

# Human Ethology Bulletin

VOLUME 13, ISSUE 4

ISSN 0739-2036

DECEMBER 1998

© 1999 *The International Society for Human Ethology*

## SOCIETY NEWS

### Election Results

Karl Grammer was re-elected Secretary of ISHE, and Astrid Jütte was elected Membership Chair, for the 1999-2001 term. Congratulations to both of you. Astrid (of the Ludwig Boltzmann Institute) has already begun compiling a directory of members' e-mail addresses--giving her a start on the next membership directory. Many thanks to Nancy Segal, the outgoing Membership Chair, who compiled the 1996 membership directory, for a job well done.

### New Editors

The next editor of the *Bulletin* will be Peter LaFreniere of the University of Maine. He was appointed by the Officers of the Society to a two-year term beginning with the March 1999 issue. Peter has been serving as Chief Book Review Editor for the past year and one-half. Replacing Peter as Chief Book Review Editor will be Thomas R. Alley of Clemson University. Like Peter, Tom has written some excellent reviews for the *Bulletin*.

I am personally very pleased with both of these appointments. I am confident that the *Bulletin* is in excellent hands and will improve under Peter and Tom's leadership.

I am also very grateful for the support and patience that the ISHE officers and members and the *Bulletin* staff and contributors have extended to me ever since I took over as editor in 1991. Because of the efforts of the chief book review editors, Linda Mealey and

Peter, and the Current Literature editors, Bob Adams and Johan van der Dennen, we were able to lengthen the *Bulletin* from 12 pages to an average of 32. I also wish to acknowledge the indispensable contributions of all the book reviewers and of those who submitted articles and news briefs. Frans Roes's interviews have been a particularly nice feature, I think. Behind the scenes, Barb Fuller reorganized the job of maintaining the mailing list, as well as handling the job of Treasurer with efficiency. With Karl Grammer's help, she began the practice of sending out renewal notices.

So, thanks to all for your help with this job, which I quit with true misgivings. It has been a pleasure to work with such idealistic and dedicated scholars, and for such a fine international organization. --Glenn Weisfeld

## ARTICLES

### Is Humaneness Canine?

By Wolfgang M. Schleidt  
Robert Hamerlingg, 1/22  
A-1150 Vienna, Austria  
Wolfgang.Schleidt@univie.ac.at

In recent years, various fields of science--neurobiology, sociobiology, behavioral ecology and game theory, to name but a few--have opened new vistas on human origins and on the question of what makes humans such special animals. Much attention has been focused on the importance of brain, kinship, competition, and evolutionarily stable strategies. Even Machiavellian intelligence has been accepted as an old primate heritage<sup>1</sup>. Given this new scientific wisdom, one may

wonder how traits of humaneness--true altruism, idealism or human kindness--could have evolved and become a recurrent phenomenon in various human populations.

How could some clever but rather beastly Anatomically Modern Humans (AMHs) have turned toward humaneness? How could AMHs have invented forms of cooperation, communication, society culminating in individual sacrifice unrivaled by any other mammal? AMH is the only primate that has evolved the capacity for "true friendship": loyalty beyond kinship. Konrad Lorenz once stated very bluntly: "of all creatures the one nearest to man in the fineness of its perceptions and in its capacity to render true friendship is a bitch."<sup>2</sup>

There is something in the bonds exhibited by wolves and dogs and humans that can reach beyond what even our closest primate relatives, chimpanzees, do. I am *not* talking about brain power now, but about what we poetically associate with "kindness of heart." Jane Goodall, commenting on Konrad Lorenz's statement, writes:

Dogs have been domesticated for a very long time. They have descended from wolves who were pack animals. They survive as a result of teamwork. They hunt together, den together, raise pups together. This ancient social order has been helpful in the domestication of the dog.

Chimpanzees are individualists. They are boisterous and volatile in the wild. They are always on the look-out for opportunities to get the better of each other. They are not pack animals.

If you watch wolves within a pack, nuzzling each other, wagging their tails in greeting, licking and protecting the pups, you see all the characteristics we love in dogs, including loyalty. If you watch wild chimps, you see the love between mother and child, and the bonds between siblings. Other relationships tend to be opportunistic. And even between family members disputes often arise that may even lead to fights.

... even after hundreds of years of selective breeding, it would be hard if not impossible to produce a chimpanzee who could live with humans and have anything like such a good relationship as we have with our dogs. It is not related to intelligence, but the desire to help, to be obedient, to gain our approval.<sup>3</sup>

Dogs have indeed been domesticated for a very long time. There is general agreement that dogs were the first domesticated animal, coming under human control several thousand years before any of the hooved animals. The fossil record of dogs reaches back as far as 14,000 years<sup>4</sup>, long before the agricultural revolution. This evidence supports the hypotheses of "man the hunter" and of the dog as early hunting companion. Compare this date with the results of the analysis of mitochondrial DNA (mtDNA) of dogs, wolves and jackals<sup>5</sup>. These recent findings indicate that the split between the ancestors of wolves and jackals reaches back one million years before present (MyBP).<sup>6</sup> The analysis of mtDNA of 67 breeds of dogs shows a high degree of similarity to wolves (as represented by 27 populations from Europe, Asia and North America), clearly supporting the hypothesis that wolves were the ancestors of domestic dogs. But most unexpectedly, this study shows that the first split between the ancestors of wolves and dogs dates back more than 100,000yBP, ten times further back than indicated by the osteological evidence; also, dogs are most closely related to wolves from Europe<sup>5</sup>. Thus, dogs came into being apparently just around the time and the place when and where AMHs started to spread into Eurasia<sup>7</sup>.

We now face an amazing temporal and geographical coincidence between the emergence of mankind and dogkind, between hominization and caninization. Reconsideration of past and current concepts of domestication has become inescapable. Even the term "domestication" now sounds absurd, since the meeting of wolves and AMHs predates by far anything that could be considered a human habitation in the form of a *domus*. Canids' use of dens dates back much further; we may instead want to talk about "cubiliation"<sup>8</sup> and wonder who cubiliated whom.

From a biologist's vantage point, we can view the intertwining process of hominization and caninization as one of coevolution. However, while the evolution of man and our primate heritage have attracted much attention ever since the publication of Darwin's *The Descent of Man*, the evolution of wolves and dogs has remained a topic for specialists and, to the best of my knowledge, not integrated into the descendants of AMH.

In brief, canids originated on the North American continent as fox-like creatures hunting small prey (rodents, insects) but with a tendency toward opportunistic omnivory. They probably first developed social skills in the sense of pack formation in the context of pursuing larger prey, possibly small horses. Roughly 10 MyBP, jackal/wolf-sized canids moved into Asia and exploded into several species of wolf-sized predators in a process of "adaptive radiation" that reached into Europe<sup>9</sup> and even Africa (sole survivors: the African wild dog and some wolf-sized jackals). A comparison of the different hunting methods of mammalian predators leaves little doubt that the decisive advantage of these big canids lies in pack formation, i.e., specific forms of cooperation and risk-sharing among individuals not closely related, in the form of long-lasting pair bonds as well as friendships among individuals of the same gender.

Reindeer, traveling seasonally in vast herds in the realm between Spain and Eastern Siberia, could well have coevolved with wolves in the sense that prey and predator became interdependent, symbiotic, as in the example of aphids and ants. In some Siberian reindeer herds now interdependent with AMH, wolves following these herds are not only tolerated by the human "owners" of these herds, but also considered to contribute to the breeding of better reindeer. Wolves take only the surplus unused by the herd owners (placentas on the calving grounds, weaklings, and the aged), because humans select the best for their slaughter! The behaviors used by wolves to get their share of the herd are basically the same as those still observed today in the grey wolf, and behavioral subprograms have been retained in today's herding dogs. F. E. Zeuner was among the first

to discuss these features of wolves and dogs, and to suggest the wolves act like "pastoralists." <sup>10</sup> Thus, among mammals, the wolf can be viewed as the first true pastoralist, ahead of AMH by millions of years (though predated by social insects, e.g., by ants as "pastoralists" of aphids). Wolves' ability to hunt as packs, to share risk fairly among members, and to cooperate, unrivaled by any of the big cats, moved wolves to the top of the food pyramid of the Eurasian plains.

How did early AMHs enter into this specialized Eurasian ecosystem and ultimately supplant the wolves at the top? With superior cognitive capacity and foresight (reflected especially in their scouting and scavenging skill), ability to manually hit a distant target, and an eye level double that of wolves, a family of AMH could ease its way into a thriving business of pastoralist wolves as junior partners and share the bounty without raising the level of intrapack social friction.

Today, AMH sits atop the food pyramid of the world, reindeer are nearly gone, and of all the mammalian species roaming Eurasia one MyBP, wolves were the most successful in increasing their numbers (as dogs), most likely followed by the aurochs (now represented by our cattle). In fact, wolves have conquered Africa (e.g., as the basenji), and "used" AMH as a vector to get into Australia (dingo), Polynesia, and even Antarctica.

I do not mean to suggest that an early encounter of humans with wolf pastoralism was an obligatory stage for all AMHs. Once a few of our ancestors had learned to live with dogs and adopt their pack algorithm ("go beyond the close ties of kinship, learn to practice close cooperation and fine-tune risk sharing"), many alternative ways to make a living became available. Within this process of coevolution, technology transfer and diversification began to thrive. AMH could become better gatherers, better hunters, more successful fishers, mammoth hunters, gardeners, astronauts, you name it. Wolves could become hunting companions, food, guards, hot water bottles, etc. And, let us not forget the symmetry of coevolution. Remember the pioneering spirit and self sacrifice of wolves: the first Russian astronauts were martyr dogs.

astronauts were martyr dogs.

Wolves meeting humans in a phase of humans' apprenticeship to wolf pastoralism and, in a subsequent process of coevolution, wolves turning into dogs and apes into AMH, is a good alternative hypothesis to the current theories of domestication--man conquering beasts, including wolves, through cognitive superiority--and to the bootstrapping theory of hominization--man domesticating himself.

*Homo homini lupus? Or, closer to the biological evidence: Homo hominipithecus--lupus homini homo?*

<sup>1</sup> e.g., Dunbar, R., *Grooming, Gossip and the Evolution of Language* (Faber & Faber, London, 1996).

<sup>2</sup> Lorenz, K. Z., *Man Meets Dog* (Methuen, London, 1954).

<sup>3</sup> Goodall, J. (Personal communication: Fax dated 25 September 1997).

<sup>4</sup> Clutton-Brook, J., in *The Domestic Dog*. (Serpel, J., ed., Cambridge University Press, Cambridge, 1995), pp. 7-20.

<sup>5</sup> Vilà, C., Savolainen, P., & Wayne, R. K., *Science* 276, 1687-1689 (1997).

<sup>6</sup> Notwithstanding the fact that the North American red wolf, now on the endangered species list, was found to be a stable hybrid of the grey wolf and the coyote: Wayne, R. K., & Jenks, S. M., *Nature*, 351, 565-568 (1991).

<sup>7</sup> Foley, R., in *Hunters and Gatherers 1 - History, evolution and social change* (Ingold, T., Riches, D., & Woodburn, J., eds., Berg, Oxford, 1988, pp. 207-221).

<sup>8</sup> Latin *cubilicus*, helper at the wolf's den, akin to *cubile*, den, lair, bed (the same Latin root as in concubine), and construed according to *domesticus*, servant around the house (*domus*).

<sup>9</sup> Rook, L., & Torre, D.N., *Jb. Geol. Paläont. Mh. H5*, 495-501 (1996).

<sup>10</sup> "the wolf and the pastoralists might be seen to have much in common" (Zeuner, F. E., *A*

*History of Domesticated Animals*. Harper & Row, New York/ Evanston, 1963, p. 124). Tim Ingold dismissed such ideas because of three critical differences between exploitation of herds by human pastoralists and by wolves: (a) humans protect their herds from wolves, wolves do not protect from humans; (b) humans select intentionally, wolves unintentionally; (c) the impact of human selection on different age and sex classes in the herd is quite different from that of wolves (Ingold, T., *Hunters, Pastoralists and Ranchers: Reindeer economics and their transformations*. Cambridge University Press, Cambridge, 1980). This critique may fit Ingold's view of pastoralism at that time, but does not touch on my hypothesis of coevolution of wolves, reindeer, and humans. In reference to the common claim "humans select intentionally," we should recall from applied animal husbandry not only that in old Greek and Roman culture the most beautiful and best individuals were selected for sacrificial offerings but that even during this century most valuable breeding stock was sold into the cities for milking or straight to the slaughterhouse (e.g., Sambras, H. H., 1994 *Gefährdete Nutztierassen*. Stuttgart: Verlag Eugen Ulmer, pp. 225, 233, 234).

<sup>11</sup> Special thanks for discussing these ideas to J. Goodall, D.W. Gracey, J. Eisenberg, J. Fentress, T. Ingold, M. Itzkowitz, H. Kummer, L.D. Mech, E. Oeser, W. Poduschka, H.H. Sambras, M. Shalter, L. Rook, C. Vilà, P. Weber & Ch. Wemmer.

## The Feminist Paradox: Short-Run Gains, Long-Term Stasis

By Wade Mackey  
Tomball College  
Tomball, TX 77375-4036 USA  
waddmac@aol.com

Since the 1960s, it has been widely reported that women in many cultures of the world have experienced increased options in the domains of education, occupation, and political power. What is less obvious, or at least less publicized, is the dynamic wherein the more that short-term options become available to women as a class, the more

restrictive become the long-term opportunities. Demographic data strongly suggest that a self-regulating mechanism exists that creates a stasis on the part of gender roles. This mechanism, as outlined below, might be referred to as the "feminist paradox."

(1) Although there are variations on the theme, the general theme of the feminist agenda advocates expanded role options for women.

(2) Expanded roles for women are robustly associated with reduced birth rates by the women of that group<sup>1</sup>. This reduction asymptotes at a point below replacement level (less than 2100 lifetime births per 1000 women). For example, virtually all of the countries in Europe are currently below replacement value.

(3) A woman who dies childless will not be an ancestor to anyone. Nearly 50% of women in *Who's Who* are childless (Coney & Mackey, 1997).

(4) Groups with restricted women's roles--i.e., those emphasizing motherhood--have greater birth rates than groups whose women have expanded role options.

(5) Hence when groups with birth rates above replacement level are in direct competition with groups whose birth rates are below replacement level, the former will always win. The only variable is the length of time needed for displacement to occur.

Accordingly, to the extent that cultural evolution and biological evolution track each other<sup>2</sup>, the genetic material plus the socialization traditions that do emphasize the mother role will systematically displace or replace any other biocultural formula.

#### Notes

<sup>1</sup> For example, the United Nations surveyed enrollment figures in tertiary educational institutions by nation and by gender (UNESCO, 1994). Across the 130 nations that had data appropriate for UNESCO, the mean

percentage of students in tertiary education who were female was 39.5% (*s.d.* = 15.5%). The rate of natural increase was then correlated with the percentage of students who were enrolled in tertiary institutions who were female. The relation between the two was negative and fairly strong ( $r = -.41$ ,  $p < .01$ , 2-tailed,  $n = 130$ ). That is, the higher the proportion of tertiary students that were women, the lower the rate of natural increase.

<sup>2</sup> For discussion and examples of such tracking, see Barkow (1980, 1989), Barkow, Cosmides & Tooby (1992), Boyd & Richerson (1985), and Durham (1979, 1990); cf. Harris (1979).

#### References

- Barkow, J. (1980). Biological evolution of culturally patterned behavior. In J. Lockard (Ed.), *The Evolution of Human Social Behavior* (pp. 277-290). New York: Elsevier.
- (1989). *Darwin, Sex and Status*. Toronto: University of Toronto Press.
- Barkow, J. H., Cosmides, L., & Tooby, J. (1992). *The Adapted Mind: Evolutionary psychology and the generation of culture*. New York: Oxford University Press.
- Boyd, R., & Richerson, P. J. (1985). *Culture and the Evolutionary Process*. Chicago: University of Chicago Press.
- Coney, N. S., & Mackey, W. C. (1997). A re-examination of Gilligan's analysis of the female moral system: Distaff altruism will not succeed. *Human Nature*, 8, 247-273.
- Durham, W. H. (1979). Toward a coevolutionary theory of human biology and cultures. In N. Chagnon & W. Irons (Eds.), *Evolutionary Biology and Human Social Behavior* (pp. 39-58). North Scituate, MA: Duxbury Press.
- Harris, M. (1979). *Cultural Materialism*. New York: Random House.
- UNESCO (1994). *Statistical Yearbook*. New York: United Nations.

## An Interview of Napoleon Chagnon

By Frans Roes  
Lauriergracht 127-II  
1016 RK Amsterdam  
The Netherlands  
tel. (31 20) 6259399  
froes@dds.nl

Generations of social science students were electrified by reading Napoleon Chagnon's *Yanomamö, the Fierce People* (1968), a monograph on a South-American Indian tribal people. The film (now in interactive CD-ROM) *The Ax Fight*, which shows an escalating conflict within a village, is an anthropological classic. Since the first time he went there in 1964, Chagnon has revisited the Yanomamö almost every year. The following interview took place in Tucson, Arizona, USA 5 June 1997.

You write that anthropologists often discover that the people they are living with have a lower opinion of you than they have of them.

When I went down there I had a Noble Savage view of what tribesmen were like. I had gone there to learn about their way of life, and I expected them to be fascinated and interested and even grateful for my going there. I was assuming that they were interested in having other people know about them. They were not; they didn't know there were other people!

Did the Yanomamö give you a hard time?

I have spent a lot of time with the Yanomamö, in total now close to six years. But initially when I went to live with them for the first time, I was completely unprepared emotionally to live in a society as primitive and as savage as the Yanomamö. They were pushy, they regarded me as sub-human or inhuman, they treated me very badly.

In their culture they expect people to be generous. They emphasize how important it is for you to be generous, and give your things to them, by making their needs seem to be more

urgent than they really are. The more I was reluctant to give things away at sometimes outrageous demands that they made, the more urgent they tried to represent their needs. If I did not give my things, disasters would befall them, and possibly me. It was a way of coercing me.

Was there a happier side?

The happier side, the more pleasant and the truly enjoyable side, was the consequence of a long period of getting to know them, and their getting to know me. A qualitative change in our relationship occurred when I went home the first time and then returned. During that period of time they apparently discussed me, discussed the things that I did, and basically concluded that I wasn't such a bad guy after all. More and more of them began to regard me as less of a foreigner or a sub-human person, and I became more and more like a real person to them, part of their society. Eventually they began telling me, almost as though it were an admission on their part: "You are almost a human being, you are almost a Yanomamö." Yanomamö means 'human'.

You write about a sense of urgency to study them.

It became very clear to me after years of university training, reading lots and lots of monographs about tribal peoples, that I had stumbled accidentally upon an extraordinarily unusual and short-lived opportunity, because very few people were as remote and isolated as the Yanomamö were. And I realized, from knowing how quickly acculturation can happen, that if I did not decide on an intense and long term commitment to learning about these people while they were still the way they were, that valuable opportunities to learn many important things about them would disappear.

Is it a primitive people?

Yes, but keep in mind that primitive is a technical word in anthropology to refer to those societies that are organized basically around kinship institutions. In other words, primitive societies are those whose entire social organization is built on, and a function of, kinship institutions, like lineages, clans,

marriage alliance systems, and they do not have other kinds of social systems like the state, police, courts.

**Is each village autonomous?**

Each village is a politically independent unit, it is almost like a nation all by itself.

**Please describe some aspects of their culture.**

The technological component and other aspects of their culture are more similar to hunting and gathering peoples than to agricultural peoples. They are agriculturists, but it is almost as if they want to keep one foot in the hunting and gathering stage, and the other foot in agriculture. So their entire cultural paraphernalia is very limited. They have hammocks, baskets, a few very crude poorly fired clay pots which have now disappeared in the last twenty years, bows and arrows, and not much else. A whole village of Yanomamö can pack up in five minutes and go off into the forest, and carry everything they own. So their technology and the number of material items they have is very, very limited, almost as though they are nomadic hunters and gatherers, but they are not.

Linguistically, and this is not unusual, their ways of evaluating and enumerating things in the external world are more based on the specific properties of things, like the arrow that has a slight bend in it, or the arrow that has a scorch mark on it. If you show a Yanomamö ten arrows, and you decide to steal one from him, he will notice immediately that it has gone because he recognizes the arrow by its individual properties. But they have no way of saying, "I have ten arrows." They will say, "More than two arrows." In their language the words they have for enumerating objects are "one," "two," and then "bruka," and bruka can mean anything from three to three million.

As for their clothing, from our point of view they are naked. In an uncontacted Yanomamö village the men and women wear basically a few cotton strings around their waists and their forearms. The men tie their penis to a cotton string around their waist. But if their penis becomes untied, they are extraordinarily embarrassed.

**If there is no state, no law, no police, then how are the bad guys controlled?**

What makes a guy bad is what his enemies in other villages think of him. In his own village he would not be considered a bad guy, he would be considered a hero. Now within the village they have certain rules about what is appropriate behavior with your kin and your neighbors. You should not steal the food of members of your village, but it is perfectly all right to steal food from other villages. You should not kill people in your own village, but it is appropriate to kill people in other villages, if they are your enemies. We have the same rules.

So "bad" is a relative term, but there are nevertheless people whose range of behavior within the village can get excessive. I know a particular headman that I wrote quite a bit about who had become so brutal and so homicidal that even people in his own village did not like him. A bad guy can become a tyrant, and very few people in that village were willing to challenge the tyrant. There are no social mechanisms to deal with somebody in the village who has gotten out of hand. In our culture we can call the police and have him arrested. In their culture, if they want to challenge that guy, they have to do it as an individual. And if this guy is a brute and quick to pick up his club or his weapons, you better be equally good.

**They live in communal dwellings?**

Even though to us it looks like a communal dwelling, each part of it is constructed by an individual family, and they just link them together. They cooperate when they build it to make it circular and enclosed for defense purposes.

**Defense against whom?**

Defense against enemies, other Yanomamö. They try to make a completely enclosed, circular village. To us it looks like it is a communal village, but each section of that village is a private household. Even though it is wide open and you cannot tell. They all live together under one roof, they can see, smell and hear each other, and life is extremely public.

**Are extramarital affairs possible?**

They are possible, and many young guys attempt to have them; in fact, many old guys attempt to have them. Sometimes the women are quite willing and cooperative in this. They may decide that they like the flirtatious approaches of a young guy, and they will quickly and discretely say, "Meet me in the garden by my...banana plant." And they may have a clandestine affair, but they will keep it secret, of course. Men are always looking where their women are, and if their wife is away for more than a few minutes without the husband knowing where she is, he begins to get suspicious. And even the suspicion of infidelity will cause brutal fights. So the men are constantly tracking where their women are, what they are doing, and if the men happen to be on a hunt, for example, they have informers in the village who will tell them, "Your wife was out with some other guy," and that is sufficient to cause a fight.

**The informer may be lying...**

Not if the man picks his informer intelligently. The informer is usually a close relative, like a brother of the man.

**It is basically a male-dominated society?**

Well, a lot of societies are male-dominated, and the Yanomamö are not unusual in that regard.

**If you grow up either as a boy or a girl in Yanomamö society, will you get a different view on life?**

Little girls learn quickly that they have less freedom than little boys. They become economically useful assets to the household compared to little boys. They have to start collecting water when they are very young, help mum carrying food from the garden, baby-sit, and they tend to become adults much younger in their life than little boys do. Boys can extend their childhood as little boys can in Holland or Germany or the United States until they are thirty-five or forty years old, before they start doing anything serious and responsible.

Young men are always a constant problem in Yanomamö villages. Once they are post-adolescent, they begin to have sexual interests; they are called huya, young men. Huyas are a big pain in the ass. Huyas in all cultures are a big pain in the ass--gangs, juvenile delinquents.

**But I guess they can be used by someone?**

Well, they are useful because they can shoot bows and arrows and they get impressed into military service just as we do with our huyas in Western industrial civilizations.

**Are the Yanomamö patrilocal or matrilocal?**

Adult brothers try to remain together for cooperation and defense; you can trust your kinsmen more than you can trust strangers. Brothers tend to be very cooperative and quick to defend each other. And without police or state or laws and courts, your only source of defense is your kinsmen. And the more closely you are related to your relatives, the greater is the probability that they will defend you, whether you are right or wrong. But they expect you to defend them, and kinsmen in general to defend each other, whether they are right or wrong.

**What if you don't have any kinsmen?**

Then you are in bad luck. Now, regarding patrilocality and where people live after marriage, if you look at primates like chimpanzees, they are doing basically the same thing as humans are doing. One sex migrates into the other group, and that same sex of the other group migrates back into the original group. What humans have done is say: Let's get the two groups together and live in the same community. So villages tend to be constructed by two or more lineages or clans, groups of people who are related through the male line, just like we inherit names in Western civilization. All of the people who have your last name would be a member of a patrilineage. So you end up with villages that tend to have a dual organization: two families that exchange women back and forth.

**But women sometimes do live in villages where they were not born.**



Let's say two villages that have been enemies decide to become allies, because both realize that they have many other enemies out there.... One way to make friends with people in other villages who are potentially enemies is to give a woman to them in marriage. But you don't do this without great concern for the safety of the girl. She does not want to live there; her relatives compel her, they have authority over whom she marries. Marriage is something too politically important to groups like the Yanomamö, and presumably throughout our history, to allow the whims of young people to have charge of it.

So for political reasons two villages who want to become friends may decide that the best way to do that is to start exchanging women. We'll give you one of our young women, for one of yours. It is usually the prominent men in the village that do this. And if the first village gives a girl to the other one, they expect the man who is going to marry her to come and live in their village for several years. So the young man will do bride service in the village where his wife lives, and her family can get to know him; they sort of sniff him over. After a two or three year period, during which he has to do a lot of tasks and favors and hunt for the father-in-law, he'll be allowed to bring his wife back to his village. But the women never like that arrangement, because once she is in a different village, she doesn't have her brothers to protect her. And since she is a stranger in the other village, she is more likely to be approached by a lot of other men for sexual activities. This means that her husband, who will resent this, will not only get into a lot of club fights with these other men in his own village, but he will punish her too. So the life of a woman who has to live in a different village where she doesn't have brothers can be very, very tragic in many cases.

**You write that most fights result from disputes over women. Why are women so scarce?**

The primary reason is that successful men often have two, three, up to five or six women. And if a guy has five wives, about five guys are going to have no wife. So polygyny creates a shortage of women. From the point of view of the male, women are a scarce commodity. And if men want to be reproductively successful,

they have to do a lot of social maneuvering and manipulation in order to find a wife of their own. A man's career may start out with not having a wife, but maybe his brother will share his wife with him. So early in a man's career, he might be polyandrous, two or three brothers sharing one woman, and then as he becomes more prominent, he might acquire his own wife.

**Women are also abducted in raids, which reminded me of what chimpanzees are doing.**

The recent work among chimpanzees indicates very clearly that once the chimps were no longer provisioned to the level they were before, and returned to a more natural kind of existence, researchers began to make realizations and discoveries that they had never made before. Chimpanzees send out patrols to their borders; they are constantly guarding borders and looking for opportunities to invade and kill members of another group, snatch female chimps, and bring them back to their own group.

But Yanomamö don't get their women raiding. Even though occasionally women are captured in raids, that is not the purpose or the function of a raid. The raid is usually to get revenge for a previous death. If a woman happens to be away from the village, and the raiders can safely take her back with them without her screaming and giving away their location, they will do it. But abduction is not necessarily or very frequently done on raids. Most of the abductions are done right at home. A group of Yanomamö from another village will come and visit. If the visitors have women with them and their neighbors are mercenary, they may just take the women away from the men and send the men packing. That's how most abductions are taking place.

**Why did the visiting group pay a visit in the first place?**

Every Yanomamö village--the leaders in them--knows that eventually it is going to be harassed by a coalition of other Yanomamö villages. So each village has allies, but allies tend to exploit each other. Say we have two villages of 200 Yanomamö, and they are allied. Since they are the same size, they can inflict

equal harm on each other. But what happens if one of these villages splits in two and part of them goes away? Now you have a village of 200 Yanomamö that has an alliance with a village of 100 Yanomamö....So, even though for years they may have been visiting in a friendly way, the guys who have 200 people in their village will decide, maybe, one day, when this friendly visit happens, "Hell, we outnumber them, lets just take their women." And then this last village will do everything they can to recover their women, and that often will lead to war. So balance of power is very important; Western civilizations have always been very alert to changes in balance of power, and it is the same for the Yanomamö .

**If the size of a village is so important, why do villages split?**

Because there is a limit as to how big human communities can get if they are organized only by kinship. They fission into smaller villages because you cannot control the violence and squabbling and fighting that begins to take place once a village gets large.

**Judging from your descriptions, the Yanomamö are a very violent people.**

One of the reasons that I felt it was urgent to study the Yanomamö was that I was one of the few anthropologists who had an opportunity to study a tribal society while warfare was still going on, and not being interdicted by the political state. Even though anthropology has a lot of literature about warfare and violence, the number of anthropologists who studied tribesmen while still at war you can count on the fingers of one hand.

Now you just told me that the Yanomamö are a really violent people. My reaction to that is: The Yanomamö stand out because they are one of the few societies that have been studied by an anthropologist at a time that they had warfare. Had anthropologists been around before Columbus in North America, I am sure that levels of violence among Native Americans would be strictly comparable to those found among the Yanomamö. And the probability is very high that in our own tribal background violence was very common as well.

**Anthropologists often call peoples like the Yanomamö 'egalitarian' societies.**

One of the common misunderstandings in scientific anthropology is that the status of people in society is basically determined by the access that they have to material possessions. We tend to think of status being intimately associated with the control and ownership of material things. Thus in anthropology, groups like the Yanomamö or the !Kung Bushmen are called 'egalitarian societies'; everybody is equal because everybody has the same number of resources. I think that is an absolutely silly and prejudicial if not Eurocentric idea....[I]n a Yanomamö village...a guy who has a lot of close kinsmen, especially brothers, is going to have a lot more social influence than a guy who has no brothers. And if your father is polygynous, you are going to have a lot of brothers. Polygyny is the fount of power. Power and status are almost entirely a function of how many kinsmen you have, and what kind of kinsmen.

**You made a distinction between lowland villages and villages in more mountainous regions.**

The work you are referring to is very recent work that I have done since 1990, when I acquired access to helicopters and airplanes to fly over Yanomamö territory and began to realize from an aerial perspective variation in ecology and geography. I also began using at that time GPS instruments, which enabled me to precisely locate where every village was. This is probably the most poorly mapped part of the world.

The villages that I have been studying from the very beginning all are in the lowland areas. It is not necessarily that these areas are richer, though you have no tapir or fish in the mountains, [and] it is also easier to make a living on a flat surface. If you make a garden on a mountain side with a thirty degree slope, the amount of effort and calories you have to expend is enormously greater than making a garden the same size on a flat surface. It is easier to do all kinds of work: collecting firewood, fetching water, chopping down trees, going hunting. Large gardens are easier to make

in the lowlands, but the lowlands are also easy to traverse and cross if you are going on a raid.

So villages tend to become bigger for defensive purposes in the lowlands, because it is easier for enemies to reach you on a fairly flat surface. Since the population is growing, over a time this lowland area gets filled up with Yanomamö....[V]illages claim and guard for military reasons a much larger area than they need for their own immediate subsistence purposes. Because each village tends to prey on the weaknesses of its neighbors, villages that get small get preyed upon, and they have to leave this more desirable area and move into less desirable terrain, which would be the foothills or the mountains where living is more difficult. So big villages with larger territories dominate the lowlands....

If this is true, it may explain a lot of the criticism of my work by some of my colleagues who have studied Yanomamö in other areas. Most of my critics who are experts on the Yanomamö have lived in very tiny Yanomamö villages, many of which are in the highlands. Once a village gets smaller, there is less violence, less fighting, less warfare, fewer abductions. Anthropologists who study these groups are quick to criticize my work where everything is conducted on a much more intense scale.

#### **Do the Yanomamö understand how Western societies are organized?**

I once had a fascinating discussion with a Yanomamö who had a little bit of training from the missionaries. He had learned some Spanish, and the missionaries sent him to the territorial capital to acquire some skills in practical nursing, so he could treat snake bites and malaria in his own village. And he told me that when he was in the territorial capital, he discovered law. He met policemen, and he found out what these people did. They guarantee the safety of other people in the town, and would protect them from abuse or violence against them from other people. He was intrigued and fascinated with that. He thought it was such a marvelous thing, because in his culture his brothers had killed other Yanomamö, and he was worried that their kinsmen would seek revenge and kill him...

And he thought it was just marvelous that law existed, and he thought Yanomamö should have law and policemen...

**We have our private homes, hide our bodies with clothes, and have other kinds of possibilities for privacy. Is this because we no longer live primarily among kinsmen?**

Anthropological textbooks do not always communicate to you the oppressiveness of having to live among kinsmen. Because they can demand and compel you to make extraordinary sacrifices simply because they are your kinsmen. And it is extremely difficult and tedious to have to live in a society where you are compelled and obligated to give things to your kinsmen simply because they are your kinsmen. And you can have lazy kinsmen. You might want to be a little more ambitious, acquire a few more things and have a slightly better life than somebody else, but if your brother who is a lazy lout comes along and demands half of what your garden produces, you have got to give it to him. You have no privacy. You are the creature of your relatives. Probably one of the greatest achievements of Western civilization is to become independent of that. If you wish, you can be isolated and survive, because society has institutions that provide you with everything that kinsmen used to provide people. And you can turn it off and turn it on when you want to--functions like...legal help, protection. But if you live in a kinship-dominated society, it is always on. The Yanomamö frequently responded to my question "Why did you fission into two groups at that site?" by saying something like: "Because there were too many others and we were sick and tired of fighting all the time. Everybody was begging everything I had, I got tired of it."

**You are pessimistic about the future of the Yanomamö: They are likely to become beggars and bums, alcoholics and prostitutes.**

I am making that statement on the basis of my knowledge of what has happened to other tribal peoples who have been acculturated and missionized in the lofty and admirable sentiment and objective of making more opportunities open to them. The opportunities that will be available to the Yanomamö in

Latin America are going to be extraordinarily limited. The best that they can hope for is getting employment as low-class laborers, or domestic servants in the households of middle- and upper-class people, which is very common in Latin-America. "When you go to the jungle, bring me back an Indian"--that is the attitude in Latin America about Indians: they are servants.

They lose their culture, they acquire very expensive appetites for outboard motors, shotguns and television sets, but where are they going to get the money to buy these? They cannot get it at their local village and their local mission, and the missionaries encourage them to think about moving to the city. But when they get to the city, nobody is going to hire them. So they enter the national culture at the lowest economic rung; they get depressed and dejected and what do they do? They end up as beggars and prostitutes and bums.

Look at the Indian reservations of the United States: the highest alcohol rates in the world, the highest suicide rates. And I cannot see this being any different for the Yanomamó. They have been persuaded in some villages to give up their own culture on promises of social and material opportunities that are very unlikely to occur.

But they cannot go on living like they used to.

Why can't they?

### Membership Renewals for 1999

It is time to renew your membership for 1999 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 financial reasons, renewal notices are not usually sent. Please report any errors, change of address, etc. to the Treasurer. Current dues and directions for payment are given on the last page. Allow four weeks for recording changes of address or payment of dues.

## Science News Stories of 1998

The following are some of the stories covered by the weekly digest *Science News* in the past year, with their volume number and page number.

Clear evidence emerged that women produce pheromones that can alter the menstrual cycles of other women (153, 164).

Preventing normal growth of butterfly wings and beetle horns increases the size of other developing body parts (153, 231).

Fire ants will kill their queen if she carries a certain form of gene--possibly the first long-sought example of a so-called green beard gene, one that marks its bearer for special treatment from other members of its species (154, 86).

If female fruit flies have a choice of mates for 10 generations, offspring live longer than flies from lineages of females with only one possible mate (154, 168).

## BOOK REVIEWS

### *Great Ape Societies*

Edited by W. C. McGrew, L. F. Marchant, & T. Nishida. Cambridge University Press, 40 W. 20th St., New York, NY 10011, USA, 1996, \$64.95 (hdbk.), \$25.95 (ppr.).

Reviewed by Mark A. Krause, Dept. of Psychology, University of Tennessee, Knoxville TN 37996, USA and Warren P. Roberts, Dept. of Anthropology, University of Georgia, Athens, GA 30602, USA.

The Wenner-Gren Foundation has long provided primatologists around the globe with opportunities to share information gathered in both laboratory and field settings. With the support of the Foundation, an impressive

contingent of primatologists gathered in 1974 to share their discoveries of great ape social ecology and cognition, many of them reporting truly novel findings that were foundational to the development of ideas within their fields of expertise. The ensuing volume, *The Great Apes*, encapsulated the proceedings of this meeting.

Twenty-two years later, *Great Ape Societies* appeared, again with the support of Wenner-Gren, and included some contributors who had participated in the first gathering. Contrasts between the two volumes are of historical relevance to the field of primatology. For example, Tokayoshi Kano reported a pilot study of pygmy chimpanzee ecology in the first volume. *Great Ape Societies* includes vital information on pygmy chimpanzee ecology that expands on Kano's original findings, and also testifies to the ever-expanding fascination with the "forgotten ape" (deWaal & Lanling, 1997).

However, various strengths of the first volume appear atrophied in *Great Ape Societies*. Each ape species received roughly equal attention in *The Great Apes* (although common and pygmy chimpanzees were lumped together), whereas *Great Ape Societies* provides a meager account of orangutans, making *The Neglected Ape* an apropos title for a recent volume (Nadler et al., 1995). Also neglected in *Great Ape Societies* are theoretical perspectives that serve to unite individual contributions. Perhaps in light of knowledge obtained by primatologists since 1974, a comprehensive volume on the topic of primate socio-ecology is a very tall order. Given this, these criticisms are not intended to dissuade professionals from reading *Great Ape Societies*, as its strengths are many.

The book is organized into five parts that are preceded by an exemplary foreword by Jane Goodall, who emphasizes the need to always remain focused on the conservation of great apes. It is in part I, an overview section, where sole mention of "the neglected ape" is made. Here, Carel Van Schaik and Jan Van Hooff present empirical findings on orangutan distribution, dispersal, ranging and social behavior, followed by theoretical perspectives on competing models that, with testing, should

provide a clearer picture of the social ecology of this somewhat elusive species. Following this are overview chapters on the comparative socio-ecology of gorillas and bonobos.

The second section expands on issues addressed in the first, with individual chapters on the social ecology of chimpanzees and gorillas. The inclusion of information on Western lowland gorillas should help to dispel popular notions of gorilla behavior drawn exclusively from studies of mountain gorillas. Far from being mere folivorous, mountain-dwelling giants, gorillas are here revealed as having seasonally variable diets composed largely of fruit and occasionally insects, with the capacity to exploit the offerings of varied environments (including foraging in swamps and nesting in trees).

The comparisons with chimpanzees are of interest not only for refining socioecological theory for large-bodied primates, but also for understanding great ape evolution. For millions of years numerous species of apes lived sympatrically. Since we have lost most of this ape diversity, studies of these smaller living systems are critical to understanding the socioecological milieu in which great apes (including our own ancestors) evolved.

The third section covers social relations among chimpanzees and bonobos in various habitats, as well as comparisons between the mating systems of the two species (Takahata, et al.). The latter topic delves into the similarities and differences between chimpanzee and bonobo sexual behavior. Takahata et al. place their findings within a more ecologically informed framework than some previous investigators have done. For example, the simplistic notion that en face copulation in bonobos is comparable with human copulation patterns appears to be abandoned. The socio-ecological data reported by Takahata et al. grounds both similarities and differences within a less speculative framework.

The fourth part of *Great Ape Societies* covers issues of cognition in chimpanzees. The only bit of new data reported here is by Savage-Rumbaugh et al., who, following a

review of their ubiquitously known work on ape language, describe equivocal evidence of bonobos using some rudimentary form of symbolic behavior to track movements. While highly speculative, this is a welcome attempt to synthesize field studies with laboratory findings by workers in the area of ape language. If followed by other investigators in the field, this endeavor could serve to resolve some controversies in this field that have persisted since its inception. Indeed, the chapter by Matsuzawa demonstrates the value of complementing field and laboratory studies of chimpanzee cognition.

Part five includes comparisons of various aspects of great ape behavior. However, some of the material does not have much apparent relation to great ape societies. The "neglected ape" receives welcome coverage in Fruth and Hohmann's chapter on nest building and its relation to social behavior. Otherwise, these comparative chapters are limited to studies of inter- and intra-specific variation in African apes. McGrew and Marchant report findings on hand laterality in gorillas and chimpanzees, but no attempt is made to inform the reader how this is relevant to great ape social life.

The final section deals with topics that may be of primary interest to human ethologists, and, hopefully, to evolutionary psychologists. Jim Moore explores the topic of using apes as referential models for human evolution. From an historical viewpoint, Adrienne Zihlman discusses several ideas pertaining to the use of modeling extinct hominids with extant ape species. One such idea, the popularity of which seems to have waned over the years, is that the pygmy chimpanzee most resembles the last common ancestor of humans and African apes in various behavioral and morphological traits. However, in light of what is known about each ape species, prospects for finding a truly satisfactory model seem somewhat bleak. *Australopithecus ramidus* may share some anatomical characteristics with pygmy chimpanzees; behavioral characteristics could be logically inferred from this evidence. However, as hypotheses regarding the conservatively retained features of pygmy chimpanzees mount, hypotheses pertaining to

why common chimpanzees derived so many unique characters become more crucial to develop. In light of molecular evidence of common and pygmy chimpanzee divergence times, this becomes even more evident.

*Great Ape Societies* provides a worthy synopsis of empirical discoveries and, to a lesser degree, theoretical advances in primate socio-ecology. The book could serve as a text for upper-division undergraduate courses and graduate courses in field primatology. Also, this book is highly recommended for professionals interested in primate evolution. Since it is mostly a compendium of previously published data, *Great Ape Societies* may be best suited to those not familiar with recent advances in chimpanzee, bonobo, and gorilla socio-ecology. Again, the book fails to incorporate recent advances in our understanding of the diversity and complexity of orangutan behavior. The editors claim that section 5 is about universals of "apehood", but they really mean African apehood.

Those working in the field of evolutionary psychology may find this book to be a valuable reference for use in creating informed adaptive scenarios for human evolution, provided that they do not assume an African origin for traits shared with Asian apes. The concept of an "environment of evolutionary adaptedness" (Buss, 1995) could be further improved by incorporating comparative data with an understanding of the paleoecological setting of any given time period or ancestral condition being scrutinized.

#### References

- Buss, D. M. (1995). Evolutionary psychology: A new paradigm for psychological science. *Psychological Inquiry*, 6, 1-30.
- Nadler, R.D., Galdikas, B.F.M., Sheeran, L.K., & Rosen, N. (1995). *The Neglected Ape*. New York: Plenum Press.
- de Waal, F., & Lanting, F. (1997). *Bonobo: The forgotten ape*. Berkeley: University of California Press.
- Hamburg, D.A., & McCown, E.R. (1979). *The Great Apes*. Menlo Park: Benjamin/Cummings.

### *Nonverbal Communication: Where Nature Meets Culture*

Edited by U. Segerstråle & P. Molnar. Lawrence Erlbaum Associates, 10 Industrial Avenue, Mahwah, NJ, 07430, USA, 1997, \$29.95 (hdbk.).

Reviewed by Marina Butovskaya, Institute of Cultural Anthropology, Russian State University for the Humanities, Miusskaya Pl.6, 125267, Moscow, Russia and Alexander Kozintsev, Museum of Anthropology and Ethnography, Universitetskaya nab.3, 199034, St. Petersburg, Russia.

Ever since Darwin's 1872 classic, studies of human nonverbal communication (NVC) have traditionally incorporated the biological perspective. Until recently, however, exchange of information between representatives of social and natural disciplines working in this area was anything but satisfactory, much to the disadvantage of both.

A crucial issue in human NVC research is the distinction between its symbolic and presymbolic parts. The former is in no way just a derivative of the latter. Segerstråle and Molnar were faced with two competing challenges: to avoid confusion between these two parts and, at the same time, to present NVC as a single phenomenon.

The contributors to the book, who are specialists in diverse areas ranging from primatology to philosophy, had participated in the 1992 Bielefeld conference on biological foundations of culture.

The first section of the book, in which universals in human NVC are addressed, contains numerous facts relevant to the discussion between those who argue that NVC is mostly learned and advocates of the opposite view who insist that NVC includes a large "hard-wired" component that is universal in *Homo sapiens*.

Ekman and Keltner summarize the cross-cultural studies of facial expression of emotions, and conclude that it is basically the

same worldwide if cultural modifications are subtracted. Smiling is a good example, since it can be both spontaneous and voluntary. The true, or Duchenne, smile is universal and associated with pleasant emotions. There exist several feigned smiles that are physiologically different from the Duchenne smile and are voluntarily or semi-voluntarily switched on to deceive the partner, mask embarrassment or grief, etc.

Due to face-brain feedback, it is not clear what is emotion: does our face mirror our mood, as the title of Darwin's *Expression of the Emotions* book implies, or is our emotional state a reflection of the facial changes, as William James thought? Strangely, James' theory is never mentioned in the book, although it is highly relevant to modern ethological views of social signals.

Due to the same feedback, it is not always easy to differentiate voluntary from involuntary expressions. We can illustrate this with an ethnographic example. The Yakuts used to laugh in the presence of women in childbirth, as they believed this made labor easier. Although at first their laughter was feigned and thus "cultural", it gradually became spontaneous and culminated in a "universal" guffaw.

Dimberg addresses psychophysiological reactions to facial expressions. As his electromyographic, skin conductance, and other experiments seem to demonstrate, humans are predisposed to certain emotional reactions (which are more clear-cut in women). While a picture of a happy face evokes facial changes suggestive of pleasure, the reaction to an angry face is fear. Moreover, people react to angry faces much more strongly than to happy ones; this is understandable given the selective advantage of rapidly responding to danger.

Concerning the oft-cited and allegedly "hard-wired" fear of snakes which Dimberg uses to support his case, caution must be applied, as infant macaques display no such fear: their mothers teach them to be afraid of snakes (Mineka). Are humans supposed to be more "hard-wired" in this respect?

Schiefenhoewel describes some

universal facial expressions such as nose wrinkling and the grimace of disgust. Also, he discusses various aspects of grooming. Because this form of NVC has survived (in the form of delousing) in traditional societies, it may be yet another universal.

In the second section, "Development of Emotions in a Social Context", information on both human and nonhuman primates is presented. H. Papousek and M. Papousek show that infants are not just recipients of parental stimulation. They actively stimulate their mothers who, in turn, unconsciously adapt their strategies to their infants' needs. In terms of communication, human infants are precocious, not altricial.

Schneider believes that the smile is both a social signal and a biological sign of the child's internal state. He argues that the Duchenne smile is not necessarily spontaneous and may signal excuse, appeasement, search for contact, etc.

Suomi demonstrates that communication in nonhuman primates is mostly emotional, in sharp contrast to humans. Basic emotions (at least their expressions), however, are the same in monkeys and humans. Another similarity is that inborn personal predispositions may be modified by socialization (does this apply to primates only?).

The third section is titled "The Social Role of Nonverbal Communication and Emotions: Evolutionary Inferences". The chapter by Marler and Evans is the most challenging and, in our view, the least acceptable one in terms of theory. The authors discuss the famous predator-specific danger signals of vervets described by Cheney and Seyfarth, and claim that these calls are "proto-words". One might bring forward quite a number of objections against this idea, had Marler and Evans not discovered virtually the same phenomenon in chickens! This alone makes any further discussion of the relevance of "input-specificity" of animal signals for the evolution of human language redundant. One might as well recall brainless creatures such as bees that are so much more promising in terms of "proto-

words" and "proto-languages" than are our closest relatives, the apes.

Maryanski uses oblique ecological reasoning to support the same untenable idea of a slow and gradual evolution of language on the basis of primate calls. Whether or not her views regarding progressive corticalization of these calls are correct, the basic problems remain. The language areas of the brain are absent in apes. Unlike vervets, chickens, or bees, wild apes do not use any "proto-words". Neither can they control their vocalization or their facial expression. Clearly, the gradual increase of cognitive abilities is not the whole story.

Evolutionary continuity, however, is beyond doubt when nonsymbolic elements of NVC are considered. Preuschoft and van Hooff think laughter and smiling have separate evolutionary roots. Laughter derives from the relaxed-open-mouth display, a play signal of nonhuman primates. The smile is a derivative of the silent-bared-teeth display used by subordinate monkeys and apes to appease the dominants.

While in species with a despotic social structure both signals are functionally quite distinct, in egalitarian species they can be used interchangeably. Because laughter and smiling can merge in humans too, one might infer that early hominid society was flexibly egalitarian rather than despotic. Turner also thinks that hominid social structure was flexible, so the control of emotions was an evolutionary necessity. Emotions have not been simply suppressed, though. Rather, the subcortical (precultural) component of emotions has become relatively less important, and the cortical (cultural and social) component has tremendously increased.

The final section is "Nonverbal Communication as Mediator Between Nature and Culture". Goldschmidt discusses ethnographic evidence on the importance of early experience in human life. The Sebai, much like the Balinese studied by Bateson and Mead, are said to suffer from the deficit of maternal attention they had experienced in infancy.



Heller investigates the role of posture in NVC. Specifically, he found that female undergraduates and nurses use the chair in profoundly different ways.

Nitschke examines the gestural languages of medieval European monks bound by the vow of silence. Although most of their signs were "transparent" (iconic), entirely different, although no less iconic, signs were used in other cultures to denote the same concepts. Iconicity, then, does not imply universality.

Finally, Frank offers some fresh ideas concerning the evolution of altruism. Their essence is that a society consisting of people with "cooperative predispositions" is more efficient than one consisting of egoists. This does deserve some comment, given the fate of Marxist regimes...

Overall, we believe this book to be extremely valuable despite being strikingly uneven. Its principal value lies in contributions that address precisely what should be addressed in a monograph bearing this title: NVC, especially nonsymbolic and emotional patterns. The editors' goal, namely to demonstrate the continuity between the behavior of nonhuman and human primates, has been brilliantly achieved.

Wherever the contributors transcend the boundaries of presymbolic NVC and touch upon uniquely human properties related to the use of symbols, all attempts to employ the same slow-and-gradual model result in overt reductionism which occasionally evokes a true Duchenne smile. Hiatus and continuity are not mutually exclusive, since they refer to different components of behavior. The qualitative distinction between man and animals is as "hard-wired" as are features linking us with our ancestors.

But if a book of such scope is controversial, is this a drawback? At the point where nature meets culture, hundreds of researchers concerned with either or both will greatly benefit from the exchange of views. In this respect, the monograph is a major achievement.

### Officers of the Society

#### President

Charles B. Crawford  
Department of Psychology  
Simon Fraser University  
Burnaby, B.C. V5A 1S6, Canada  
tel. 1-604-291-3660  
fax 1-604-291-3427  
e-mail: crawford@sfu.ca

#### Vice-President/ President-Elect

Linda Mealey  
Psychology Department  
College of St. Benedict  
St. Joseph, MN 56374 USA  
tel. 10612-363-3135  
fax 1-612-363-3202  
e-mail: lmealey@csbsju.edu

#### Vice-President for Information

Peter LaFreniere  
(see Editorial Staff box)

#### Secretary

Karl Grammer  
Ludwig-Boltzmann-Institute  
for Urban Ethology/Human Biology  
Althanstrasse 14  
A-1090 Vienna, Austria  
tel. 49-815237355

#### Treasurer

Barbara F. Fuller  
School of Nursing  
University of Colorado  
4200 E. Ninth Ave.  
Denver, CO 80220 USA  
tel. 1-303-315-8929  
fax 1-303-315-5666  
e-mail: barbara.fuller@uchsc.edu

#### Membership Chair

Astrid Jütte  
Ludwig Boltzmann Institute for Urban  
Ethology, Institute for Human Biology  
Althanstrasse 14  
A-1090 Vienna, Austria  
e-mail astrid.jutte@bigfoot.com

*Uniting Psychology and Biology:  
Integrative Perspectives on  
Human Development*

Edited by Nancy L. Segal, Glenn E. Weisfeld & Carol C. Weisfeld. Washington DC: American Psychological Association, 1997, \$39.95 (hdbk.) for members.

Reviewed by Johan M. G. van der Dennen, Center for Peace and Conflict Studies, University of Groningen, Oude Kijk in 't Jatstraat 5/9, 9712 EA Groningen, The Netherlands.

"Even as smaller and smaller niches in psychology are carved out, the discipline moves toward a more holistic approach to behavioral science. Pursuing the 'big picture' has been the life's work of Daniel G. Freedman, PhD, a distinguished psychologist whose wide range of interests has provided remarkable variations on a single theme: an interactionist, holistic view of human behavior. His pioneering ethological analyses encouraged naturalistic studies of the evolved bases of behavior; his comparative view of human behavior helped set the stage for current cross-cultural research. Scholars interested in the twists and bedrocks of human development will find in this volume a stimulating sampler of cutting-edge research on the topics that define Freedman's career: behavior genetics, human ethology, evolutionary psychology, and culture. An expansive ripple effect of scholarship has resulted from Freedman's broad-based research and teachings, and *Uniting Psychology and Biology* presents this intellectual ancestry."

This is the text on the wrapper, and though for some scholars 'holism' may evoke uneasy associations with 'New Age' obscurantism, Daniel Freedman indeed comes as close to the Renaissance ideal of *Homo universalis*, pursuing the big picture, as a contemporary scientist can possibly get.

The volume is, first and foremost, an unabashed homage to, and a Festschrift dedicated to, Dan Freedman's unique scholarship. Freedman is a brilliant and inquisitive mind who pioneered and explored

many novel areas of investigation: the genetics of dog behavior (Freedman, 1958), genetically based behavioral dispositions and motor patterns in human infants (Freedman, 1964), the interaction of genetic and environmental factors in the ontogeny of human behavior (Freedman, 1974), observational studies of dominance hierarchies, MZ and DZ twin studies, and observations of human cultures. Only four years after Edward Wilson's synthesis, Dan Freedman produced one of the first books on human sociobiology (Freedman, 1979), in which his propensity toward integration was already prominent.

He worked with the finest minds of his generation: Abraham Maslow, Kurt Goldstein, Gregory Bateson, and John Paul Scott, and he was usually ahead of his time. I had the honor to meet Dan Freedman a few years ago at the Ringberg Castle Conference on 'Indoctrinability and Warfare', organized by Eibl-Eibesfeldt and his assistants, in Andechs, Germany. It turned out to be a memorable meeting, and I can now understand the impression he must have made on his students who wrote this Festschrift for him.

The bulky volume contains almost 40 contributions (including section introductions and conclusions) by some 25 accomplished scholars, most of them former students and colleagues. The contributions are grouped into 8 sections: Introduction; Genetic Basis of Behavior; Biological Approaches to Developmental Issues; Naturalistic Studies of Behavior; Evolutionary Analyses; Film Retrospective; Behavior Genetics, Human Ethology, Evolutionary Psychology, and Culture; and Final Overview. It is hard to think of a relevant subject which is not represented in this book.

The quality of these contributions is extremely heterogeneous in both readability and content. It is hardly possible, within the framework of a book review, to do justice to every contribution. Therefore I shall limit myself to presenting some impressions, necessarily biased by my own preferences and taste, and finally summarize some of the conclusions as formulated by the editors. I apologize beforehand to those authors who are left out.

Freedman's own contribution ("Is nonduality possible in the social and biological sciences?: small essays on holism and related issues") tries to transcend the classic dichotomies which have haunted our disciplines: mind versus body, innate versus acquired, culture versus biology, nature versus nurture, reductionism versus holism, etc.

Michael Bailey's chapter ("Are genetically based individual differences compatible with species-wide adaptations?") is highly informative on a number of issues at the behavior genetics-evolutionary psychology interface, such as heritabilities of behavioral traits and sex differences as frequency-dependent reproductive strategies.

Genetics as a risk factor throughout the life span is highlighted by Irving Gottesman, Hill Goldsmith & Gregory Carey ("A developmental and a genetic perspective on aggression"). They present a sophisticated 'reaction surface' model of behavioral traits and conclude that "It is likely that insofar as genetic risk factors may be important, they are most relevant to a subset of individuals manifesting chronic antisocial behavior with nonacute onsets. That such a subgroup exists has been repeatedly shown in the literature..." (p. 120). This small group of hard-core, chronic recidivists is responsible for the majority of violent crimes, including rape.

John Paul Scott, grand old man of aggression research, describes in "Genetic analysis of social behavior" two major lines of research, which span a 20-year period: the discovery of the critical period of social attachment, and gender and breed differences in agonistic behavior.

Nicholas Blurton Jones, Kirsten Hawkes & James O'Connell ("Why do Hadza children forage?") demonstrate the power of the adaptationist approach by simply asking how foraging might enhance the fitness of Hadza children. This is a refreshing exercise in evolutionary anthropology.

In a short, but extremely fascinating, contribution ("Genetic basis of intrapsychic conflict"), one of the founding fathers of

sociobiology, Robert Trivers, discusses 'genomic imprinting', or parent-specific gene expression, and its implications for internal conflicts between different sets of cells, for example the maternally imprinted neocortex and the paternally active hypothalamus.

One of the founders of evolutionary psychology, Jerome Barkow ("Happiness in evolutionary perspective"), notes that, oddly enough, evolution joins with Medieval Roman Catholicism in a discussion of how the 'seven deadly sins' may have yielded adaptive advantages in older hominid environments even though they do not lead to happiness. Unfortunately, evolution is not about maximizing the happiness of organisms, but about relative gene frequencies and reproductive success. Fortunately, unhappiness is predicted by evolutionary psychology to be just as episodic and situational as happiness.

Glenn Weisfeld ("Discrete emotions theory with specific reference to pride and shame") presents ten principles for constructing a list of the basic emotions, and he offers convincing evidence of homologies between pride-shame in humans and dominance-submission in other animals. Principle 10 provides the rationale for this finding: "If all human emotions possess at least rudiments in other species (Principle 3), then *we can expect to find homologies between each basic human emotion and some motive in other species.* These homologies support the notion that the human emotion in question evolved from the animal emotion and therefore is basic" (p. 429; italics in original). This is an excellent theoretical exercise in a time-honored tradition starting with Darwin's *Expression of the Emotions* (1872).

In their final overview ("Uniting Psychology and Biology"), Glenn Weisfeld, Carol Weisfeld & Nancy Segal wonder what such an integration - the application of evolutionary theory to our own species' behavior - would look like. They identify three requirements: "First, there would be emphasis on species-wide behaviors, not on variability. No natural science dwells on diversity; all try to generalize, to establish laws that describe the main phenomena of

interest. Psychology skipped over this descriptive stage in its history....Once these universals, these building blocks of human behavior, were recognized, the causes of their variability could be addressed. Much inter-individual variation is a result of genetic differences...Moreover, the influence of genes on most behaviors does not subside as children get older...Perhaps most important, functional analyses of universal human behaviors and developmental events are needed. The great, unique contribution of biology to psychology is the Darwinian perspective, Tinbergen's 'why' question of function..." (pp. 528f).

I would add that proximate explanations of behavior would benefit considerably if they were put squarely within an ultimate, evolutionary context, and that it helps in understanding a behavioral phenomenon, including its neural and/or endocrinological substratum, to recognize why it evolved in the first place.

Evolutionary psychologists, ethologists, sociobiologists, and even evolutionarily informed sociologists like Pierre van den Berghe have often pondered the question why the social sciences resist Darwinism. Trivers suggested that widespread ignorance of biology is a factor. Certainly that must play a prominent role, but it cannot account for the intense hatred and hostility with which otherwise reasonable scholars have greeted attempts to unite psychology and biology. For examples, see the recent reviews of Frank Salter's excellent book *Emotions in Command in Ethology*, and of my edited volume *The Nature of the Sexes in Archives of Sexual Behavior*.

#### References

- Freedman, D. G. (1958). Constitutional and environmental interactions in rearing of four breeds of dogs. *Science*, 127, 585f.
- (1964). Smiling in blind infants and the issue of innate versus acquired. *Journal of Child Psychology & Psychiatry*, 5, 171-189.
- (1974). *Human Infancy: An evolutionary perspective*. Hillsdale, NJ: Erlbaum.

--- (1979). *Human Sociobiology: A holistic approach*. New York: Free Press.

**Editor's Note:** This review was arranged by Peter LaFreniere.

### *Separation and Its Discontents: Toward an Evolutionary Theory of Anti-Semitism*

By Kevin MacDonald. Praeger, 88 Post Rd. West, Westport, CT, 06881-5007, USA, 1998, \$65 (hdbk.)

By Stephen K. Sanderson, Dept. of Sociology, Indiana University of Pennsylvania, Indiana, PA, USA

Kevin MacDonald's *Separation and Its Discontents* is a direct successor to his earlier *A People that Shall Dwell Alone: Judaism as a Group Evolutionary Strategy*, published in 1994. In the earlier book MacDonald attempted to show that the Jews have been among the most exclusivist and endogamous ethnic groups in all of human history. These are traits that appear to have been more common among Near Eastern populations than among other populations, and MacDonald speculates that they may have a biological basis.

The Jews have often shown fierce loyalty to Judaism, even when they have been broken up into many diaspora communities. They have exhibited extremely high levels of within-group altruism and a marked tendency to have negative stereotypes of Gentile groups among whom they dwelt. Historically they have actually followed a kind of eugenics policy by placing high value on marrying their daughters and sisters to the leaders of Judaism, the Jewish rabbinical scholars. Because of the social reinforcement given these practices over 3000 years, Jews have evolved as a biologically distinct population with the world's highest intelligence level. MacDonald then shows how high IQs, combined with an orientation toward high-investment parenting, have given Jews a significant advantage in resource competition with Gentiles and have made them one of the most economically and socially successful groups the world has ever seen. Wherever

Jewish communities have been found they have almost always been more successful, on average, than their neighbors.

It is within this framework that MacDonald's new book must be understood. In this book he attempts to develop a theory of anti-Semitism based on his understanding of the distinctive features of Judaism and the nature of the interactions between Jewish and non-Jewish groups.

MacDonald's argument is rooted in evolutionary biology and social identity theory. Social identity theory assumes basically the following (and MacDonald is clearly assuming that the processes depicted by social identity theory are evolved characteristics of the human species): Individuals tend to distinguish between ingroups and outgroups and to exaggerate the similarities among individuals within each group; the stereotypic attitudes and behaviors of the ingroup are positively valued at the same time that the attitudes and behaviors of the outgroup are negatively valued. These categorization processes lead to discriminatory behavior directed by the ingroup toward the outgroup; beliefs in the superiority of the ingroup; and a clear preference for the ingroup. Conflicts of interest exacerbate all of these tendencies; people tend to manipulate their social identity in order to provide themselves with positive self-images; and people will readily adopt a group mentality that leads to behavior that is often intensely emotional and "irrational."

Throughout history the Jews have exhibited these collectivist traits at a very high level, typically higher than that of the groups among whom they have lived. They have held themselves apart and fiercely resisted assimilation into surrounding non-Jewish communities, behaviors that have almost always been associated with the tendency to look askance at these non-Jewish communities. These traits, in and of themselves, have fostered a great deal of anti-Semitism, which in turned strengthened them over time.

MacDonald shows that anti-Semitic attitudes have been remarkably uniform

throughout history and that the Jews have evoked these attitudes virtually wherever they have gone. As MacDonald notes, "the remarkable thing about anti-Semitism is that there is an overwhelming similarity in the complaints made about Jews in different places and over very long stretches of historical time" (p. 32). Jews have typically been perceived by rival groups as extremely clannish and intent on a separate existence; as extremely adept at economic competition with non-Jews and intent upon economic exploitation and domination; as dominating non-Jews; of having overbearing personalities; and as being disloyal to the societies in which they have lived. All of these perceptions have been most intense the more numerous Jews have been and the greater the extent to which they have had real conflicts of interest with non-Jews. Where resource competition between Jews and non-Jews has been at its peak, anti-Semitism has also tended to be at its peak.

MacDonald devotes three chapters to documenting the ebb and flow of anti-Semitism throughout human history. As he notes, in the Roman empire Jews were greatly overrepresented in such sectors of the economy as banking, international trade, and the slave trade, and they virtually monopolized various industries, such as silk, clothing, and glassware. As Jewish control over these economic sectors increased, anti-Semitism grew.

After the Roman empire collapsed anti-Semitism ebbed, but it began to flow again in the 12th and 13th centuries:

There is evidence that resource competition exacerbated the anti-Semitism of the period. Jews were expanding demographically in Western Europe during the 11th-13th centuries, with the rate of increase being particularly high during the 12th century. . . . This was also the period when Jewish economic and cultural prosperity in medieval Europe was at its peak (pp. 116-17).

Anti-Semitism was at its most virulent in Germany in the 19th and 20th centuries. After 1870, Jews increased in numbers and the resource competition between them and Gentiles

increased considerably. MacDonald makes much of the fact that Gentile groups often became mirror images of Jewish groups in order to successfully compete with them. Zionism and anti-Semitism were inextricably intertwined. All of this, of course, is just what MacDonald's evolutionary version of social identity theory predicts.

MacDonald also devotes a chapter to examining the extent to which Jews have attempted to defend themselves against the charges that have been flung against them. As MacDonald points out, "rationalization, deception, and self-deception are expected among those who create and maintain ideologies," for "ideologies serve the evolutionary interests of those who adopt them" (p. 207). Jews have been particularly adept at self-deception, MacDonald argues. In evolutionary perspective, self-deception is extremely useful to successful individuals and groups because it prevents them from detecting their own deceptions of others. This, in turn, allows them to continue to give full force to their strategies of ethnic competition.

I am certainly no expert on anti-Semitism, but my knowledge of the evolutionary biology of ethnicity and of the evidence presented by MacDonald suggests to me that a great deal of what he says rings true. Perhaps the most crucial things that have to be explained are that Jews have evoked anti-Semitic reactions almost everywhere they have gone, and that the nature of these reactions has been remarkably similar in diverse times and places.

Theoretically, what intrigues me most about MacDonald's work on Judaism is his suggestion that not only the Jews, but Near Eastern peoples in general, have been biologically predisposed to be higher than average on collectivist and ethnocentric personality traits. Near Eastern peoples lived under conditions, he has suggested, in which these traits would have been particularly adaptive. It is a pity that this remains mostly a speculation and that the idea is not pursued. One of the most noteworthy features of the modern political scene is the extreme intransigence of Jews and Arabs in the Middle

and Near East. The thought that this intransigence could actually be rooted in their biological as well as cultural evolution is extremely provocative and might go far toward explaining an ethnic confrontation that has, to this point, been extremely difficult to understand.

The only matter on which I significantly disagree with MacDonald concerns his claim that Judaism as an ethnic strategy is some sort of group selection process. I have not been convinced by its proponents that group selection is a significant biological

#### Bulletin Submissions and Duplication

Anything that might be of interest to ISHE members is welcome: Society Matters; articles; replies to articles; suggestions; announcements of meetings, journals or professional societies; etc. These sorts of submission should be sent to the editor. Book review inquiries should go to the appropriate book review editor. Submission should be in English, on paper and, if possible, also on diskette (MS Word 5.0 preferred). Shorter reviews are desirable (less than 1000 words). **Please include complete references for all publications cited.** For book reviews, please include **publisher's mailing address and the price of hardback and paperback editions.**

Submissions are usually reviewed only by the editorial staff. However, some submissions are rejected. Political censorship is avoided, so as to foster free and creative exchange of (even outrageous) ideas among 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.

*Bulletin* content may be reproduced without limit for scholarly (but not commercial) purposes. That is, no one may be charged for receiving the content, unless permission is obtained from the Editor or the ISHE President. Sample copies of the *Bulletin* are available from the Editor. Send number of copies desired and date required.

reality. I have no space to delve into this issue in this short review, so suffice it to say that I think it is far easier and much more theoretically acceptable to interpret Jewish ethnic strivings in purely individual selectionist terms. These strong ethnic strivings emerged because of their advantages to individuals, and group benefit was simply the aggregate of individual benefit. However, this criticism of MacDonald should not be allowed to detract too much from what really is a remarkable, and remarkably courageous, effort. MacDonald's books on Judaism have been an exceptional intellectual experience for me, and I eagerly look forward to reading his third book on Judaism.

**Book Review Editor's Note:** The forthcoming third volume is titled *The Culture of Critique: An Evolutionary Analysis of Jewish Involvement in 20th-Century Intellectual and Political movements*, and MacDonald is already researching a fourth volume exploring the generalizability and importance of group selection strategies in human evolution by examining other groups that have displayed similar tendencies.

### *Human by Nature: Between Biology and the Social Sciences*

Edited by Peter Weingart, Sandra D. Mitchell, Peter J. Richerson, & Sabine Maasen. Lawrence Erlbaum Associates, Inc., 10 Industrial Avenue, Mahwah, NJ 07430, 1997, \$89.95 (hdbk.)

Reviewed by Emily A. Schultz, Dept. of Sociology & Anthropology, St. Cloud State University, St. Cloud, MN 56301, USA.

This 600-page volume is the outcome of a year-long residential seminar entitled "Biological Foundations of Human Culture," held in 1991-92 at the University of Bielefeld in Germany. The sociologist Peter Weingart, who played a key role in organizing the seminar, describes it as an opportunity "to delineate a theme that among social scientists is fraught with historical and political taboos" (p. vii), whether the issue be "Nazi biology" or sociobiology. The volume includes an

introduction and eleven chapters written singly or in collaboration by thirty participants from a variety of disciplines, including anthropology, archaeology, psychology, history and philosophy of science, genetics, sociology, literature and media studies, economics, primatology, and environmental biology.

According to the preface, contributors

explicitly avoided biological and sociological reductionisms. Instead, a pluralistic perspective was considered a prerequisite of the project by all participants. We adopted the model of 'integrative pluralism' as a methodological strategy (p. viii).

Although it sometimes fails to measure up to the promise in the preface, this book's very existence remains a landmark event. It should be required reading—all of it—for every scholar whose research focuses on "human nature."

The contents of the various essays in the volume are dense and deserve a detailed exposition impossible to offer in a review this short. I must therefore limit myself to offering potential readers an overall idea of what they will find. Roughly speaking, the contributors fall into three groups: defenders of sociobiology (led by evolutionary psychologists John Tooby and Leda Cosmides), critics of sociobiology (led by cultural inheritance theorists Robert Boyd, Peter Richerson, and William Durham), and a third group that might be called referees (e.g., Sandra D. Mitchell, Lorraine Daston, and Peter Weingart, the last of whom bravely coauthored position papers both with sociobiologists (chapter 2) and with their critics (chapter 8). For reasons that will become clear, my sympathies lie with the second and third groups.

The volume is divided into three sections. Part I, *Contexts*, contains three chapters that explore various ways that links between biology and the social sciences have been conceived across disciplines and through time.

Part II, *Homologies*, explores "the value and limitations of homologies from biology in the study of culture." By "homology", the authors mean "structures in different populations...that are similar as a result of inheritance from a common ancestor" (p. 10). Papers in this section explore the extent to which "human culture" may in fact be explained by concepts and theories used to explain the behavior of non-human animals.

Part III, *Analogies*, "explores the potential of analogical reasoning ("humans are like animals")...the relation between the two domains is one of similarity, not identity, so that such an investigation illuminates the differences between biological and cultural processes, as well as the similarities" (pp. 9, 12).

The volume's organization appears to reflect the following editorial strategy: The sociobiologists will go first and, apart from a brief intermission (chapters 2 and 3), they may throw everything they've got at the opposition (chapters 1, 2, 5, 6, and 7). In return, however, their critics will be allowed the last word (chapters 8-11).

The rhetoric of integrative pluralism is liberally sprinkled throughout Parts I and II, and all attempts at vulgar "reductionism" are foresworn. Nevertheless, many readers (especially critics of sociobiology) are likely to be disappointed initially by what they find. Chapter 1, for example, offers brief histories of several disciplines, ostensibly discussing the extent to which they do (or do not) take biology into consideration. As described by Monique Borgerhoff-Mulder, Alexandra M. Maryanski, and Jonathan H. Turner (pp. 31ff), however, my own discipline of anthropology is virtually unrecognizable. In particular, these authors assert that anthropological critics of sociobiology have "misunderstood" its implications and suffer from "confusion" (p. 34).

I beg to differ. Most of us who object to sociobiology understand its claims very well and *disagree* with them. The position of sociobiology within anthropology may be "legitimate" (p. 35), but it is also *contested*, and it is contested by anthropologists (including

Boyd, Richerson and Durham) who cannot easily be described as "antiempiricist," "deconstructionist," or "antiscience," (pp. 34-38). As it happens, standard objections to sociobiology in anthropology (including my own) are identical to those reported for sociology: sociobiology is "radically reductionist...ignoring those 'emergent' sociocultural phenomena that reveal their own dynamics"; it is "simplistic, trying to explain complex, emergent phenomena in terms of ideas about genic fitness"; and it offers "glib, ad hoc, and easily constructed stories about how a phenomenon promoted genic fitness in the evolutionary past" (p. 29).

If this passage of tendentious disciplinary history was disappointing, the essay in chapter 2 by Peter Weingart and Ullica Segerstråle (pp. 68-80 ff.) was a further letdown. They begin with an interesting discussion of the biological views of human nature adopted by the Nazis, and they end with useful observations about the lack of simple correlations between a scientist's politics and his or her scientific commitments. Unfortunately, the middle of their essay degenerates into an *ad hominem* attack on Richard Lewontin that consists entirely of charges with no evidence offered to back them up (pp. 80ff). But the least enthusiastic commitment to integrative pluralism is surely found the essay in chapter 5 by Segerstråle and Peter Molnar (pp. 183-193), who write:

In the 1990s, it is no longer possible to postulate a simple either-or situation when it comes to culture and biology. Additional evidence has accumulated to tip the balance in favor of the biological foundations of nonverbal behavior – or, more correctly, an answer which inseparably involves both culture and biology (p. 185).

Are they really suggesting that linking culture to biology can *only* mean favoring biology over culture? Wouldn't integrative pluralism assign culture *some* causal role? Apparently not, for Segerstråle and Molnar equate cultural causation with linguistic determinism (p. 185) and with "the militant cultural perspective" which "appears quite



similar to the previous linguistic relativistic thesis of the cultural determination of our categories of thought" (p. 192). Readers may be forgiven for drawing the conclusion that, from the point of view of these sociobiologists, "integrative pluralism" will only be achieved when social scientists admit defeat and agree that human genes hold culture on a tight leash.

The preceding examples illustrate some of the rhetorical moves that repeatedly surface in the essays written by sociobiologists. *Ad hominem* attacks are limited to the case of Lewontin and a brief swipe at Stephen Jay Gould (p. 84). Far more common is vituperation directed at unnamed critics whose alleged claims are always presented in extremist language, such as the reference to the "militant cultural perspective" cited above, or the reference (p. 63) to "radical equipotentialists"—sociologists and anthropologists who not only criticize sociobiology, but who are said to endorse the same theories that "were used to justify repression and genocide by Marxist regimes" in Cambodia, China and the USSR! To study human cultural diversity instead of human universals is equated with advocating "purely sociocultural theories" (p. 182) and with setting humans apart as essentially different from other animals (pp. 4, 151, 189, 192). The authors of chapter 6, moreover, display a gross misunderstanding (and misspelling) of pidgin languages (p. 204). Are these examples of what Mitchell identifies in chapter 3 as "crude caricature" (p. 103)?

By contrast, Sabine Maasen's essay in chapter 2 stands out as an even-handed discussion of competing developmental and sociobiological explanations for female orgasm. The overt purpose of her essay is to show that there is "no one-to-one correlation between political convictions and scientific assumptions" (p. 88), but she ends up showing as well that sociobiology does not encompass all of evolutionary biology. This is significant, for the sociobiologists who contribute to this volume regularly equate *all* of "evolutionary" or "Darwinian" biology with sociobiology (see, for example, pp. 1, 2, 33, 34, 38, 64, 152, 213). Such rhetorical arrogance can only put off many readers who might otherwise be inclined to make an effort to understand a substantive sociobiological argument.

That Darwin can be understood in multiple ways is acknowledged on p. 3, but only the cultural inheritance theorists in Part III explore the options. Boyd and Richerson, for example, are inspired by the "Lamarckian" Darwin, who proposed

that intergroup competition aided by "inherited habit" led to the rise of the special "moral and intellectual faculties" of humans. Through a long history of coevolution, humans are plausibly genetically adapted to live in an environment of culturally defined groups that have been subject to group selection. We claim that competing arguments have a much more difficult time accounting for the apparent absence of the human pattern of cooperation among other animals, and the great variety of apparently culturally shaped forms of cooperation, notwithstanding virtual ubiquity of some elements of cooperation in human adaptive complexes (p. 351).

Concluding "that *Lamarckian evolution* may prove to be more adequate and promising for modeling cultural evolution than models of conventional neo-Darwinian evolution" (p. 292), these scholars take a classic sociobiological metaphor and turn it around on its creators: "Lumsden and Wilson's...idea of a 'leash' between genetics and culture is an excellent metaphor if we consider its full implications. We have all seen large, poorly trained dogs on a tight leash dragging their owners through the streets. Many of us have seen unleashed dogs working in sophisticated harmony with human hunters and herders. Is the leash loose or tight? If it is tight, who is dragging whom about? Or is it mainly a matter of mutualistic teamwork?" (p. 353)

Chapters 3 and 4 offer a moment of respite between the two bodies of sociobiological exposition in Parts I and II. Chapter 3, "The Whys and Hows of Interdisciplinarity," delivers what it promises. Sandra Mitchell shows that she knows her way around the "disunity of science" literature, in terms of which any form of "integrative pluralism" needs to be assessed. The same sophistication is evident in Peter B.

Sloep's essay about the metaphorical transfer of models, in Lorraine Daston's superb discussion of anthropomorphism, and in Gerd Gigerenzer's cautionary tale about the dangers of borrowing statistical tools. Chapter 4, "The Social Intelligence Hypothesis," coauthored by Daston, Gigerenzer, Hans Kummer and Joan Silk, it also is extremely interesting and helpful.

Finally, in the four chapters of Part III, direct, critical responses to various sociobiological arguments are offered. The culture inheritance theorists Boyd, Richerson, and Durham have their say, along with other anthropologists, sociologists, geneticists, ecologists and media scholars. To their credit (and, I must add, to my own personal satisfaction), the individual articles in part III come closest to exemplifying my view of integrative pluralism. *Ad hominem* attacks, for example, are absent: compare, for example, the courtesy accorded Richard Dawkins in chapter 8 (pp. 301, 309) and in chapter 11 (p. 398) with the treatment meted out to Lewontin and Gould in Chapter 2.

It is toward evolutionary psychologists that the contributors to Part III direct most of their critique, which actually begins on p. 276, at the very end of Part II, when behavioral ecological anthropologists challenge Cosmides and Tooby's conclusion that general mental mechanisms are "an impossibility." This defense paves the way, a few pages later, for the writers in Part III to explore how the human capacity for symbolic culture might constitute such a general mechanism. These moves all call into question the exclusive focus of evolutionary psychologists upon *adaptedness*. Evolutionary psychologists call themselves "adaptationists" because they highlight the way natural selection can produce organs (such as the eye) that appear precisely "designed" for a highly specific adaptive function (p. 215). But adaptationist arguments are less helpful to those interested in explaining how natural selection can produce a body part (such as the human hand) (p. 276) that is characterized by a general, *all-around adaptability*. If human beings are weedy generalists rather than specialists (more like rats, say, than like koalas), paying attention to

adaptedness alone is not likely to shed much light on the origins of our all-around adaptability, especially if the human capacity for culture plays a central role in that adaptability.

Writers in Part III point out that contemporary anthropological theory views culture as *symbolic* practices that individuals learn socially (cf. p. 308), and cultural traditions are understood as emergent phenomena that can, for good or ill, buffer the effect of natural selection on individuals. Moreover, as demonstrated by the case study on patterns of lactose malabsorption in various human populations, a group's commitment to a particular set of cultural practices (e.g., dairying) may create "culture-driven genetic change" (p. 344). Since evolutionary psychologists apparently can only conceive of natural selection (a) driven by non-cultural factors and (b) operating on individuals, they interpret talk about symbolic culture and culture-driven genetic change as tantamount to asserting that human beings are not subject to natural selection *at all*; hence the accusations of "radical environmentalism" directed at those who make this argument.

Charges like this one puzzled me at first. I was stunned, for example to see sociobiologists lump religious creationists, Cartesian dualists and all social scientists together, accusing them of "dichotomous thinking" in which "the thesis of human uniqueness" has been used "as an argument for ignoring biology" (p. 3; cf. p. 53). But motivation for this hyperbolic accusation became clearer when I realized that evolutionary psychologists are still fighting a battle with the ghost of behaviorism. Behaviorism is anathema to them because of its commitment to a few generalized mental mechanisms which allow organisms (including humans) to be freely ("equipotentially") conditioned by "the environment" into all the complex behaviors for which their species is known (pp. 56 ff.). Having rejected behaviorism, however, evolutionary psychologists proceed to lump with the behaviorists all scholars who refuse to reduce the "mental content" of (human) minds to the complex, evolved architecture that they

believe they have discovered (pp. 233-34); all are equally guilty of "environmentalism" (p. 77).

For example, they criticize behavioral ecological anthropologists because, although these scholars accord a key role to the "fitness-maximizing human mind", they nonetheless promote a "generalized" mechanism rather than the content-full "domain-specific mechanisms" that evolutionary psychology argues for (pp. 275-76). They object to the UNESCO statement on human rights because, they say, it "marked the explicit declaration of environmentalism as the politically and intellectually sanctioned approach in opposition to biological determinism" (p. 77).

None of this sounds like "integrative pluralism," but it connects worries about behaviorism to the "meaning problem," which is the key issue dividing sociobiologists from their critics (p. 312). Sociobiologists do not like to talk about symbolism, and some of them go to great lengths to avoid having to do so. This is particularly obvious in chapter 6, "Evolutionary Theory and Human Social Institutions: Psychological Foundations," jointly written by Nancy W. Thornhill, Leda Cosmides, Alexandra M. Maryanski, Peter Meyer, John Tooby, and Jonathan H. Turner (pp. 210-252). In chapter 2, Weingart et al. write that what critics of sociobiology attack is "not sociobiology, but 'sociobiology' as stereotyped by the critics and feeding on earlier biological conceptions" (p. 79). Anthropologists might respond that what the sociobiologists attack is not anthropology, or the traditional concept of culture, or even the ideas of Clifford Geertz, but 'anthropology,' 'culture,' and 'Geertz' as stereotyped by the critics and feeding on earlier behaviorist conceptions.

First, the concept of culture: Thornhill et al. would like to claim that the "evolved architecture of the human brain" contains virtually everything that cultural anthropologists have traditionally attributed to "cultural learning." Sociobiologists seem to believe that if they can reduce cultural learning to old-fashioned, non-symbolic, behaviorist conditioning, their arguments about brain architecture will appear more plausible.

And so they define culture as "contingently variable," "contentful," "organized," "socially learned" and socially variable "information" (p. 231). First, by excluding any references to symbolism, and by making no reference to cultural *practices* that cannot be reduced to "mental content" (see p. 308), nothing differentiates "cultural learning" from the "learning" of non-human animals that do not rely on symbols. Second, by equating the anthropological account of "cultural learning" with outmoded accounts of behaviorist conditioning, anthropological defenders of culture can be portrayed as doubly misguided.

Next, the anthropological interest in cultural variation: "Geertz" is blasted for his "naïve realism" because he claims "that humans do not have general cultures, only particular ones, and so evolved to realize themselves only through cultural particularity" (p. 222). "Anthropological orthodoxy to the contrary," they retort, "human life is full of structure that recurs from culture to culture" (p. 223). But the "human universals" they offer (p. 223) resemble nothing so much as a cladist's list of plesiomorphies that humans share with one another, with other primates, and even with some other mammals. Like Malinowski's famous "they lived, they loved, they died," such human universals are not false, but they tell us nothing about why these "recurring structures" mean different things in different cultural traditions.

Do sociobiologists carry on at such length about human universals because they fear that drawing attention to what makes humans *different* from other species (i.e., symbolic culture) can only give aid and comfort to creationists and others who associate human dependence on symbolic culture with "freeing" human beings from "nature?" Sociobiologists seem unable or unwilling to imagine an approach to human nature that both accepts evolutionary continuity and is more interested in human diversity than in human universals. Variation cannot be explained by a constant, yet the authors of chapter 6 harangue social scientists interested in variation for not being interested in universals!

Thornhill et al. would apparently like

to explain cultural variation by reducing it to the triggering of different "domain-specific mechanisms" whenever a human group moves into a new environment. But this explanation runs into problems in the face of novel environments, for which existing mental mechanisms are unprepared (pp. 277-78). Regardless, Thornhill et al. charge that "the 'do what your parents did' concept of culture is not a principle that can easily explain why cultural elements change, where new ones come from, why they spread, or why certain complex patterns (e.g., pastoralist commonalities) recur in widely separated cultures" (p. 232).

But anthropological views of culture have *never* claimed that people can *only* learn the culture of their parents! 100 years ago, Boas and his students were studying widespread patterns of cross-cultural *borrowing* as well as within-culture inheritance! Moreover, reducing cultural variation to mechanical environmental adaptation (cf. p. 233) has long been criticized within anthropology as simplistic. The point is made in chapter 10, where Boyd, Borgerhoff-Mulder, Durham and Richerson discuss the challenges faced in attempts to reconstruct the culture history of neighboring East African groups: "Comparative ethnographic data with age sets scored as present/absent, or as a quantitative variable on political importance, would not contain enough detail to reconstruct much history in East Africa. A richer data set offers more possibilities, as we have seen" (p. 383). Anthropologists are not likely to take seriously a sociobiological "critique" of our key concept that is built on so many distortions and omissions.

In Part III, chapter 8, Durham and Weingart begin their defense of the concept of symbolic human culture:

a bona fide unit of culture must have a history of social transmission...The point is not academic—because in the newly emerging subfield of "evolutionary psychology" culture has been defined instead as "any mental, behavioral, or material commonalities shared across individuals...regardless of why these commonalities exist"

(Tooby and Cosmides 1992, p. 117). By this definition, something can be construed as fully "cultural" *without* any history of social transmission; it is then said to be "evoked culture." To reduce confusion, we stick with "history of social transmission" as a requisite feature of cultural units (p. 301).

Durham and Weingart also respond to the distorted interpretation of Geertz offered by Thornhill et al., supplying the key attribute of human culture which they ignore:

To many culture theorists, the essential defining feature of culture is the meaning of "X" to its practitioners....This means that the unit of culture should incorporate culture's important symbolic dimension (p. 302).

They remind readers that Leslie White, the anthropologist praised by sociobiologists for seeking "a return to stage-model evolution in a much more sophisticated form" (p. 33), is equally famous in anthropology for his emphasis on the symbolic dimension of human culture (p. 302).

Finally, they make clear that, far from denying that the human brain has a complex architecture,

To account for the emergence of "meaning," it seems helpful to assume that the communication of mental images through language and related imitative capacities builds up structures and memory, both in individual brains and between individuals that continuously select new experience. By this, the essence of "culture" is created by the continuous flow of communication of mental images among members of communicating populations of different generations: a "social memory" is created (p. 302).

Indeed, they emphasize, part of this evolved architecture may include mechanisms that facilitate cultural learning, perhaps "because attentional processes make it impossible not to

learn what one notices" (p. 321).

At the end of chapter 9, Boyd and Richerson echo Marshall Sahlins's dissatisfaction with the "cyclical and repetitive opposition" engaged in by scholars committed to different theoretical perspectives on 'human nature' (e.g., Marxists, functionalists, methodological individualists, various species of Darwinists)" (p. 342). Their call to "operationalize" concepts like "meaning" and "units of culture" (p. 312) will surely be denounced as a positivist trap by some and as an environmentalist snare by others.

Those who fear that all biology is reductionist, however, might be reassured if they knew more about cultural inheritance theory, which "fully recognizes, incorporates, and exploits culture's symbolic dimension" (p. 312). Those who believe that all biology *should* be reductionist need to (re-)examine the possibilities offered by integrative pluralism. After all, today there are sociobiological sociologists who regard social institutions as emergent phenomena, even if they still harbor suspicions about culture. Perhaps if all suspicious scholars gave up caricature and aimed to be maximally explicit in their definition of "culture," obfuscation and bad feeling might actually dissipate, and genuine integrative pluralism might be possible. In any case, by agreeing to be published together in this volume, the contributors have taken a step in the right direction.

## ANNOUNCEMENTS

### *Clinical Sociobiology Course*

The 20th annual Cape Cod (Massachusetts) Institute will consist of a summer-long series of postgraduate courses for mental health professions and others. One course, on Clinical Sociobiology: Darwinian Feelings and Values, will run 19-23 July 1999 and be conducted by John Price, Russell Gardner, John Fentress, and James Brody. The scheduled morning sessions: Natural Selection and Human Psychological Adaptations, Social Behavior as an Expression of Our Adaptations, Hierarchy Regulation, Marriage and Child-Rearing, and Genes as

Conversationalists with our Settings. The optional evening sessions: Diagnostics, Complexity Theory, and Genetics. For a copy of the catalogue, contact Dr. Gilbert Levin, 1308-B Belfer Bldg., Albert Einstein College of Medicine, 1300 Morris Park Ave., Bronx, NY 10461, USA, tel. 1-718-430-2307, fax 1-718-430-8782, e-mail [glevin@aecom.yu.edu](mailto:glevin@aecom.yu.edu). The catalogue is also available at <http://www/cape.org>.

### *HBES Conference*

The 11th annual meeting of the Human Behavior and Evolution Society will take place at the University of Utah in Salt Lake City 2-6 June 1999. Abstracts for papers are due 1 March; abstracts for symposia are due 1 February. The meeting web page is <http://kimura.anthro.utah.edu/hbes99>.

Steven Gangstad ([sgangest@unm.edu](mailto:sgangest@unm.edu)) chairs the program committee, and the local organizers are Alan Rogers ([rogers@anthro.utah.edu](mailto:rogers@anthro.utah.edu)) and Elizabeth Cashdan ([cashdan@anthro.utah.edu](mailto:cashdan@anthro.utah.edu)). Gangstad is in the Dept. of Psychology and the other two in Anthropology at the University of Utah, Salt Lake City, UT, 84112, USA.

### *Evolutionary Psychology Session*

The biennial meeting of the Society for Psychological Anthropology will take place 21-26 September 1999 in Albuquerque, New Mexico. The organizer is Phil Bock at [pbock@unm.edu](mailto:pbock@unm.edu). Jerry Barkow has been asked to organize a session on evolutionary psychology whose theme will be "Does evolutionary psychology lead to new questions for psychological anthropology?" For information, contact Jerome H. Barkow, Dept. of Sociology & Social Anthropology, Dalhousie University, Halifax, N. S., Canada, B3H 3J5, tel. 1-902-494-6747, fax 1-902-494-2897, e-mail [j.h.barkow@dal.ca](mailto:j.h.barkow@dal.ca).

### *Return of Linda Mealey*

Linda Mealey, ISHE Vice-President/President-Elect, has returned to Minnesota from the University of Queensland. To reach her, please see the Officers' Box.

to explain cultural variation by reducing it to the triggering of different "domain-specific mechanisms" whenever a human group moves into a new environment. But this explanation runs into problems in the face of novel environments, for which existing mental mechanisms are unprepared (pp. 277-78). Regardless, Thornhill et al. charge that "the 'do what your parents did' concept of culture is not a principle that can easily explain why cultural elements change, where new ones come from, why they spread, or why certain complex patterns (e.g., pastoralist commonalities) recur in widely separated cultures" (p. 232).

But anthropological views of culture have *never* claimed that people can *only* learn the culture of their parents! 100 years ago, Boas and his students were studying widespread patterns of cross-cultural *borrowing* as well as within-culture inheritance! Moreover, reducing cultural variation to mechanical environmental adaptation (cf. p. 233) has long been criticized within anthropology as simplistic. The point is made in chapter 10, where Boyd, Borgerhoff-Mulder, Durham and Richerson discuss the challenges faced in attempts to reconstruct the culture history of neighboring East African groups: "Comparative ethnographic data with age sets scored as present/absent, or as a quantitative variable on political importance, would not contain enough detail to reconstruct much history in East Africa. A richer data set offers more possibilities, as we have seen" (p. 383). Anthropologists are not likely to take seriously a sociobiological "critique" of our key concept that is built on so many distortions and omissions.

In Part III, chapter 8, Durham and Weingart begin their defense of the concept of symbolic human culture:

a bona fide unit of culture must have a history of social transmission...The point is not academic—because in the newly emerging subfield of "evolutionary psychology" culture has been defined instead as "any mental, behavioral, or material commonalities shared across individuals...regardless of why these commonalities exist"

(Tooby and Cosmides 1992, p. 117). By this definition, something can be construed as fully "cultural" *without* any history of social transmission; it is then said to be "evoked culture." To reduce confusion, we stick with "history of social transmission" as a requisite feature of cultural units (p. 301).

Durham and Weingart also respond to the distorted interpretation of Geertz offered by Thornhill et al., supplying the key attribute of human culture which they ignore:

To many culture theorists, the essential defining feature of culture is the meaning of "X" to its practitioners....This means that the unit of culture should incorporate culture's important symbolic dimension (p. 302).

They remind readers that Leslie White, the anthropologist praised by sociobiologists for seeking "a return to stage-model evolution in a much more sophisticated form" (p. 33), is equally famous in anthropology for his emphasis on the symbolic dimension of human culture (p. 302).

Finally, they make clear that, far from denying that the human brain has a complex architecture,

To account for the emergence of "meaning," it seems helpful to assume that the communication of mental images through language and related imitative capacities builds up structures and memory, both in individual brains and between individuals that continuously select new experience. By this, the essence of "culture" is created by the continuous flow of communication of mental images among members of communicating populations of different generations: a "social memory" is created (p. 302).

Indeed, they emphasize, part of this evolved architecture may include mechanisms that facilitate cultural learning, perhaps "because attentional processes make it impossible not to

### *McGrew Wins Delwart Award*

The \$10,000 award of the Jean Marie Delwart Foundation in Human Ethology and Cultural Anthropology was given to Professor William C. McGrew, Miami University, USA for his original contributions to the ethology of the primates and their material culture. The award was presented at the annual session of the Académie Royale des Sciences de Belgique, Brussels, 19 December 1998. Bill is a long-standing ISHE member and book reviewer for the *Bulletin*. *Great Ape Societies*, which he edited with L. F. Marchant and T. Nishida, is reviewed in this issue. He also published *Chimpanzee Material Culture* in 1992. We extend to him our heartiest congratulations and express our thanks to the Foundation for supporting our field.

### *1998 Darwin Award*

The Darwin award is an annual honor given to the person who provided the human gene pool with its greatest service by getting killed in the most extraordinarily stupid manner. This year's winner is Friedrich Riesfeldt of Paderborn, Germany. Friedrich fed his constipated elephant Stefan 22 doses of animal laxative and more than a bushel of berries, figs and prunes before the plugged-up pachyderm finally let fly—and suffocated the keeper under 200 pounds of excrement. Investigators say Friedrich, 46, was attempting to give the ailing elephant an olive-oil enema when the beast unloaded on him. "The sheer force of the elephant's unexpected defecation knocked Mr. Riesfeldt to the ground, where he struck his head on a rock and lay unconscious as the elephant continued to evacuate his bowels on top of him," said Paderborn police detective Erik Dern. "With no one there to help him, he lay under all that dung for at least an hour before a watchman came along, and during that time he suffocated."

ISHE Web Page:  
<http://evolution.humb.univie.ac.at>

### Editorial Staff

#### Editor

Peter LaFreniere  
 Little Hall  
 Department of Psychology  
 University of Maine  
 Orono, ME 04469 USA  
 tel. 1-207-581-2044  
 fax 1-207-581-6128  
 e-mail: peterlaf@maine.edu

#### Current Literature Editor

Johan van der Dennen  
 Center for Peace and Conflict Studies  
 University of Groningen  
 Oude Kijk in 't Jatstraat 5/9  
 9712 EA Groningen, The Netherlands  
 tel 31-50-3635649  
 fax 31-50-3635635; email:  
 J.M.G.van.der.Dennen@rechten.rug.nl

#### Outgoing Book Review Editor

Linda Mealey  
 Psychology Department  
 College of St. Benedict  
 St. Joseph, MN 56374 USA  
 tel. 1-612-363-3135  
 fax 1-612-363-3202  
 e-mail: lmealey@csbsju.edu

#### New Chief Book Review Editor

Thomas R. Alley  
 Dept. of Psychology  
 Clemson University  
 Brackett Hall  
 Clemson, SC 29634-1511, USA  
 tel. 1-803-656-4974  
 fax 1-803-656-0358  
 e-mail: alley@clemson.edu

#### German Book Review Editor

Karl Grammer  
 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

## CURRENT LITERATURE

December 1998

Compiled by Johan van der Dennen

Abed, R.T. (1998) The sexual competition hypothesis for eating disorders. *British Journal of Medical Psychology*, 71, 4, 525-547 (Rotherham Dist. Gen. Hosp., Dept. Psychiat., Moorgate Rd, Rotherham S60 2UD, S Yorkshire, England)

Almeida, D.M. & Kessler, R.C. (1998) Everyday stressors and gender differences in daily distress. *Journal of Personality and Social Psychology*, 75, 3, 670-680 (Univ. Arizona, Sch. Family and Consumer Resources, Div. Family Studies, POB 210033, Tucson, AZ 85721, USA)

Anderson, P. A., & Guerrero, L.K. (Eds.) (1998). *Handbook of Communication and Emotion: Research, theory and applications*. Academic Press, 6277 Sea Harbor Dr., Orlando, FL 32887, USA.

Antonucci, T.C., Akiyama, H. & Lansford, J.E. (1998). Negative effects of close social relations. *Family Relations*, 47, 4, 379-384 (Inst. Social Res., 426 Thompson St, Ann Arbor, MI 48108, USA)

Atzwanger, K., Schafer, K. & Schmitt, A. (1998) Distrust of strangers: A theoretical background for a multidisciplinary research programme. *Social Science Information sur les sciences sociales*, 37, 3, 533-538 (Ludwig Boltzmann Inst. Stadtethol., Althanstr. 14, A-1090 Vienna, Austria)

Backenstrass, M., Fiedler, P., Kronmuller, K.T. & Mundt, C. (1998) Are there specific marital interaction patterns connected with depression? Using SASB to study marital relationships. *Zeitschrift für klinische Psychologie Forschung und Praxis*, 27, 4, 271-280 (Univ. Heidelberg, Psychiat. Klin., Vossstr 4, D-69115 Heidelberg, Germany)

Bedford, V.H. (1998) Sibling relationship troubles and well-being in middle and old age.

*Family Relations*, 47, 4, 369-376 (Univ. Indianapolis, Dept. Psychol., 1400 E. Hanna Ave, Indianapolis, IN 46227, USA)

Ben-Hamida, S., Mineka, S. & Bailey, J.M. (1998) Sex differences in perceived controllability of mate value: An evolutionary perspective. *Journal of Personality and Social Psychology*, 75, 4, 953-966 (Northwestern Univ., Dept. Psychol., 2029 Sheridan Rd, Evanston, IL 60208, USA)

Benenson, J.F., Morganstein, T. & Roy, R. (1998) Sex differences in children's investment in peers. *Human Nature: An Interdisciplinary Biosocial Perspective*, 9, 4, 369-390 (McGill Univ., Dept. Educ. and Counseling Psychol., 3700 McTavish St, Montréal, PQ H3A 1Y2, Canada)

Birch, S.H. & Ladd, G.W. (1998) Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology*, 34, 5, 934-946 (Univ. Illinois, Children's Res. Ctr. 183, Dept. Educ. Psychol., 51 Gerty Dr, Champaign, IL 61820, USA)

Boesch, C. & Tomasello, M. (1998) Chimpanzee and human cultures. *Current Anthropology*, 39, 5, 591-614 (Max Planck Inst. Evolut. Anthropol., Inselstr. 22-26, D-04103 Leipzig, Germany)

Boone, R.T. & Cunningham, J.G. (1998) Children's decoding of emotion in expressive body movement: The development of cue attunement. *Developmental Psychology*, 34, 5, 1007-1016 (Assumption Coll., Dept. Psychol., 500 Salisbury, Worcester, MA 01605, USA)

Brantingham, P.J. (1998) Hominid-carnivore coevolution and invasion of the predatory guild. *Journal of Anthropological Archaeology*, 17, 4, 327-353 (Univ. Arizona, Dept. Anthropol., Tucson, AZ 85721, USA)

Buss, D.M. (1999) *Evolutionary Psychology: The new science of the mind*. Allyn & Bacon, 160 Gould St., Needham Hts., MA 02494 USA (hdbk.). **Needs reviewer** (review copy received).

Cairns, R.B., Cairns, B.D., Xie, H.L., Leung, M.C. & Hearne, S. (1998) Paths across generations: Academic competence and aggressive behaviors in young mothers and



- their children. *Developmental Psychology*, 34, 6, 1162-1174 (Univ. N. Carolina, Ctr. Dev. Sci., 100e Franklin St, CB 8115, Chapel Hill, NC 27599, USA)
- Caldera, Y.M. & Sciaraffa, M.A. (1998) Parent-toddler play with feminine toys: Are all dolls the same? *Sex Roles*, 39, 9-10, 657-668 (Texas Tech. Univ., Dept. Human Dev. & Family Studies, Lubbock, TX 79409, USA)
- Calkins, S.D., Smith, C.L., Gill, K.L. & Johnson, M.C. (1998) Maternal interactive style across contexts: Relations to emotional, behavioral and physiological regulation during toddlerhood. *Social Development*, 7, 3, 350-369 (Univ. N. Carolina, Dept. Psychol., Rm 296 Eberhart Bldg., Greensboro, NC 27402, USA)
- Campbell, A., Muncer, S. & Bibel, D. (1998) Female-female criminal assault: An evolutionary perspective. *Journal of Research in Crime and Delinquency*, 35, 4, 413-428 (Univ. Durham, Durham DH1 3H,; England)
- Carbonell, E. & Vaquero, M. (1998) Behavioral complexity and biocultural change in Europe around forty thousand years ago. *Journal of Anthropological Research*, 54, 3, 373-397 (Univ. Rovira and Virgili, Dept. Geog. and Hist., Area Prehist., Pl. Imperial Tarraco 1, Tarragona 43005, Spain)
- Cartledge, B. (Ed.) (1998). *Mind, Brain, and the Environment*. Oxford Univ. Press, 200 Madison Ave., New York, NY 10016, USA.
- Cashdan, E. (1998) Smiles, speech, and body posture: How women and men display sociometric status and power. *Journal of Nonverbal Behavior*, 22, 4, 209-228 (Univ. Utah, Dept. Anthropol., Salt Lake City, UT 84112, USA)
- Coney, N.S. & Mackey, W.C. (1998) The woman as final arbiter: A case for the facultative character of the human sex ratio. *Journal of Sex Research*, 35, 2, 169-175 (Coney, N.S.: Dept. of Sociol., Anthropol. & Social Work, Western Illinois University, Macomb, IL 61455, USA)
- Coney, N.S. & Mackey, W.C. (1998) Cultural evolution and gender roles: Advantage... patriarchy. *Mankind Quarterly*, 39, 1, 45-69 (vide supra)
- Coss, R.G. & Schowengerdt, B.T. (1998) Evolution of the modern human face: Aesthetic and attributive judgments of a female profile warped along a continuum of paedomorphic to late archaic craniofacial structure. *Ecological Psychology*, 10, 1, 1-24 (Univ. Calif. Davis, Dept. Psychol., Davis, CA 95616, USA)
- deWaal, F.B.M., & Lanting, F. (1997). *Bonobo: The forgotten ape*. University of California Press, 2120 Berkeley Way, Berkeley, CA 94720, USA, \$24.95 (1998 ppr. edition).
- Dehle, C. & Weiss, R.L. (1998) Sex differences in prospective associations between marital quality and depressed mood. *Journal of Marriage and the Family*, 60, 1002-1011 (Idaho State Univ., Dept. Psychol., Pocatello, ID 83209, USA)
- Dijkstra, P. & Buunk, B.P. (1998) Jealousy as a function of rival characteristics: An evolutionary perspective. *Personality and Social Psychology Bulletin*, 24, 11, 1158-1166 (Univ. Groningen, NL-9700 AB Groningen, Netherlands)
- Dixon, A.K. (1998) Ethological strategies for defence in animals and humans: Their role in some psychiatric disorders. *British Journal of Medical Psychology*, 71, 4, 417-445 (Novartis Pharma Ltd, Nervous Syst. Res., CH-4002 Basel, Switzerland)
- Donnelly, D. & Fraser, J. (1998) Gender differences in sado-masochistic arousal among college students. *Sex Roles*, 39, 5-6, 391-407 (Georgia State Univ., Dept. Sociol., Atlanta, GA 30303, USA)
- Durm, M.W. & Stowers, D.A. (1998) Just world beliefs and irrational beliefs: A sex difference? *Psychological Reports*, 83, 1, 328-330 (Athens State Coll., Dept. Behav. Sci., Naylor Hall, 300 N. Betty St., Athens, AL 35611, USA)
- Einon, D. (1998) How many children can one man have? *Evolution and Human Behavior*, 19, 6, 413-426 (Univ. London Univ. Coll., Dept. Psychol., Gower St, London WC1E 6BT, England)
- Eisenberg, L. (1998) Nature, niche, and nurture - The role of social experience in transforming genotype into phenotype. *Academic*

*Psychiatry*, 22, 4, 213-222 (Harvard Univ., Sch. Med., 641 Huntington Ave, 2nd Floor, Boston, MA 02115, USA)

Ekman, P. (Ed.) (1997). *What the Face Reveals: Basic and applied studies of spontaneous expression using the facial action coding system (FACS)*. Oxford Univ. Press, 200 Madison Ave., New York, NY 10016, USA.

Erdley, C.A. & Asher, S.R. (1998) Linkages between children's beliefs about the legitimacy of aggression and their behavior. *Social Development*, 7, 3, 321-339 (Univ. Maine, Dept. Psychol., 5742 Little Hall, Orono, ME 04469, USA)

Feldman, S.S. & Gowen, L.K. (1998) Conflict negotiation tactics in romantic relationships in high school students. *Journal of Youth and Adolescence*, 27, 6, 691-717 (Stanford Univ., Program Human Biol., Bldg 80, Stanford, CA 94305, USA)

Finnegan, R.A., Hodges, E.V.E. & Perry, D.G. (1998) Victimization by peers: Associations with children's reports of mother-child interaction. *Journal of Personality and Social Psychology*, 75, 4, 1076-1086 (Perry, D.G.: Florida Atlantic Univ., Dept. Psychol., Boca Raton, FL 33431, USA)

Fisher-Thompson, D. & Burke, T.A. (1998) Experimenter influences and children's cross-gender behavior. *Sex Roles*, 39, 9-10, 669-684 (Niagara Univ., Dept. Psychol., Niagara Univ., NY 14109, USA)

Flack, W.F., Jr., & Laird, J.D. (Eds.) (1998). *Emotions in Psychopathology: Theory and research*. Oxford Univ. Press, 200 Madison Ave., New York, NY 10016, USA.

Free, M.L., Oei, T.P.S. & Appleton, C. (1998) Biological and psychological processes in recovery from depression during cognitive therapy. *Journal of Behavior Therapy and Experimental Psychiatry*, 29, 3, 213-226 (Griffith Univ., Sch. Appl. Psychol., Nathan Campus, Nathan, QLD 4111, Australia)

Froming, W.J., Nasby, W. & McManus, J. (1998) Prosocial self-schemas, self-awareness, and children's prosocial behavior. *Journal of Personality and Social Psychology*, 75, 3, 766-

777 (Pacific Grad. Sch. Psychol., 935 E. Meadow Dr., Palo Alto, CA 94303, USA)

Furnham, A., Dias, M. & McClelland, A. (1998) The role of body weight, waist-to-hip ratio, and breast size in judgments of female attractiveness. *Sex Roles*, 39, 3-4, 311-326 (Univ. Coll. London, Dept. Psychol., 26 Bedford Way, London WC1 0AP, England)

Gazzaniga, M.S. (1998). *The Mind's Past*. University of California Press, 2120 Berkeley Way, Berkeley, CA 94720, USA. **Needs reviewer.**

Geary, D. C. (1998). *Male, Female: The evolution of human sex differences*. American Psychological Assn., P. O. Box 92984, Washington, DC, 20090, USA. \$49.95, \$39.95 for APA members (hdbk.). **Needs reviewer.**

Gershenfeld, H.K. & Paul, S.M. (1998) Towards a genetics of anxious temperament: from mice to men. *Acta Psychiatrica Scandinavica*, 98, Suppl. 393, 56-65 (Univ. Texas, Sw. Med. Ctr., Dept. Psychiat., Dallas, TX 75235, USA)

Gilbert, P. (1998) Evolutionary psychopathology: Why isn't the mind designed better than it is? *British Journal of Medical Psychology*, 71, 4, 353-373 (Kingsway Hosp., Mental Hlth. Res. Unit, Derby DE22 3LZ, England)

Gilbert, P. (1998) The evolved basis and adaptive functions of cognitive distortions. *British Journal of Medical Psychology*, 71, 4, 447-463 (vide supra)

Gjerde, P.F. & Westenberg, P.M. (1998) Dysphoric adolescents as young adults: A prospective study of the psychological sequelae of depressed mood in adolescence. *Journal of Research on Adolescence*, 8, 3, 377-402 (Univ. Calif. Santa Cruz, Dept. Psychol. Social Sci. 2; Santa Cruz; CA 95064; USA)

Gottlieb, G. (1998) Normally occurring environmental and behavioral influences on gene activity: From central dogma to probabilistic epigenesis. *Psychological Review*, 105, 4, 792-802 (Univ. N. Carolina, Ctr. Dev. Sci., Campus Box 8115, Chapel Hill, NC 27599, USA)

- Grych, J.H. (1998) Children's appraisals of interparental conflict: Situational and contextual influences. *Journal of Family Psychology*, 12, 3, 437-453 (Marquette Univ., Dept. Psychol., Milwaukee, WI 53217, USA)
- Hale, W.W. (1998) Judgment of facial expressions and depression persistence. *Psychiatry Research*, 80, 3, 265-274 (Acad. Hosp. Groningen, Dept. Biol. Psychiat., Hanzeplein 1, NL-9713 GZ Groningen, Netherlands)
- Handal, P.J., Tschannen, T. & Searight, H.R. (1998) The relationship of child adjustment to husbands' and wives' marital distress, perceived family conflict, and mothers' occupational status. *Child Psychiatry and Human Development*, 29, 2, 113-126 (St. Louis Univ., Dept. Psychol., 221 N. Grand Blvd., Shannon Hall 212, St. Louis, MO 63103, USA)
- Hatta, T. & Kogure, T. (1998) Sex difference in cognitive competitive tasks of verbal and spatial information. *Psychologia*, 41, 3, 131-143 (Nagoya Univ., Sch. Informat. and Sci., Dept. Behav. and Informat. Proc., Chikusa Ku, Nagoya, Aichi 4648601, Japan)
- Hay, D.F., Vespo, J.E. & Zahn-Waxler, C. (1998) Young children's quarrels with their siblings and mothers: Links with maternal depression and bipolar illness. *British Journal of Developmental Psychology*, 16, Part 4, 519-538 (Univ. Cambridge, Fac. Social & Polit. Sci., 8-9 Jesus Lane, Cambridge CB5 8BA, England)
- Hecht, M.A. & LaFrance, M. (1998) License or obligation to smile: The effect of power and sex on amount and type of smiling. *Personality and Social Psychology Bulletin*, 24, 12, 1332-1342 (LaFrance, M.: Louisiana Coll., Dept. Psychol., Pineville, LA 71359, USA)
- Howes, C. & Phillipsen, L. (198) Continuity in children's relations with peers. *Social Development*, 7, 3, 340-349 (Univ. Calif. Los Angeles, Dept. Educ., 1029c Moore Hall, Los Angeles, CA 90095, USA)
- Jang, K.L., Livesley, W.J. & Vernon, P.A. (1998) A twin study of genetic and environmental contributions to gender differences in traits delineating personality disorder. *European Journal of Personality*, 12, 5, 331-344 (Univ. British Columbia, Dept. Psychiat., 2255 Wesbrook Mall, Vancouver, BC V6T 2A1, Canada)
- Jefferson, T., Herbst, J.H. & McCrae, R.R. (1998) Associations between birth order and personality traits: Evidence from self-reports and observer ratings. *Journal of Research in Personality*, 32, 4, 498-509 (NIA, Gerontol. Res. Ctr., NIH, 5600 Nathan Shock Dr., Box 3, Baltimore, MD 21224, USA)
- Karen, R. (1994). *Becoming Attached: First relationships and how they shape our capacity to love*. Oxford Univ. Press, 198 Madison Ave., New York, NY 10016, USA, \$17.95 (1998 pp. edition)
- Katainen, S., Raikkonen, K. & Keltikangas-Järvinen, L. (1998) Development of temperament: Childhood temperament and the mother's childrearing attitudes as predictors of adolescent temperament in a 9-year follow-up study. *Journal of Research on Adolescence*, 8, 4, 485-509 (Univ. Helsinki, POB 4, FIN-00014 Helsinki, Finland)
- Klopp, B. & Mealey, L. (1998) Experimental mood manipulation does not induce change in preference for natural landscapes. *Human Nature: An Interdisciplinary Biosocial Perspective*, 9, 391-399 (Mealey, L., Coll. St. Benedict, Dept. Psychol., St Joseph, MN 56374, USA)
- Krauss, R.M. (1998) Why do we gesture when we speak? *Current Directions in Psychological Science*, 7, 2, 54-60 (Columbia Univ., Dept. Psychol., 1190 Amsterdam Ave., Mail Code 5501, New York, NY 10027, USA)
- Kurdek, L.A. (1998) The nature and predictors of the trajectory of change in marital quality over the first 4 years of marriage for first-married husbands and wives. *Journal of Family Psychology*, 12, 4, 494-510 (Wright State Univ., Dept. Psychol., Dayton, OH 45435, USA)
- Ladd, G.W. & Ladd, B.K. (1998) Parenting behaviors and parent-child relationships: Correlates of peer victimization in kindergarten? *Developmental Psychology*, 34, 6, 1450-1458 (Univ. Illinois, Childrens Res. Ctr. 183, 51 Gerty Dr., Champaign, IL 61820, USA)

- LaFontana, K.M. & Cillessen, A.H.N. (1998) The nature of children's stereotypes of popularity. *Social Development*, 7, 3, 301-320 (Univ. Sacred Heart, Dept. Psychol., 5151 Park Ave., Fairfield, CT 06432, USA)
- Langkamp, D.L., Kim, Y. & Pascoe, J.M. (1998) Temperament of preterm infants at 4 months of age: Maternal ratings and perceptions. *Journal of Developmental and Behavioral Pediatrics*, 19, 6, 391-396 (Sect. Ambulatory Pediat., 700 Children's Dr., Columbus, OH 43205, USA)
- Larson, J.H., Hammond, C.H. & Harper, J.M. (1998) Perceived equity and intimacy in marriage. *Journal of Marital and Family Therapy*, 24, 4, 487-506 (Brigham Young Univ., Marriage and Family Therapy Program, 274 Trlb, Provo, UT 84602, USA)
- Lavelli, M. & Poli, M. (1998) Early mother-infant interaction during breast- and bottle-feeding. *Infant Behavior and Development*, 21, 4, 667-683 (Univ. Milan, Ist. Psicol. Fac. Med., Via Tommaso Pini 1, I-20134 Milan, Italy)
- Leckman, J.F. & Mayes, L.C. (1998) Understanding developmental psychopathology: How useful are evolutionary accounts? *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 10, 1011-1021 (Yale Univ., Sch. Med., Ctr. Child Study, 1-269 Sterling Hall Med., POB 207900, New Haven, CT 06520, USA)
- Leve, L.D., Winebarger, A.A., Fagot, B.I., Reid, J.B. & Goldsmith, H.H. (1998) Environmental and genetic variance in children's observed and reported maladaptive behavior. *Child Development*, 69, 5, 1286-1298 (Oregon Social Learning Ctr., 160 E. 4th Ave., Eugene, OR 97401, USA)
- Lim, S. & Howard, R. (1998) Antecedents of sexual and non-sexual aggression in young Singaporean men. *Personality and Individual Differences*, 25, 6, 1163-1182 (Howard, R: Natl. Univ. Singapore, Dept. Social Work and Psychol., 10 Kent Ridge Crescent, Singapore 119260, Singapore)
- Livesley, W.J., Jang, K.L. & Vernon, P.A. (1998) Phenotypic and genetic structure of traits delineating personality disorder. *Archives of General Psychiatry*, 55, 10, 941-948 (Univ. British Columbia, Dept. Psychiat., 2250 Wesbrook Mall, Vancouver, BC V6T 2A1, Canada)
- Loehlin, J.C., McCrae, R.R., Costa, P.T. & John, O.P. (1998) Heritabilities of common and measure-specific components of the big five personality factors. *Journal of Research in Personality*, 32, 4, 431-453 (Univ. Texas, Dept. Psychol., Austin, TX 78712, USA)
- Lohaus, A., Volker, S., Keller, H. Cappenberg, M. & Chasiotis, A. (1998) Perceived infant problems and maternal interactional quality: An analysis of longitudinal relations. *Zeitschrift für Entwicklungspsychologie und pädagogische Psychologie*, 30, 3, 111-117 (Univ. Marburg, Fachbereich Psychol., Gutenbergstr. 18, D-35032 Marburg, Germany)
- Macy, M.W. & Skvoretz, J. (1998) The evolution of trust and cooperation between strangers: A computational model. *American Sociological Review*, 63, 5, 638-660 (Cornell Univ., Dept. Sociol., Uris Hall, Ithaca, NY 14853, USA)
- Marlowe, F. (1998) The nubility hypothesis - The human breast as an honest signal of residual reproductive value. *Human Nature - An Interdisciplinary Biosocial Perspective*, 9, 3, 263-271 (Harvard Univ., Dept. Anthropol., Cambridge, MA 02138, USA)
- McGrew, W.C. (1998) Culture in nonhuman primates? *Annual Review of Anthropology*, 27, 301-328 (Miami Univ., Dept Sociol. Gerontol. and Anthropol., Oxford, OH 45056, USA)
- McGuire, M.T., Troisi, A. (1998). *Darwinian Psychiatry*. Oxford Univ. Press, 200 Madison Ave., New York, NY 10016, USA. **Needs reviewer.**
- McGuire, M.T. & Troisi, A. (1998) Prevalence differences in depression among males and females: Are there evolutionary explanations? *British Journal of Medical Psychology*, 71, 4, 479-491 (Univ. Calif. Los Angeles, Sch. Med., 760 Westwood Plaza, Los Angeles, CA 90024, USA)
- Messinger, D.S. & Fogel, A. (1998) Give and take: The development of conventional infant gestures. *Merrill Palmer Quarterly Journal of Developmental Psychology*, 44, 4, 566-590

(Psychol. Annex, POB 249229, Coral Gables, FL 33124, USA)

Moore, C. & Corkum, V. (1998) Infant gaze following based on eye direction. *British Journal of Developmental Psychology*, 16, Part 4, 495-503 (Dalhousie Univ., Dept. Psychol., Halifax, NS B3H 4J1, Canada)

Morgan, B.L. (1998) A three generational study of tomboy behavior. *Sex Roles*, 39, 9-10, 787-800 (Univ. Wisconsin, Dept. Psychol., 335 Main Hall, La Crosse, WI 54601, USA)

Morrongiello, B.A. & Rennie, H. (1998) Why do boys engage in more risk taking than girls? The role of attributions, beliefs, and risk appraisals. *Journal of Pediatric Psychology*, 23, 1, 33-43 (Univ. Guelph, Dept. Psychol., Guelph, ON N1G 2W1, Canada)

Moss, E., Rousseau, D., Parent, S., St-Laurent, D. & Samtonge, J. (1998) Correlates of attachment at school age: Maternal reported stress, mother-child interaction, and behavior problems. *Child Development*, 69, 5, 1390-1405 (Univ. Québec, Dept. Psychol., CP 8888, Succ. Ctr. Ville, Montréal, PQ H3C 3P8, Canada)

Mountain, J.L. (1998) Molecular evolution and modern human origins. *Evolutionary Anthropology*, 7, 1, 21-37 (Stanford Univ., Stanford, CA 94305, USA)

Muehlenhard, C.L. & Rodgers, C.S. (1998) Token resistance to sex - New perspectives on an old stereotype. *Psychology of Women Quarterly*, 22, 3, 443-463 (Univ. Kansas, Dept. Psychol., 426 Fraser Hall, Lawrence, KS 66045, USA)

Mueller, U. & Mazur, A. (1998) Reproductive constraints on dominance competition in male *Homo sapiens*. *Evolution and Human Behavior*, 19, 6, 387-396 (Univ. Marburg, Sch. Med., D-35033 Marburg, Germany)

Muris, P. & Merckelbach, H. (1998) Perceived parental rearing behaviour and anxiety disorders symptoms in normal children. *Personality and Individual Differences*, 25, 6, 1199-1206 (Univ. Limburg, Dept. Psychol., POB 616, NL-6200 MD Maastricht, Netherlands)

Myers, O.G. (1998). *Children and Animals:*

*Social development and our connections to other species*. Westview Press, 5500 Central Ave., Boulder, CO 80301, USA

I. (1998) The history, status and teaching of Darwinian medicine in Norway. *Norsk Epidemiologi*, 8: 101-6 (Division of Zoology, Department of Biology, University of Oslo, P.O. Box 1050 Blindern, N-0316 Oslo, Norway)

Nesse, R. (1998) Emotional disorders in evolutionary perspective. *British Journal of Medical Psychology*, 71, 4, 397-415 (Univ. Michigan., Room 5057 ISR, 426 Thompson St, Ann Arbor, MI 48106, USA)

Nettle, D. (1998) Explaining global patterns of language diversity. *Journal of Anthropological Archaeology*, 17, 4, 354-374 (Univ. Oxford Merton Coll., Oxford OX1 4JD, England)

O'Brien, M. & Bahadur, M.A. (1998) Marital aggression, mother's problem-solving behavior with children, and children's emotional and behavioral problems. *Journal of Social and Clinical Psychology*, 17, 3, 249-272 (901 Nicholson Rd, Wynnewood, PA, USA)

O'Connor, T.G., Deater-Deckard, K., Fulker, D., Rutter, M. & Plomin, R. (1998) Genotype-environment correlations in late childhood and early adolescence: *Antisocial Behavioral Problems and Coercive Parenting*, 5, 970-981 (Inst. Psychiat., Social Genet. and Dev. Psychiat. Res. Ctr., 113 Denmark Hill, London SE5 8AF, England)

O'Neill, P. & Petrinovich, L. (1998) A preliminary cross-cultural study of moral intuitions. *Evolution and Human Behavior*, 19, 6, 349-367 (Univ. Mississippi, Dept. Psychol., University, MS 38677, USA)

Olweus, D. & Endresen, I.M. (1998) The importance of sex-of-stimulus object: Age trends and sex differences in empathic responsiveness. *Social Development*, 7, 3, 370-388 (Univ. Bergen, Ctr. Hlth. Promot., Hemil, Christiegt 13, N-5015 Bergen, Norway)

Owens, E.B., Shaw, D.S. & Vondra, J.I. (1998) Relations between infant irritability and maternal responsiveness in low-income

- families. *Infant Behavior and Development*, 21, 4, 761-777 (Univ. Pittsburgh, Clin. Psychol. Ctr., 604 OEH, Pittsburgh, PA 15260, USA)
- Parkes, C.M., Laungani, P., & Young, B. (Eds.) (1997). *Death and Bereavement across Cultures*. Routledge, 29 W. 35th St., New York, NY 10001, USA.
- Pederson, D.R., Gleason, K.E., Moran, G. & Bento, S. (1998) Maternal attachment representations, maternal sensitivity, and the infant-mother attachment relationship. *Developmental Psychology*, 34, 5, 925-933 (Gleason, K.E.: Univ. Western Ontario, Dept. Psychol., London, ON N6A 5C2, Canada)
- Plomin, R. & Caspi, A. (1998) DNA and personality. *European Journal of Personality*, 12, 5, 387-407 (Inst. Psychiat., Social Genet. and Dev. Psychiat. Res. Ctr., De Crespigny Pk., London SE5 8AF, England)
- Plomin, R. & Rutter, M. (1998) Child development, molecular genetics, and what to do with genes once they are found. *Child Development*, 69, 4, 1223-1242 (vide supra)
- Plotkin, H.C. (1997). *Evolution in Mind: An introduction to evolutionary psychology*. Harvard Univ. Press, 79 Garden St., Cambridge, MA 02138, USA. **Needs reviewer.**
- Price, J. (1998) The adaptive function of mood change. *British Journal of Medical Psychology*, 71, 4, 465-477 (Odintune, Plumton, E Sussex, England)
- Priel, B., Mitrany, D. & Shahar, G. (1998) Closeness, support and reciprocity: a study of attachment styles in adolescence. *Personality and Individual Differences*, 25, 6, 1183-1197 (Ben Gurion Univ. Negev, Dept. Behav. Sci., POB 653, IL-84105 Beer Sheva, Israel)
- Putallaz, M., Costanzo, P.R., Grimes, C.L. & Sherman, D.M. (1998) Intergenerational continuities and their influences on children's social development. *Social Development*, 7, 3, 389-427 (Duke Univ., Dept. Psychol., Box 90085, Durham, NC 27708, USA)
- Raine, A. et al. (Eds.) (1997). *Biosocial Bases of Violence*. Plenum Press, 233 Spring St., New York, NY 10013, USA.
- Reese-Weber, M. & Bartle-Haring, S (1998) Conflict resolution styles in family subsystems and adolescent romantic relationships. *Journal of Youth and Adolescence*, 27, 6, 735-752 (Illinois State Univ., Dept. Psychol., Campus Box 4620, Normal, IL 61790, USA)
- Regan, P.C. (1998) What if you can't get what you want? Willingness to compromise ideal mate selection standards as a function of sex, mate value, and relationship context. *Personality and Social Psychology Bulletin*, 24, 12, 1294-1303 (Calif. State Univ. Los Angeles, Dept. Psychol., 5151 State Univ. Dr., Los Angeles, CA 90032, USA)
- Relethford, J.H. (1998) Genetics of modern human origins and diversity. *Annual Review of Anthropology*, 27, 1-23 (SUNY Coll. Oneonta, Dept. Anthropol., Oneonta, NY 13820, USA)
- Robinson, D.L. (1998) Sex differences in brain activity, personality and intelligence: a test of arousability theory. *Personality & Individual Differences*, 25, 6, 1133-1152 (Kuwait Univ., Fac. Med., Dept. Community Med. and Behav. Sci., POB 24923, Safat 13110, Kuwait)
- Robinson, M.D., Johnson, J.T. & Shields, S.A. (1998) The gender heuristic and the database: Factors affecting the perception of gender-related differences in the experience and display of emotions. *Basic and Applied Social Psychology*, 20, 3, 206-219 (Johnson, J.T.: Univ. Calif. Davis, Dept. Psychol., Davis, CA 95616, USA)
- Rokach, A. (1998) Loneliness in singlehood and marriage. *Psychology*, 35, 2, 2-17 (Inst. Study and Treatment Psychosocial Stress, 45 Inniswood Dr, Scarborough, ON, M1R 1E8; Canada)
- Ross, H.S. & den Bak-Lammers, I.M. (1998) Consistency and change in children's tattling on their siblings: Children's perspectives on the moral rules and procedures of family life. *Social Development*, 7, 3, 275-300 (Univ. Waterloo, Dept. Psychol., Waterloo, ON, N2L 3G1, Canada)
- Rowatt, W.C., Cunningham, M.R. & Druen, P.B. (1998) Deception to get a date. *Personality and Social Psychology Bulletin*, 24, 11, 1228-1242 (Baylor Univ., Dept. Psychol. and Neurosci., Waco, TX 76798, USA)

# INTERNATIONAL SOCIETY FOR HUMAN ETHOLOGY

## Membership and Bulletin

The International Society for Human Ethology aims at promoting ethological perspectives in the scientific study of humans worldwide. It encourages empirical research in all fields of human behavior using the full range of methods developed in biology and the human behavioral sciences and operating within the conceptual framework provided by evolutionary theory. Founded in 1972, the Society fosters the exchange of knowledge and opinions concerning human ethology with all the other empirical sciences of human behavior. A not-for-profit scientific society, ISHE administers its funds to support this purpose.

YES, I WANT TO BECOME A MEMBER OF ISHE FOR THE CURRENT CALENDAR YEAR.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

E-mail \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_

New membership or renewal? New \_\_\_\_\_ Renewal \_\_\_\_\_ Start Membership in 19 \_\_\_\_\_

Annual dues (tax-deductible in the US) are \$US 25 per year or (preferably) \$60 for three years (\$10/yr. or \$25/3 yrs. for students or professors emeriti/-ae). Membership includes the quarterly *Human Ethology Bulletin* and the current Membership Directory.

Please pay by check in US funds made out to ISHE or by credit card (VISA or Mastercard or Eurocard). Please send payment to the Treasurer, Prof. Barbara Fuller, University of Colorado, School of Nursing, 4200 E. 9th Ave., Denver, CO 80262 USA, fax 1-303-315-5666, e-mail [barbara.fuller@uchsc.edu](mailto:barbara.fuller@uchsc.edu). If you must pay by foreign check, please add \$10.

Type of credit card \_\_\_\_\_ Credit card number \_\_\_\_\_

Expiration date \_\_\_\_\_ Amount of payment \_\_\_\_\_ Signature \_\_\_\_\_