her first reports rather than using the more judgemental labels ("secure", etc.). Given the number of studies that have been conducted, there is little doubt that infants do differ and can be meaningfully grouped by their behavior. There is some question, however, as to whether infants can be judged as more optimally adjusted (attached), across cultures and other grouping factors (e.g. ecology, industrial development, etc.), in terms of A-B-C assignment. I point out to you what may seem obvious, that in all of these studies *the children have lived to be a one-year-old!* The children who are truly sub-optimally attached with mother may have died, they may be so poorly cared for or so abused that they don't even get into attachment studies. Statistically there may be bias due to restriction in range, dispersion.

2. Much of the attachment research has been based solely on observations in Ainsworth's "strange situation". Yet, in her pioneering investigation that was only one aspect. Unfortunately little has been learned since that study concerning the on-going, developmental aspect of undifferentiated, attachment-in-making, full-attachment, nor the correlates of daily

activity and attachment.

3. The "fact" (I think validated by Ainsworth's home study) that strange situation behavior is a valid index for U.S. infants does not demonstrate that it is valid under *any* or *all* conditions. When it is not, it is incumbent on the conscientious scientist to develop his/her own methods which are context appropriate. In societies, for example, where infants are in very frequent and close contact with their mothers, where they infrequently are exposed to "true" strangers, where they seldom are confronted with strange rooms - and never abandoned in them, then it seems inarguable that the Strange Situation is inappropriate (and perhaps unethical). This does not mean that attachment can not be studied - even under controlled conditions, or that infants can not be so stressed that we might reliably expect that the attachment system will be activated. Rather it calls on the scientist's ingenuity.

I would like to share with you some comments and observations made by other researchers concerning the "adaptive" value and/or evolutionary correlates of infant and mother characteristics. There have been a number of studies of the effect of early contact on infant-mother attachment, usually assessed in terms of the mother's behavior towards the infant (most other attachment work has focused on the infant's behavior and attachment to mother). The results are inconsistent or negative. The mothers originally studied by Klaus and Kennel (1981) were from an economically deprived background. Yet, most other studies have involved relatively well off mothers. It might be that these mothers are so primed for motherhood, view it so positively that a ceiling effect prevails. This is, all the mothers want and await the child's birth, so immediate or (relatively) delayed first contact with the baby has no observable effect (Grossmann, Thame, & Grossmann, 1981). In an evolutionary context, however, it may well be that in hunter-gatherer society - which prevailed through the formative eons of homo evolution, mother's early contact with the infant might well be critical in establishing whether the infant will live beyond birth. When the infant's very survival depends on mother carrying it and providing for all its needs, immediate and intense bonding would be essential. I point out to you the reports in the ethnographic literature, that mothers in contemporary hunter-gatherer peoples *who do not intend to keep their babies, do not look at them during the birth, but rather look to the side until parturition is complete and then abandon the child* (Thomas, 1959). Here early contact is critical, an effect which is obscured by modern birthing and child care practices.

Another example of the adaptive value of infantile characteristics, which may not be apparent under the conditions which prevail in most "modern" societies, concerns infant temperament (easy and difficult). Although there is disagreement on how to best measure temperament and what the causal and modifying phenomena are, there seems to be a consensus that some infants are "easier" than others, while some are notoriously "difficult". Most

researchers and discussants have, however, been unable to explain *why* some are easy, some difficult. Wouldn't it make more sense, for example, if all babies were easy? Under modern conditions in industrialized economies, where in general the essential requirements for survival are available to all and where the vast environment-related swings (e.g. drought) in essential resource requirements are seldom experienced, this might seem likely. Yet, mankind has not long lived under such conditions nor do they exist for all of humanity even now. Where critical conditions are likely to fluctuate, as they have throughout so much of our existence, then it may well be adaptive for alternative strategies (easy/difficult) to have evolved. There is some evidence supporting this position. In a recently published study which investigated temperament among the Masai of East Africa supporting evidence was discovered. The temperament of infants was assessed when they were 4-5 months old. Four months later the researchers returned to the tribe. In the interim the tribe had experienced severe ecological stress and food was in quite short supply. The investigator found that a disproportionate number of the children who had survived had initially been assessed as "difficult" (de Vries, 1984). It seems that when all is well, parents might prefer and respond more positively to an "easy" baby. But it may well be that when essential requirements are scarce, the difficult child - who is active and annoying, might get more attention and food and might out-survive the easy babies who were cute and content - and ignored and starved!

References:

- DeVries, M.W. (1984). Temperament and infant mortality among the Masai of East Africa. *American Journal of Psychiatry*, 141, 1189-1194.
- Grossmann, K., Thame, K., & Grossmann, K.E. (1981). Maternal tactile contact of the newborn after various postpartum conditions of mother-infant contact. *Developmental Psychology*, 17, 158-169.
- Klaus, M.H., & Kennel, J.H. (1981). *Parent-infant bonding* (2nd ed.). St. Louis: C.V. Mosby Co.
- Miyake, K., Chen, S-j., & Campos, J. (1985). Infant temperament, mother's mode of interaction, and attachment in Japan: an interim report. In I. Bretherton and E. Waters (Eds.), *Growing points in attachment theory and research* (pp. 276-297). *Monographs of the Society for Research in Child Development*, 50, (serial no. 209, nos. 1-2).
- Takahashi, K., & Miyake, K. (1984, April). Culture-boundness of the A,B,C classification by the strange situation: a case of Japanese infants and mothers. Paper presented at the 4th biennial International Conference on Infant Studies.
- Thomas, E.M. (1959). *The harmless people*. New York: Vintage Books.

Late entry in the "Daring Ideas Contest"

The Tale of the Human niche and its behavioral implications: optimization of reproductive effort

by: Eduardo Gudynas,
Latin America Regional Office,
Association for the Study of Man Environment
Relations,
P.O. Box 13125,
Montevideo, Uruguay.

Recently Mackey (1986a, HEN 4(10): 5) in his tale of two niches raised once again the importance of this ecological concept and its behavioral implications. Mackey asked two questions: (1) which is the present human niche? and (2) are there any subsets that present reproductive advantages? Mackey (1986b, HEN 4(11): 7-8) further deals with "differences" in niche resulting in reproductive "differences".

Niche and reproductive tactics

At this point it is necessary to recall precise definitions for the words invoked. First used in the 20s, the niche referred to the place of a species in the biotic environment (C. Elton) or the range of environmental variables that allows a species to carry out its life process (J. Grinnell). The first concept applies to the role or "profession" of a species in the community, while the second defines a subdivision of the environment (e.g. a habitat). Hutchinson (1958) introduced the idea of the niche as a multidimensional space, where ranges of values express the probability of survival of the species. Whittaker et al. (1973) showed that the niche is a construct, which cannot be observed directly, but is postulated by scientists to explain the range of observations. The niche is an attribute of one species that permits us to study interactions with other species.

Two points are relevant to this analysis: first, there are neither empty nor prefixed niches, but they are described after the observed pattern of ecological variables. So the humans did not "live" in a niche (as stated by Mackey, 1986a), but a niche is described for them. Second, this description is done for *one* species, and the main purpose is to study the role within a community, but not for subsets of the species.

Although there is only one niche that may be described for humans, it may have changed as new variables have been added with time (e.g. cultural, economical, political). It could be stated that niche hypervolume has increased, as did its complexity. Furthermore, as known for other species, range for one resource axis (e.g. food) is coupled with behavioral axis (e.g. feeding behavior). So, the variation in ranges and the addition of new variables, have led to modifications coupled with behavioral dimensions.

Mackey actually related differences in range values

for some ecological variables with reproductive advantages. He postulated that the woman-child-state triad are producing offspring at the same rate as the nuclear family. He confused two variables: (a) the number of offspring, and (b) reproductive success (the number of surviving offspring in a season or in lifetime). Certainly parental investment is reduced in the woman-child-state triad because the state only provided money to obtain services and materials, but not a father, that spends time and energy, and whose importance could not be neglected. Thus, reproductive success may not be equal. Furthermore, a third variable must be introduced: humans, as other animals, optimize input variables (e.g. food) to optimize output ones (e.g. reproductive success) so as to optimize reproductive fitness. Thus, behavior would be adaptive to maximize inclusive fitness, which includes the improvement of reproductive success of the offspring.

r-K optimization pattern

Cost/benefit optimization is a process, as complete maximization is never reached. Although man is a K-selected strategist species if compared with others (Pianka, 1970), variability within the strategy is well known (commented for humans on an historical perspective by Colinvaux, 1981). In some cases, input/output balance of the parents resulted in a higher birth rate, while in others birth rate is low, but investment high, although through raising, education, etc. In both cases, the ultimate goal is to maximize the number of surviving offspring. I postulate here that these differences may be referred to the r-K continuum concept, and it may be postulated that human populations, although nearer the K extreme of the continuum, have some facing the K end point, and others facing the r one. This seems the result of human niche expansion; the increased variability in range for niche variables is coupled with behavioral dimensions, that also show an increased variability.

Mackey (1986b) again misinterpreted concepts of niche and reproductive success while dealing with the causes of demographic patterns between North and South societies. The solution of the "demographic transition" debate is suggested by this model. Third World countries are largely constituted by low-income populations (Latin America GNP ranges from US\$ 300 - Haiti - to \$ 4,140 - Venezuela - compared with a mean of \$ 11,070 for developed countries) that optimizes reproductive success by a higher birth rate. Their reproductive success is nevertheless poor (just recall that mean life expectancy in less developed countries is 57.0 years, and in developed countries 72.4 years). But in the same countries, a minority of high income sets presents low birth rates. They are facing the K end point of the continuum, and reproductive success is carried out through few children, while investment is also directed to education, job opportunities, etc.

This minority could not alter national figures, but as they live in Mackey's "southern" niche, and presenting a different reproductive pattern, we conclude to refute his model.

The r-K optimization model supports the idea that reproductive success maximizes the probability of offspring to attain high reproductive success. Less developed societies, with high birth rate and low death rate present an improvement and advantage compared with primitive societies, that present both high death and birth rates. But in a cultural world, with hard selective pressures on the cultural dimensions of the niche, adaptive cultural characters are favored, so it is advantageous to convert part of parental investment to support cultural attributes of offsprings, most of them learned. This explains why lowering of birth rates in some less developed countries is not associated with the "economic development" (as measured by economical variables), but with the "social development" (as measured by key factors as nutrition, health, sanitation, education, etc.) (Ehrlich, 1985).

References:

- Colinvaux, P. (1981). *El destino de las naciones*. Ed. Belgrano, Buenos Aires, 396 pp.
 Ehrlich, A.H. (1985). The human population: size and dynamics. *Amer. Zool.*, 25, 395-406.
 Hutchinson, G.E. (1958). Concluding remarks. *Cold Spring Harbor Symp. Quant. Biol.*, 22, 415-427.
 Pianka, E.R. (1970). On r and K selection. *Amer. Nat.*, 104, 592- 597.
 Whittaker, R.H.; S.A. Levin & R.B. Root. (1973). Niche, habitat and ecotope. *Amer. Nat.*, 107, 321-338.

Another late entry in the "Daring Ideas Contest"

Language and the African Experience

by: David Alan Munro
 formerly: Univ. of Ibadan,
 Univ. of Nigeria, Nsuka
 Presently: 802 Bluebird Cn Dr.
 Laguna Beach, CA 92651, U.S.A.

Like an unseen counselor the notion of African Genesis sits in on the studies of Old Africa. If this is the way Africa was, says the counselor, then this is the way it was for all humanity.

It was said that Nigeria - itself arbitrarily carved out of West Africa by European colonialists - had 360 langas when the colonialists arrived. It was then many hundreds of years more primitive than Europe, and this leads us to:

Proposition One: The farther back in history we go, the greater the multiplicity of languages in a given area. This was both a convenience in establishing tribal identity and an inconvenience to individuals, but to some of the latter it represented challenge, so

Proposition Two: The very multiplicity of languages

explains how humans became so damned smart. Harry Jerison has pointed out that our brains developed in a mere million years, leading us to

Proposition Three: the multiplicity of languages, as testing ground, contributed directly to (gave differential reproductive advantage to) people who mastered many languages. For genetic reasons many tribes practiced exogamy, for practical reasons they traded goods, for military/diplomatic reasons they seized or exchanged women, and men sought extra women then, as they do now, preferring the exotic, the foreign, giving us

Proposition Four: Ingenious men (and some women) who knew a number of languages were most able to travel and leave their seed or to accommodate travelers facilitating the mixture. Monolinguals were neither so smart nor so fecund. This has been with us so long that it comes down to us an inherited behavioral predilection, thus

Proposition Five: Small children want and need a variety of languages for cognitive development, perceived by them as playgroup enjoyment. Therefore, even as ontogeny recapitulates phylogeny,

Proposition Six: It is a deprivation limiting children's subsequent cognitive competence not to expose them to a variety of languages at the automatic - or "imprinting" - language-learning ages.

I trust these propositions fit your criterion: definitely more daring than demonstrable.

The development of explicit quantitative models designed to address those issues and providing a coevolutionary alternative to traditional sociobiological theory is the purpose of the book under review. In this, Boyd and Richerson succeed admirably. The exposition of the book's main ideas is lucid, and the mathematical models they present are well integrated with the text. *Culture and the Evolutionary Process* is an important contribution and deserves widespread attention.

The central argument is that when populations of organisms are exposed to variable environments, individual learning and social learning are two alternative means by which phenotypes may come to approximate the locally adoptive variant. Individual learning refers to change in behavior through evaluating (consciously or unconsciously) the outcomes of behavioral variants under given environmental circumstances. This process is associated with costs and benefits. The benefits are increased in fitness resulting from adaptive adjustments of behavior in relation to local conditions. The costs involve the time and energy necessary to conduct trial-and-error learning experiments and the errors made due to incorrect evaluations of outcomes. The authors point out that psychological research on human decision-making suggests rather limited capabilities for integrating complex information and frequent errors in judgment. Sampling error is another cost of learning. For example, although experiments with different mixes of agricultural crops might lead to the most efficient mix given local patterns of temperature and rainfall, it is also possible to come to incorrect conclusions if the patterns of rainfall are temporally aberrant when the experiments are conducted.

An alternative to this form of learning is to adopt patterns of behavior by imitating the behavior of other individuals. Once some members of a population adjust their behavior to local conditions through individual learning, selection can favor behavior copying as an alternative to trial and error learning with its associated costs. For the authors, this form of behavior imitation *without evaluation of outcome* is the essence of culture.

However, as more individuals adopt the copying alternative, behavior will become less sensitive to local fitness constraints. This should result in some equilibrium distribution of individual learners and cultural copiers, or, alternatively, a mixed-strategy with an equilibrium proportion of reliance on the two forms of learning within individuals.

A central thesis of the book is that the process of cultural transmission itself can create forces of directional change in the distribution of phenotypes, and ultimately of genotypes, within populations. As long as imitation is, on average, associated with greater fitness, these forces can favor the evolution of behavior variants which do not maximize biological fitness. The example discussed in chapter 6 is the demographic transition. The authors argue that it may be quite difficult to determine the most fit reproductive rate through individual learning and that selection might favor copying the reproductive rates of others. If culturally successful people (e.g., those who achieve wealth and leadership positions) are more likely to be copied, then their reproductive strategies will become

BOOK REVIEWS

Culture and the Evolutionary Process. Chicago: University of Chicago Press, 1985. £27.95, \$35.00. By Boyd and Richerson.

Reviewed by Hillard Kaplan

Department of Anthropology, University of New Mexico, Albuquerque, NM 87131, U.S.A.

Learning and the cultural evolution of behavior

Most anthropologists accept the theory of evolution by natural selection for explaining at least the early stages of hominid evolution, and yet argue that the existence of culture in human societies creates forces which weaken the linkage between behavior and biological fitness (e.g., Sahlins 1976). In order to resolve these seemingly conflicting viewpoints and to determine whether both can be correct, we need to develop and test models concerning 1) why the capacity for culture might evolve in a noncultural organism and 2) once organisms inherit behavior patterns culturally, how do the specific features of the cultural transmission process affect the kinds of behavior that can evolve.

increasingly prevalent in the population. The authors hypothesize that during the demographic transition, raising large families conflicted with social success. Since those individuals who were most socially successful and therefore most frequently imitated produced fewer offspring, the phenotype with the lower (putatively, less biologically fit) reproductive rate became more prevalent through time (see Kaplan and Hill [1986] and Lancaster and Lancaster [1987] for an alternative view which suggests that reproductive restraint is the most biologically-fit strategy under the conditions prevalent during the demographic transition). In chapters 7 and 8, the authors discuss the evolution of large-scale cooperation and symbolic behavior as effects of specific cultural transmission processes. This, I believe, is the first coherent set of models designed to both place culture squarely within the framework of organic evolution and to specify ways in which cultural transmission can favor the evolution of nonbiologically-fit behavior patterns.

According to these models, the extent to which the forces of cultural transmission might move populations away from locally-fit equilibria is a function of the difficulty of evaluating outcomes of behavior. Blind copying will be favored when evaluating outcomes is costly and error-prone. I am less convinced than the authors that this is frequently the case. The peoples with whom I have worked can be quite explicit about the costs and benefits of alternative subsistence and reproductive strategies. For example, Ache foragers were aware of the costs of too short birth spacing. They could point to the experience of women whose children died because they were too closely spaced (this is a means of evaluating behavioral alternatives without having to conduct the experiment oneself). As Boyd and Richerson are aware, the empirical importance of cultural transmission remains to be determined.

One weakness of the book is that their characterization of the sociobiological alternative to the coevolutionary view they espouse does not do it justice. They define "environment" for purposes of evolutionary analysis as *external* to the population under investigation. However, one of the most important advances in behavioral ecology (the term I prefer to sociobiology) is the recognition that the fitness costs and benefits of behavioral alternatives can be heavily influenced by the behavior of other individuals (e.g., Parker's [1984] and Maynard Smith's [1982] treatments of evolutionarily stable strategies).

For example, the most effective strategy for obtaining mates and raising viable offspring can be largely determined by the behavior patterns adopted by conspecifics. The effects of a given level of investment in offspring on their competitive ability in the marriage and job market may be a function of the investment typical of other parents. In the post-industrial period, competition may have driven at least some classes of peoples to increasing levels of investment in offspring and hence to the production of fewer children. It is my suspicion that models of population dynamics which focus upon the fitness consequences of behavioral alternatives as a function of the behavior of other

individuals will provide greater insight into the complexities of human behavior than will models of cultural transmission. However, this too is an empirical question. As Chamov (1986;24) has pointed out, "Natural selection, operating in a group-structured population, can sometimes produce the unexpected. And we still have so much to learn." This new book with its simple yet rich set of models of cultural transmission advances us one step further.

References

- Chamov, E.L. (1986). Group selection revisited. *Nature*, Vol. 321 (Ma6): 23-24.
- Kaplan, H. & Hill, K. (1986). Sexual strategies and social class differences in fitness in modern industrial societies. *Behavioral and Brain Sciences* 9: 198-99.
- Lancaster, J.B. & Lancaster, C.S. (1987, in press). The watershed: change in parental-investment and family-formation strategies in the course of human evolution. In (Lancaster, J.B., A.S. Rossi, J. Atmann, & L.R. Sherrod, eds.) *Parenting Across the Lifespan: Biosocial dimensions*. Chicago: Aldine.
- Maynard Smith, J. (1982). *Evolution and the theory of games*. Cambridge: Cambridge University Press.
- Parker, G.A. (1984). Evolutionary stable strategies. In (Krebs, J.R. & N.B. Davies, eds.) *Behavioral Ecology* (2nd ed.). Sunderland, Mass.: Sinauer.
- Sahlins, M. (1976). *The Use and abuse of biology: An anthropological critique of sociobiology*. Ann Arbor, Michigan: University of Michigan Press.

CURRENT LITERATURE AND FILMS

Material for this section of the Newsletter should be sent directly to the editor. A sentence or two of summary would increase the value to readers.

Articles, chapters, papers

- Balogh, R.D., & Porter, H. (1986). Olfactory preferences resulting from mere exposure in human neonates. *Infant Behavior and Development*, 9, 395-401. (Vanderbilt University, Nashville, TN 37203).
- Briem, V. (1986). Temporal organization in the behavior of newborn infants in active sleep. *Behaviour*, 99, 189-220. (Lund University, Department of Psychology, S-22350, Lund, Sweden).
- Caro, T.M., & Mulder, M.B. (1987). The problem of adaptation in the study of human behavior. *Ethology and Sociobiology*, 8, 61- 72. (Caro, T.M., Univ. of Cambridge, Department of Zoology, Subdept. Animal Behavior, Cambridge CB3 8AA, England).

- Crawford, C., & Galdikas, B.M.F. (1986). Rape in non-human animals: An evolutionary perspective. *Canadian Psychologie*, 27, 215-230. (Crawford, C., Simon Fraser Univ., Dept. of Psychology, Burnaby, B.C., Canada V5A 1S6).
- Delorenzana, J.M.A., & Wald, L.M. (1987). On evolutionary systems. *Behavioral Science*, 32, 19-33. (Delorenzana, J.M.A., Univ. Complutense Madrid, Dept. of Political Science, Madrid 3, Spain).
- Dimberg, U. (1986). Facial reactions to fear-relevant and fear-irrelevant stimuli. *Biological Psychology*, 23, 153-162. (Uppsala Univ., Dept. of Psychology, Box 227, S-75104, Uppsala, Sweden).
- Geller, E.S., Russ, N.W., & Altomari, M.G. (1986). Naturalistic observations of beer drinking among college students. *Journal of Applied Behavior Analysis*, 19, 391-396. (Geller, E.S., Virginia Polytech Institute and State Univ., Dept. of Psychology, Blacksburg, Virginia 24061).
- Harrigan, J.A., Weber, J.G., & Kues, J.R. (1986). Attributions of selftouching performed in spontaneous and posed modes. *Journal of Social and Clinical Psychology*, 4, 433-446. (Harrigan, J.A., Univ. of Cincinnati, College of Medicine, Dept. of Family Medicine, 231 Bethesda Ave., ML 582, Cincinnati, Ohio 45267).
- Harris, Paul B., & Mc Andrew, Francis J. (1986). Territoriality and Compliance: the influence of gender and location on willingness to sign petitions. *Journal of Social Psychology*, 5, 657-662. (Harris, Paul B., Knox College, Dept. of Psychology, Galesburg, IL 61401).
- Hill, K., Hillard, K., Hawkes, K., & Hurtado, A.M. (1987). Foraging decisions among ache hunter-gatherers: New data and implications for optimal foraging models. *Ethology and Sociobiology*, 8, 1-36. (Hill, K., Univ. of Utah, Dept. of Anthropology, Salt Lake City, UT 84112).
- Hold-Cavell, B.C.L., Atili, G., & Schleidt, M. (1986). A cross-cultural comparison of children's behavior during their 1st year in a preschool. *International Journal of Behavioral Development*, 9, 471-484. (Max Planck Institute, Humanelhol, Forschungsstelle, D-8131, Seewiesen, Fed. Republic of Germany).
- Jesness, Bradley (1985). *A human Ethogram: . . . Key Chapters and Sections*. Indexed in Resources in Education Nov. '85 (part of the ERIC document collection, available on microfiche in major libraries).
- Levin, R.N., & Johnston, R.E. (1986). Social mediation of puberty: An adaptive female strategy? *Behavioral and Neural Biology*, 46, 308-324.
- Mackay, W.C., & Coney, N. (1987). Human sex ratios as a function of the woman's psychodynamics - a preliminary study. *Ethology and Sociobiology*, 8, 49-60. (Mackay, W.C., 9713 Saigon Drive, El Paso, TX 79925).
- Mussig, R. (1986). Family typology - a holistic classification scheme based on gestalt conception, human ethology, system theory and psychoanalytic theory. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, 35, 283-293. (Nuestader Strasse 7, D-7500 Karlsruhe 21, Fed. Rep. of Germany).
- Nelson, J.K., Thomas, J.R., Nelson, K.R., & Abraham, P.C. (1986). Gender differences in children's throwing performance - biology and environment. *Research Quarterly for Exercise and Sport*, 57, 280-287. (Nelson, J.K., Louisiana State Univ., Sch. Hperd., Baton Rouge, LA 70803).
- Porter, R.H., Balogh, R.D., Cernoch, J.M. & Franchi, C. (1986). Recognition of kin through characteristic body odors. *Chemical Senses*, 3, 389-395. (Vanderbilt University, Nashville, TN 37203).
- Schiefenhövel, W. (1985). Sterben und Tod bei den Eipo im Hochland von West-Neuguinea. (Death and dying among the Eipo, Highland, of West-New Guinea). In: D. Sich, H.H. Figge & P. Hinderling (Eds), *Sterben und Tod - Eine kulturvergleichende Analyse* (Death & dying - A crosscultural analysis). Braunschweig u. Wiesbaden: Vieweg Verlag.
- Summary: The primary reactions to losing a close person constitute a cross-cultural universal: like physical pain, grief causes crying, and crying, a powerful signal used since birth, causes group members to care and comfort. Mourning and singing dirges, the latter uniformly shaped by the physiology of crying, follow 'volcanic' motivations, emerging from affective brain centers, leaving the controlling cortex little room for cultural transformation. This seems to be the reason why also the secondary answer of the living to death produces another universal behavior pattern. From July 74 to June 76 data on 11 cases of death were gathered, using participant observation and interview techniques. The salient points of these cases are briefly sketched, two deaths are described in more detail; they show the differences in individual and collective mourning, existing even in the 'egalitarian' acephalic society of the Eipo. In the discussion which includes some other Papuan cultures of the highlands, of New Guinea, particular attention is directed to the rituals of mourning, and to the verbal expression of grief. These rituals are seen as attempts to provide relief and an opportunity for assimilating grief and grievance; they also channel the most powerful emotions which can easily lead to raging revenge. It is not the fate of the dead - in Eipo escha-

tology reason enough for possible lament - but the feeling of being left alone which gives rise to crying and mourning. Results of recent life events studies (OSTERWEIS et al.) confirm the wisdom of New Guinean highland cultures: USA residents who have suffered the loss of a person close to them are significantly more often victims of disease and death than control groups. Highland Papuan mourning rituals free tears, facilitate the expression of grief, and support those endangered by depression, accident and disease by strengthening their social bonds. Mortuary rites of other cultures may, in a similar way, help the bereaved to live on. (Forschungstelle für Humanethologie am Max-Planck-Institut für Verhaltensphysiologie. D-8131 Seewiesen, West-Germany.)

Schiefenhövel, W. (1985). Stressfaktoren und Stresslösung in industrialisierten und traditionellen Gesellschaften - Beispiele aus Feldbeobachtungen in Neuguinea. (Stress factors and resolution of stress in industrialized and traditional societies - Examples from field studies in New Guinea). *Mitteilungen der Anthropologischen Gesellschaft in Wien (MAGW)*, 115, 41-52.

Summary: An attempt is made to point out some of the differences in the ways of life of industrialized and traditional societies, which seem to be important in estimating the respective strain caused by stress. The comparison is based on observations among eight ethnic groups in New Guinea, the description of Western conditions is taken from Schaefer (1978). Papuans often respond to material and psychological stress stimuli with aggressive motor-actions using up the catecholamines produced under stress, in "civilized" societies, especially working situations such reactions are more under cultural control. In cases of warfare and other attacks the group members react according to the "vegetative gallop rhythm" (Siedeck 1955) as a functional whole, almost like one organism consisting of many individuals.

The possible stressors pain, cold and heat are coped with very well by the Panuan because of his early adaptation to the harsh environment. The roughness of this training finds a counterbalance in the mother-child relationship, which is optimal in terms of behavioural biology.

In addition to the absence of major biological frustration other factors involved in coping with stress are discussed: the integration of the individual into a functioning community, the confrontation with existential experiences, ceremonies to maintain and reproduce the well-being of the individual and the group and different forms of nutrition and different physiological reactions among nonacculturated ethnic groups. Attention is drawn to the responsibility industrialized nations have in exporting Western culture with its partially detrimental effects, including, among others, increased strain due to stress. Serious disease, attributed to superhuman powers, is possibly the greater stressor for the members of traditional societies.

- A report of a case of thanatomania (possible psychogenic death) is given, in which the traditional (psychosomatic) as well as modern medical treatment failed.

Schiefenhövel, W. (1985). Introduction. In: C. Thomson (Ed.), *The phylogeny and ontogeny of communication systems*. Proceedings of the conference held at the Fifth International Summer Institute for Semiotic and Structural Studies, University of Toronto, June 1-3, 1984. Kingston, Ontario: Queens University.

Schiefenhövel, W., Schleidt, M. und Grammar, K. (1985). Mimik und Emotion: verhaltensbiologische Aspekte. (Facial Expression and Emotion: verhaltensbiologische Aspekte. In: V. Schubert (Ed.), *Der Mensch und seine Gefühle* (Man and his feelings). St. Ottilien: Eos Verlag.

Schiefenhövel, W. (1986). Bauen ohne Architekt - Siedlungen und Häuser in Melanesien. (Building without Architects. Settlements and Houses in Melanesia.) *Arcus*, 2, 77-83.

Summary: This article, which attempts to incorporate aspects of human ethology and behavioral biology, is based on observations and experiences which have been collected since 1965 over the course of several sojourns in Melanesia for field research. In contrast to other mammals, man has no rigid genetically programmed image of how his dwelling should look; rather man appears to be equipped with a great plasticity. The examples show how different the villages of very traditional ethnic groups in New Guinea can be: nucleated villages, concentric villages, street villages, row villages, and other forms. The settlement forms represent adaptations to external circumstances as well as to inner, typically human prerequisites. The various models of village plans reflect the sociological structure of the society. It is apparent that if a settlement is of a certain size, man establishes a basic structure and thus a planning principle. In the mass grouping of primarily anonymous people, small and very small structures are formed; they make it possible to experience one's immediate living area and its relation to other living areas.

Schiefenhövel, W. (1986). Jugend zwischen Aggression und Anpassung - Ergebnisse humanethologischer Feldforschung. (Youth between aggression and adjustment. Results of human ethological fieldwork). In: H. Remschmidt (Ed.), *Jugend und Gesellschaft - Realitätswältigung, Krisen und Auswege*. (Youth and Society). Frankfurt: Verlag Umwelt und Medizin.

Schiefenhövel, W. (1986). La agresión: un ejemplo de Nueva Guinea y algunas consideraciones generales sobre etología humana. (Agresión and aggression control: an example from New Guinea and some

general considerations on human ethology). In: J. Sanmartín, V. Simón, M^a L. García-Merita. (Eds.), *La sociedad naturalizada genética y conducta*. Tirant lo Blanch.

Schiefenhövel, W. (1986). Extraktionszauber. Domäne der Heilkundigen. (Extraction magic. Healer's domain). In: Schiefenhövel, W., Schuler, J. u. Pöschl, R. (Eds.), *Traditionelle Heilkundige - Ärztliche Persönlichkeiten im Vergleich der Kulturen und medizinischen Systeme*. Braunschweig u. Wiesbaden: Vieweg.
Summary: The magical principle of extracting a disease or its symbol - in the Western Pacific often the most elaborate therapeutic method - appears, in comparison with the two other common forms of religious curing (transduction magic and expellant magic), to be particularly interesting, both emically and etically. Its pathogenetic counterpart is the concept of intrusion; a material or immaterial agent enters the milieu interm of the body. The intrusion-extraction-theory thus marks the cross-road of empiricoscientific and magico-religious medicine. Some casuistic examples of extraction magic in Melanesia, documented during ethnomedical fieldstays, are described. The ritual can take different outer forms: sometimes corpora aliena are produced in a surprising way, in other cases such illusionistic elements are missing. Extraction magic is, however, always impressive for patients and witnesses. This may form the base for their popularity and (at least subjectively experienced) effectivity. It is difficult to say how the healer himself views his often carefully planned and carried out actions; the term *pia fraus* may best summarize his role. The intrusion-extraction-theory is also known in the Philippines. The methods of "psychic surgery", adapted to the mostly western clientele, are seen as extraction magic in a new robe.

Schiefenhövel, W. (1986). Populationsdynamische Homöostase bei den Eipo in West-Neuguinea. (Homeostasis of population dynamics among the Eipo in West New Guinea). In: O. Kraus (Ed.), *Regulation, Manipulation und Explosion der Bevölkerungsdichte*. Göttingen: Vandenhoeck & Ruprecht.

Schiefenhövel, W. und Schuler, J. (1986). Der Heilkundige, Wahrzeichen menschlicher Gesellschaft. Vorwort. (The healer, manifestation of human Society. - Foreword). In: Schiefenhövel, J. u. Pöschl, R. (Eds.), *Traditionelle Heilkundige - Ärztliche Persönlichkeiten im Vergleich der Kulturen und medizinischen Systeme*. Braunschweig u. Wiesbaden: Vieweg.

Brautigam, H.-H. versus Schiefenhövel, W. (1986). Streitgespräch über Geburtshilfe. (Dispute: "High tech or Natural childbirth"). *Der Spiegel*, 43 (Oct. 20), 278-288.

Wallbott, H.G., & Scherer, K.R. (1986). How

universal and specific is emotional experience - evidence from 27 countries on 5 continents. *Social Science Information*, 25, 763-796. (Wallbott, H.G., Univ. of Giessen, Dept. of Psychology, Fachbereich 06, Otto Behagelstrasse 10F, D-6300, Giessen, Fed. Republic of Germany).

Weinrich, J.D. (1987). A new sociobiological theory of homosexuality applicable to societies with universal marriage. *Ethology and Sociobiology*, 8, 37-48. (Boston Univ., School of Medicine, Div. of Psychiatry, Dept. of Biobehavioral Science, Family Studies Lab, 85 E. Newton Street, Boston, MA 02118).

Books

Crawford, C., Smith, M., & Krebs, D. (Eds.). (in press). *Sociobiology and Psychology: Ideas, Issues and Implications*. Hillsdale, N.J.: Lawrence Erlbaum (Contributors: David M. Buss, Denys de Catanzaro, Charles B. Crawford, Martin Daly, Robert Fagen, John L. Fuller, Dennis Krebs, Katherine M. Noonan, Richard H. Porter, Michael Ruse, Irwin Silverman, Martin S. Smith, Donald Symons, Nancy Wilson Thornhill, Margo Wilson, Pierre L. van den Berghe).

Schiefenhövel, W., Schuler, J. und Pöschl, R. (Eds.) (1986). *Traditionelle Heilkundige - Ärztliche Persönlichkeiten im Vergleich der Kulturen und medizinischen Systeme*. (Traditional healers - iatric personalities in different cultures and medical systems.). Wiesbaden: Vieweg.

Schiefenhövel, W. und Sich, D. (Eds.) (1986). *Die Geburt aus ethnomedizinische Sicht*. (Childbirth - An ethnomedical view.) Wiesbaden: Vieweg, second edition.

Films

"THE HUMAN ANIMAL"

Phil Donahue, seven-time Emmy Award winner, hosts this intriguing and insightful series. Why do we behave the way we do? How do our childhood experiences shape our adult personalities? How can we learn to coexist peacefully?

To find the answers, Donahue travelled throughout the world, interviewing over 50 internationally-known biologists, anthropologists, psychologists and other experts. He shares these important findings in the five programs of The Human Animal:

Love & Sex;
 War & Violence;
 Nature & Nurture;
 Woman & Man;
 The Family.

These 5 programs are available on video cassettes (VHS, Beta 2, U-matic). Order from: Films for the Humanities, Inc., Box 2053, Princeton, N.J. 08543, U.S.A.

BULLETIN BOARD

Human Ethology Abstracts VI is available

HEA VI. is available from the Association for the Study of Man- Environment Relations (ASMER), P.O. Box 57, Orangeburg, New York 10962 U.S.A. The single issue is \$6. The complete series of all HE Abstracts and Bibliographies (10 in all) is available for \$22.50. Prices are prepaid and postpaid.

ASMER publishes Man-Environment Systems.

XX International Ethological Conference

Madison, WI, August 7-16, 1987. Plenary topics: history of animal behavior in North America; social influences on reproduction; cultural transmission of behavior; communication; group social structure; parent-offspring relationships; behavior genetics at the population level; applications of ethology to animal welfare. Please send inquiries to the Host, Charles Snowdon, Dept. of Psychology, University of Wisconsin, Madison, WI 53706.

1987 ISHE Meeting

The official 1987 meeting of the Society will be with the Animal Behavior Society, from 21 to 26 June at Williams College, Williamstown, Massachusetts. We have requested time on the program for a business meeting and social hour. Registration information is available from Lee Drickamer, Biology Department, Williams College, Williamstown, MA 01276.

Newsletter Submissions

Yes, please send anything which might be of interest to ISHE members: announcements of meetings, comments relevant to human ethology, suggestions for Forum topics, sabbatical opportunities, employment opportunities, anything.

Suggestions for books to review, or reviews, should be sent to the Editor William Baily (Dept. of Psychology, Tulane University, New Orleans, Louisiana 70118).

Submissions in any legible format are acceptable. Floppy disks containing McWrite files produced on the Macintosh or Worldperfect files produced on an IBM-PC (compatible) can be processed as well.

Ballot

- I vote to approve the election of Bob Adams as Vice President.
- I vote to disapprove the election of Bob Adams as Vice President.

MAIL TO:

Frans X. Plooij
ISHE ballot Paedological Institute of the City of Amsterdam,
Ulsbaanpad 9, 1076 CV Amsterdam,
Netherlands.