

# Human Ethology Newsletter

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## Newsletter Submissions

Anything which might be of interest to ISHE members is welcome: society matters, suggestions for Forum topics, Mini Communications, Current literature and films, and material for the Bulletin Board such as announcements of meetings, sabbatical opportunities, employment opportunities, etc., should be sent to the Editor.

Suggestions for books to review, or reviews, should be sent to the nearest Book Review Editor dealing with the language concerned. A list of the book review editors is printed in the column inside the backpage.

Submissions in any legible format are acceptable as long as these are in English. Floppy disks containing Wordperfect files produced on an IBM-PC (compatible), or ASCII files can be processed as well and are in fact preferred, because they lower the production costs.

Submission deadlines are as follows: the material should have reached the editor in Amsterdam before February 15, May 15, August 15, or November 15 for inclusion in the next issue of March, June, September, or December, respectively.

## GROWING POINTS

The objective of this section is to stimulate discussion on "Growing points in Human Ethology". A few examples of the growing points mentioned in the last plenary session at the 1986 Tutzing conference are:

1. The history of human ethology has to be written in order to guarantee the spread of ideas without loss in translation.
2. Behaviour genetics.
3. The study of ontogeny.
4. A focus on the practical relevance and benefits of the ethological approach in various fields of application.

The following contribution concerns example 4. If you wish to comment, send your contribution directly to the editor.

## What Human Ethology and Family Theory could give each other.

by: Ricarda Müssig, Analytical child psychotherapist and Family Therapist, Neustädter Strasse 7, 7500 Karlsruhe 21, FRG.

When Frans Plooij asked me to write some notes for the "growing points in human ethology" from my point of view as a family therapist I readily agreed to curse later my lightheadedness! Of course as a former geologist it never had been a question for me that our phylogenetic legacy was not confined to the somatic area only. But up to now I was just interested in some special questions I came across. Therefore, the following just mirrors my personal interests and is not considered to be an exhaustive overview of the whole field of family therapy.

### 1. Possibilities for ethological research in family therapy

For all therapists healing is the central task. But this includes intensive observation — and in a way you could define family therapists as participating observers in various family cultures. The therapeutic situation enables families to speak of events, patterns of interaction and phantasies they never would reveal to non-therapists. Our theories allow us to construct an hypothesis and to react with an appropriate intervention (as we hope). The outcome tells us if it was a good intervention or not. In this way we come as near to an experiment as possible.

On the other hand, our field of investigation is strictly limited. We can observe nonverbal behaviour and interactional sequences in therapy, but never see the family in its every day life at home with all the minute actions defining social relations. And we are handicapped by the fact that we deal generally with dysfunctional families unable to solve their problems without professional help.

On the ISHE congress I felt to what extent we therapists are fixed on negative areas and how we neglect — in theory and therapy — drives and rituals for bonding, sharing and peace making, though all this may be our therapeutic aim. Do we know what a sufficiently normal family is like? There are therapeutic directions with clear ideas about hierarchy, structures, roles, alliances and rules (Minuchin, 1974), but to what extent does this scheme reflect sociocultural norms? Another group, that of systems theorists, tells us they are not interested at all in these questions and the family should find out by itself how to function best.

A special problem offers psychoanalysis. Up to now this group has not developed something like a family theory, but confines to a very cautious expansion of originally individual centered ideas, blocked by fundamental concepts like the oedipus complex as an innerpsychic problem. Family therapists of today cannot help but look at this complex as the introject of common familiar incest phantasies. Now Bischof (1972, 1985) identified an incest taboo which is generally spread under warmblooded animals. He doesn't believe in a human drive to commit incest. I think, that the incest taboo had to develop with warmbloodedness- and a long time of closeness between parents and children to block generally valid sexual signals if shown by conspecifics you know from birth. On the other hand, I think that Freud's Oedipuscomplex may be seen as a wide spread human view of a seducing familiar situation connected with other patterns such as the menacing alpha (as animals don't know their father, but most humans do), the wish to belong (and to pay a price for it), and typically human feelings such as guilt.

For me another question is central: what are the minimal requirements for a functional family (or social) system, requirements which may never be violated lest symptoms and sufferings will result — not only in men but in animals as well! And for this I expect with interest the further investigation of transcultural patterns of interaction as announced in Tutzing by Eibl-Eibesfeldt.

Of course, we have to differentiate between generally ethological problems and specifically human problems which stem from qualities and values animals don't possess, such as the ability (or the curse) to live not only in the present, but in the past and the future as well; or phantasy, the longing for justice, the fear of death, quick cultural changes and, last but not least, the gift not only to learn, but to learn the wrong. On the other hand I often meet with ethological problems and I am looking for an ethological symptoms theory and for interventions which match just these problems in the hope to get some new and effective tools to help.

## 2. What family therapy and theory could give to human ethology

Though many papers in Tutzing proved to be very stimulating for a family therapist, I couldn't help missing some points crucial for family therapists.

2.1. During his childhood everybody introjects his complete family system as persons, roles, rules, patterns, shared familiar phantasies, values (Müssig, 1976), and this introjected relational net (system) will influence his behaviour for the rest of his life: he will tend to re-establish this system (or the contrary!) in his future core family. This leads to two statements important for research.

a) Invisible but significant persons (even if dead) may exert a stronger influence on human behaviour than visible persons! In the well known experiments from Van Holst (1977) with tupaias low ranking animals displayed strong stress symptoms if exposed to the presence of an alpha-animal and developed

two types of behaviour with corresponding symptoms. The same symptoms may be found in humans. But here we need not the bodily presence of the menacing alpha. One of my patients, a woman of 30 years, displayed cardiac dysfunctions lying sleepless in her bed and remembering her admired and menacing adoptive mother who had deceased 16 years ago.

b) There are no dyadic relations. Anyone who observes and describes fathers and sons (or mothers and sons) as if isolated from the rest of the family (as Tremblay 1986 did), has to consider that he highlights only a part of a larger system, whose absent members may be responsible for reactions he is inclined to describe to the visible persons and conditions.

2.2. This leads to a second crucial point for family therapy: Behaviour connected with the need to belong to a social system and the feeling of loyalty. For us, these feelings are responsible for a lot of familiar problems! A child (or a grown-up person) can be impinged by the urgent feeling to be responsible for the welfare of the family even if this includes to do impossible, unbearable or unnatural tasks. I think that the fundamental drives we find here can be reduced to three points: 1) The wish to belong; 2) a general feeling of responsibility (a child may behave like a parent of his parents, if they signal this); and 3) the need to display learned qualities and patterns which fit into the family system (= as an equivalent to inherited characters of the species) even if they are dysfunctional and unnatural.

For instance a child couldn't dare to be crowned with more success than his father, if father would signal that he just couldn't bear it! (Though saying a successful child is all he needs to be happy.) Or a girl should give one of her parents the illusion to be a boy, what may perturbate her body scheme in her own eyes and be one of the reasons she ends up by becoming anorectic. Or a child suffers the pain to remain the lifelong scapegoat of the family — but he doesn't dare to go away! For this task keeps the family going, as everybody believes.

2.3. The third concept is that of systems theory applied to social relations. After World War II, systems theory and therapy of families (and social systems) took a rapid expansion and since some years are spreading in Europe as well. The basic idea is this: all family members try to influence each other to keep the system unchanged by recursive interactions. A more or less functional equilibrium results: individual A behaves in a specific manner to stimulate B to react in a specific manner with the aim, that this allows A (or C, D and so on) to react as well in a suitable manner to maintain the system. There are inherited patterns, including those for generational thresholds and to a smaller or greater extent the capacity to develop new patterns to solve unexpected problems. These family regulation systems are interdependent with individual regulation systems (as analyzed from a psychoanalytical point of view by me, 1975/76; and from an ethological point of view by Bischof, 1985). An example from Tutzing (Fischbach, 1986): The Yanomani children, by touching themselves, not only stabilized their individual homeostasis but also the social system.

From my point of view an interesting question for research in ethology is the following: In what manner (or to what extent) change the sequences of interactional patterns and the relations in a primate group if a young is born or an adult member dies (or will be taken out of the cage).

## 3. Finally three of my papers are discussed illustrating my use of human ethological viewpoints.

a) A classification scheme of families (1982 a, 1986): Amongst our patient families — perhaps in society as well — nearly all families are characterised either by a harmony myth (cooperation) or a quarrel myth (rivalry). Families with a quar-

rel myth are interesting as it is only here that we find dissocial and desructive behaviour and certain types of sexual disorders! You can find these types also in larger social systems such as teams. Chimps show attributes of quarrel families, Gorillas of harmony families.

b) In families with a suicidal child or youth I found this common pattern: "For me is — under these conditions — no place in my family!" These conditions changed from family to family, but there was a group with "impossible conditions" as to commit incest or to murder a family member or to allow at least these phantasies. A case of my praxis shall be presented now in rough outline (Müssig, 1982 b).

Jens, 18 years old, complains that the hairdresser has mutilated him by cutting too short a tuft of his hair. Since this time (half a year) he can't bear to look into the mirror and this is the reason for his suicidal attempt he committed some days before the family interview. Here I join a relatively normal family, only the generation limits are somewhat diffuse. There are some incest phantasies between the male members and the 14-years-old Silke. To get into her room, she has to pass through her brother's room. In the bathroom father and Silke use to wrangle and to fool about. Sometimes father tells his son to find a girl friend and bring her home "that I can have a try!"

The obsessional idea developed not immediately after the visit to the hairdresser's, but four weeks later, when mother had to go to the hospital for one week. On the same day Silke's menarche occurred, and this combination of events seems to have destabilized the homeostasis of the family. All of a sudden, Jens found himself in a very seducing situation and his way out was the phantasy: "Better castrated than to commit incest!" Finally this elicited the second phantasy: "Better dead than castrated!"

The obsessional idea vanished after the first and only session without an interpreting intervention. I think that the most important intervention was that I separated the hunting fields of father and son. I said to father (and of course to the family as well) that I couldn't imagine that he, a good looking man of forty years, should be interested in such young, immature girls, the more so as he had a good looking wife. But if he was interested after all, I told him I expected him to be man enough to find a girl on his own without the need to poach in the territory of his son.

At the time I wrote the paper on suicidal families I knew Bischof's (1972) paper about the incest taboo. Later, when I read about the quail siblings (Bischof, 1985) this remembered me of this family. In both cases brother and sister were imprisoned in a territory, with the only difference that here the fence was an invisible one. I think that brother and sister were tied with invisible and incestuous tinted ropes to the parent of the opposite gender with the aim to keep the family system together. Father displayed the role of a pasha with the phantasy to be the owner of all females within his reach. For this the boy couldn't dare to have a girl friend or to bring her home. The absence of mother and the menarche of Silke had incited the sexual needs of the young man. And to avoid an emergency incest, he imagined a psychic castration by the hairdresser cutting not his hair but — in his underlying phantasy — his penis — a common phantasy.

Today I think that the pattern of aristogamy could be applied to the modern small family as well, as parents generally look with mistrusting eyes at the sexual interests of their youngsters. On the other hand it makes sense that children hate the thought of their parents being still (!!!) sexually active at a time, when the teenies themselves begin with the exploration of this exciting field.

For this, I believe that my final intervention was successful as ethological parameters had been included: To open the fence round the family and to designate own territories for father and son.

As human ethology and family therapy have developed in parallel without much contact, it seems inevitable that on both sides questions may be put which were answered long ago — more or less correct — on the other side. But perhaps just the development in separated territories offers the possibility to find new questions and answers. I am looking forward to people interested in discussing such questions with me and other (presumably few) family therapists.

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## FORUM

### On "the Seville Statement on Violence"

*The Seville Statement on Violence was printed in the June 1987 issue of the Human Ethology Newsletter, Vol. 5, no. 2. At the 1986 American Anthropological Association Annual Business Meeting the Statement passed unanimously, and was ratified by mail ballot in 1987, with 1669 in favour and 230 against. Close to 8500 ballots had been mailed to members of the Association and ca. 2200 were returned. In response to the ballot, Robin Fox (University Professor, Rutgers) addressed the following letter to the Anthropology Newsletter. The letter is reprinted here.*

Letter to the *Anthropology Newsletter*,

It disturbs me that the "Seville Statement on Violence" might become official AAA policy without anyone offering a murmur of dissent. It is not that one cannot readily agree with the rather obvious propositions. Indeed, it is a little like being asked to vote in favour of mom and apple pie. But this exercise in self-righteous piety, while leaving its sponsors with a warm glow of moral superiority, does nothing to advance our understanding of the dilemma of human violence. What is more it raises false hope in suggesting that a condemnation of such simplistic notions as "innate aggression causes war" will remove "pessimism" and therefore lead to peace on earth. It isn't pessimism that threatens peace but fanaticism — even the soberly considered kind exemplified by this document. To me, at least, the prospect of being at the mercy of human intelligence and culture, given its record, is far more frightening than being at the mercy of "aggressive instincts", which I think I understand and can handle.

I certainly do not believe that such instincts "cause" war. (See "The Violent Imagination", in P. Marsh and A. Campbell, eds, *Aggression and Violence*, Basic Blackwell, 1982.) But I believe they exist, and that complementary to them are the equally powerful instincts to ritualize aggression. I also believe that in the "normal circumstances" of our species — that proverbial 99% of our existence in the paleolithic — these would be in some kind of healthy balance, as they were and are for other aggressive animals. But I also know that this is no longer the case and that what we now have to fear is something for more terrible than simple aggression.

Except for a few pathological cases, aggression is not a basic motive for action: it is a tool of other more frightening motives. What the supporters of this resolution do not seem to understand is that their own action in drawing up a list of heresies and pushing for their general condemnation tells us more about our dismal prospects for survival than anything they can say about human aggression. Our worst enemy is *fanaticism* (xenophobic or ideological or both) and our capacity for an intelligent *rouinization of fanaticism*. Aggression is merely a handmaiden that can be called into play once the heretics are identified and condemned, ostracized and silenced and eventually tortured and burned. It is ironically appropriate that this document should have originated in that sordid center of the Inquisition, Seville. No, I'm afraid that the absolute "scientific" proof that innate aggression is not the cause of our troubles does nothing to alleviate my pessimism, and this declaration and the thoughtless acceptance of it do a lot to deepen my gloom over the prospects for

human survival. The nuclear war they anticipate will certainly not be "caused" by innate aggression, but by mechanisms closer to those that produced this pointless document. It is this that students of human survival should be considering, not shopworn denunciations of ideas that no one ever really held in the first place.

Robin Fox  
Rutgers University

David Adams (Psychology, Wesleyan), Corresponding Secretary of the Seville Statement Support Network, was asked to respond to Dr. Fox's letter and did so by calling attention to his paper (with Sarah Bosch) "The Myth that War is Intrinsic to Human Nature Discourages Action by Peace by Young People".

Precis and excerpts follow, but the reader is directed to Ramirez, Hinde, Groebel (Eds.) *Essays on Violence*. Seville 1987 (the volume produced by the Seville Conference) for the complete paper.

126 college students answered questions (and 114 completed followup questionnaires a month later) regarding attitudes to peace activity, beliefs concerning human nature and war, feeling of anger about the arms race, and normative attitude about peace activity of family, friends, and school. 40% of the students answered "very much" or "somewhat" to the question "Do you believe that war is intrinsic to human nature? 40% agreed that "there is a war instinct" and 33% that "wars are inevitable because human beings are naturally aggressive". The researchers then examined the history of "peace activity" by students holding these views.

"As predicted, beliefs about human nature and war proved to be significant correlates of peace activity . . .

"These results support the need for a worldwide educational campaign to dispel the myth that war is instinctive, intrinsic to human nature, or unavoidable because of an alleged biological basis. As shown by the results obtained here, such a myth is widespread and constitutes an important obstacle that interferes with the development of activity or peace . . .

"The data obtained in this study are consistent with similar results obtained in Finland and in a pilot study . . . in the U.S. In all three studies it was found that a student is more likely to believe that he or she can do something about nuclear war if he or she believes that war is not intrinsic to human nature."

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## MINI COMMUNICATIONS

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

### Genetic Similarity theory: Beyond Kin Selection?

by: J. Philippe Rushton, Department of Psychology, University of Western Ontario, London, Ontario N6A 5C2, Canada.

Kinship was the basis of seminal work by Hamilton (1964) providing a solution to the question of how altruism could



evolve. The answer proposed was that individuals behave so as to maximize their inclusive fitness, rather than only their individual fitness by increasing the production of offspring by both themselves and their relatives, a process now known as kin selection. This formulation provided a conceptual breakthrough, redirecting the unit of analysis from the individual organism to his or her genes, for it is these which survive and are passed on.

While the idea of kin selection is not new (Hamilton, 1964) and is considered central to sociobiological theorizing, only recently has it been applied to human relationships. This delay may be due in part to the theory's focus on altruism between relatives, an emphasis of limited applicability to humans where altruism is frequently directed to non-kin and is often explained by empathy, reciprocity, social rules, and other proximate mechanisms, although twin studies have shown that human altruism and social preferences are genetically mediated (Rushton, Littlefield & Lumsden, 1986).

Building on the work of Hamilton (1964), Dawkins (1976), and Thiessen and Gregg (1980), and adopting the mechanistic viewpoint of the selfish gene, Rushton, Russell and Wells (1984) explicitly extended the kin selection theory of altruism to the human case by arguing that if a gene can ensure its own survival by acting so as to bring about the reproduction of family members with whom it shares copies, then it can also do so by benefiting any organism in which copies of itself are to be found. Rather than only protecting kin at the expense of strangers, organisms are postulated to detect other genetically similar organisms and to exhibit altruistic behaviour toward these "strangers", as well as toward its own relatives. This is the crux of genetic similarity theory. Thus kin recognition would be but one form of genetic similarity detection.

If humans do detect and prefer those who are genetically similar, it should be possible to demonstrate this within interpersonal relationships. With respect to both friendships and marriages it is known that partners resemble each other in such characteristics as age, ethnic background, socio-economic status, physical attractiveness, religion, social attitudes, level of education, family size, intelligence (IQ), and personality (see reviews by Rushton, Russell & Wells, 1985; Thiessen & Gregg, 1980). Correlations tend to be higher for opinions, attitudes, and values (0.40 to 0.70) and lower for personality traits and personal habits (0.02 to 0.30). Less well known is the fact that partners also tend to resemble each other on socially undesirable traits including criminality, alcoholism and psychiatric disorders. Advantages thought to accrue to optimising similarity in personal relations include altruism, cooperation, communication and trust.

To examine whether such assortment is mediated genetically, my co-workers and I carried out blood tests and differential heritability analyses. Using blood antigens we estimated genetic distance across 10 blood loci with 7 polymorphic marker systems (ABO, Rhesus (Rh), P, MNSs, Duffy (Fy), Kidd (Jk), and HLA) over 6 chromosomes and found that both male friendship dyads and sexually interacting couples share more genetic markers than do randomly generated pairs from the same samples (Rushton, 1988; Rushton & Chan, 1988). These results are shown in Table 1.

Table 1. Percentage of genetic similarity based on 10 blood loci in six types of human relationships. Source: Rushton, 1988; Rushton & Chan 1988).

Relationship	Number of Pairs	Mean $\pm$ SE	Stand. Deviation	Range
Mother-offspring	160	73 $\pm$ 1	9	50-88
Sexually interacting adults in which male is father of produced child	799	52 $\pm$ 1	12	17-90
Sexually interacting adults in which male is excluded from paternity	187	44 $\pm$ 1	12	15-74
Randomly paired male-female dyads	200	43 $\pm$ 1	14	11-81
Male friendship dyads	76	54 $\pm$ 1	12	22-80
Random male pairs	76	48 $\pm$ 1	11	22-72

We also found that the epigenetic rules inclining people to choose each other on the basis of similarity may be particularly fine-tuned, inclining individuals to assort on the more genetically influenced of sets of homogeneous characteristics. Partner similarity has been found to be most marked on the more heritable of sets of homogeneous traits over a variety of anthropometric, cognitive, behavioral, and attitudinal attributes in both male friendship dyads (Rowe & Osgood, 1984; Rushton & Chan, 1988), and marriage partnerships (Rushton & Nicholson, 1988; Rushton & Russell, 1985; Russell, Wells & Rushton, 1985). Consider the one study carried out independently of ourselves. Rowe and Osgood (1984) examined delinquency in 530 teenaged twins and found that not only was antisocial behaviour itself about 50% heritable but that the correlation of 0.56 between the delinquency of self and the delinquency of friends was genetically mediated. That is, genetically disposed delinquent students were also genetically inclined to seek each other out.

Finally, we examined parental preferences between full siblings. Because kin selection theory emphasizes relatives "identical by descent" where all siblings have a .5 coefficient of relationship, differences between full siblings has been overlooked. Because of the genetic similarity theory focus on assortative mating, however, some children are clearly expected to be more similar to one parent than to the other. If a father provided a child with 50% of his genes, 10% of which overlapped with the mother's contribution, and a mother provided the child with 50% of hers, 20% of which overlapped the father's contribution, then the child would be 60% similar to the mother and 70% similar to the father. Family members are expected to favour those who are most similar. An explicit test of this prediction was made in a study of bereavement following the death of a child: Both mothers and fathers, irrespective of the sex of the child, grieved most for children they perceived as resembling their side of the family (Littlefield & Rushton, 1986). Among siblings perceived similarity is correlated with genetic similarity measured by blood tests.

It would appear that people do moderate their behaviour in accord with the genetic similarity of others. The implications of these findings may be far reaching, providing, for example, a biological basis for ethnic nepotism and group selection. Since two individuals within an ethnic group will, on average, be genetically more similar to each other than two from different

groups, people may be expected to prefer their own group over others. This line of argument provides the basis for group selection to occur. Hamilton's (1964) theory of inclusive fitness is generally regarded as an extension of individual selection, not group selection (Dawkins, 1976). Essentially there did not seem to exist a mechanism by which altruistic individuals, other than by benefiting kin, could leave more genes than individuals who cheated. With the genetic similarity theory view that genes can maximize their replication by benefiting any organism in which copies of themselves are to be found, a process is provided by which group selection may operate (Rushton, 1987).

Benefiting genetically similar others has been greatly enhanced through culture. through the use of language, law, religious imagery, and patriotic nationalism replete with kin terminology, ideological commitment enormously extends altruistic behaviour. Indeed recent analyses suggest that evolution under culturally driven group selection, including migration, war and genocide may account for the greatest amount of change in human gene frequencies (Ammerman & Cavalli-Sforza, 1984; Wilson, 1983). The human propensity for deontological action may be guided by epigenetic rules which lead people to those cultural choices which maximally increase their genetic fitness (Lumsden & Wilson, 1981; Rushton, Littlefield & Lumsden, 1986). If genetic similarity theory is correct, these choices will most likely benefit genetically similar others.

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## BOOK REVIEWS

Dear Editor:

I am writing in connection with Dr. G. Schubert's review of *Ostracism: a Social and biological Phenomenon* in the *Human Ethology Newsletter* of December, 1987.

Dr. Schubert, in his usual agreeable style, claims that he has heard me describe the drowning of Nikkie, a male chimpanzee, as a "suicide". Yet I have never publicly discussed the incident, neither in Nairobi nor elsewhere, for the simple reason that it happened long after I had left Arnhem Zoo (I concluded my studies in 1981; Nikkie died in 1984). In addition, I have always viewed his death as the unintended result of an escape attempt.

It was a journalist who came up with the suicide idea ("Primate King Throws Himself off the Rock", shouted his article) without any support from ethologists involved with the chimpanzee project, who, of course, expressed strong reservations regarding this interpretation. Unfortunately, the sensationalistic story has found a willing ear in the media, and Dr. Schubert's uncaring remarks further ensure that it will stay alive.

Frans de Waal, Ph.D.

Madison, Wisconsin.

**The unheralded majority: Contemporary women as mothers.**

Lexington, M.A.: Lexington Books, 1985, 170 pages, by Lydia N. O'Donnell.

Reviewed by William T. Bailey.

Psychology Department, Tulane University.

**The not un-common mother**

Researchers in many areas of "social change" have tended to focus on the uncommon — Supermoms, Superdads, and children in center-based daycare, for instance. All of these are statistically — and socially, unusual cases. There is relatively less published about the "average" father, mother, or child. One frequently gets the impression from reading the current literature — popular and professional, that most young children are growing up in one-parent (female) families or, failing that, are parented by gender-role neutral fathers and supermoms. Some few are, most aren't, and Lydia O'Donnell's book on the contemporary mother demonstrates once again that "the more things change, the more they stay the same."

As she very cogently notes, "Media headlines and our tendency to focus on what is changing and novel rather than on

what remains the same have overshadowed a number of basic facts: most women still become mothers; most children are raised for most of their lives in nuclear families; and most families continue to participate actively in the social life of their communities" (p. 3). Discussing the media myth of the "high-powered career women who carefully weigh the costs of motherhood and consider whether they want to take on the burden of child rearing in light of their other commitments", she notes that, in the majority of cases she studied, "motherhood was an accepted, virtually inevitable, and usually desirable event in the normal progression of a woman's life" (p. 44).

O'Donnell's study of contemporary women was conducted in 1980. She interviewed 74 women with at least one child 12 or younger who resided in two communities in the Boston (Massachusetts) metropolitan area; one had a working class population while the other was middle and upper-middle class.

I've commented before that we (ethologists) often get much good data from those who aren't ethologists. To the case in point, much of what O'Donnell says is quite compatible with ethological/evolutionary thinking. With an intuitive grasp of the concept of *fitness*, she notes that "it is the rare parent who wishes a daughter (or for that matter, a son) to remain childless" (p. 43). In a discussion of "decision-making" she evokes a caveat which ethologists will (appropriately) find quite familiar in our discussions of *strategies*. "This does not imply, though, that people necessarily have all the information at their disposal which an objective outsider would think important for making a truly informed choice. Nor does it presume that individuals calculate in some mechanistic way the costs and benefits of each alternative. Instead, it assumes that women size up their situations and make decisions which seem sensible to them at that time" (p. 18).

She concludes that, for the majority of contemporary women, the essence of motherhood is "giving and getting" (the title of her ultimate chapter). Despite polemics about social changes such as role-sharing and flexible work hours, parenting in modern society is more like that in the recent past than that in some utopian, idealized future. In some ways modern families and parenting practices more closely approximate conditions prevailing in the environment of evolutionary adaptation than in the more recent (historical) past. For instance, the contemporary practice of parent(s) going one place to acquire resources (one's job) and then taking them to another place (home) for consumption is what we find in a hunter/gatherer life style.

O'Donnell has provided a scholarly, though readable, approach to her subject matter which she studied using an innovative approach. She incorporates many very original ideas including a particularly intriguing interpretation of the data on mothers' employment which suggests that even in the past this might have been more widespread than is usually assumed. I will leave the details of this interesting possibility to the reader. Those with an interest in parents — particularly mothers, will want to own this book. Members more broadly interested in human behaviour will wish to insure that their institutional library has a copy.

## Ethología de la vivienda humana. De los nidos de gorillas y chimpancés a la vivienda humana.

Barcelona: Editorial Labor, 1985, 126 pp., 15 black & white photos, softbound, by Jordi Sabater Pi. (Address publisher: Calabria 235-239, 08029 Barcelona, Spain.)

### Reviewed by Eduardo Gudynas.

ASMER's Regional office for Latin America, P.O. Box 13125, Montevideo, Uruguay.

Sabater Pi's, lecturer on ethology at the Department of Psychology, University of Barcelona, recent book shows his sustained interest in the behaviour and ecology of gorillas and chimpanzees. He is also author of "The chimpanzee and the origin of culture" (1978, Promoción Cultural, Barcelona, 124 pp.) and "Gorillas and chimpanzees from Occidental Africa" (1984, Fondo Cultura Económica, México, 278 pp.). The first book deals with the cultural features of chimpanzees, including the use of tools, communication, sexuality, etc. The second is a large monograph that presents the author's research at the Muni River, Guinea, West-Africa. It deals extensively with the use and fabrication of tools, nests and feeding, with detailed descriptions and well organized discussions. The objective of this third book, "Ethology of the human dwelling" is to study the use, more or less cultural, of space by the Hominoidea, particularly by comparisons between Pongidae apes and humans.

Almost one third of the book is devoted to describe the nests of pongids, particularly those of gorillas and chimpanzees, with many data from his field work. Descriptions are detailed, including typology, situation, materials, occupancy, building, etc. Then, he describes human nests of preindustrial cultures, particularly those of the !Kung. He follows to evaluate the archaeological evidence at the hominid phyletic level, and closes with a discussion of the presented data and review of the literature.

Unfortunately, the title of the book does not clearly show its contents, as most of it deals with the description of the pongid nests. The data presented, and the comparisons with the human dwelling, either from recent cultures or palaeontological evidence, is scarce. Furthermore, there are other approaches to the study of the behaviour and human dwelling that are not mentioned, that range from the first studies on the proxemics to the most recent ones that seek for the biological basis of the cultural patterns of human housing. Finally, comparative data for preindustrial cultures are very scarce. A valuable source of evidence should come out of the comparative analysis and common features of other cultures in other continents.

Thus, the book is more strictly a behavioral ecology of the pongid nests, and space use, with special reference to gorillas and chimpanzees. In this field, the book is most interesting, particularly due to its detailed descriptions of the nests, which will be very useful for many researchers.

Art work in the book is good, with well selected black and white photographs, that adequately follow the text.

Lastly, I would like to point out the clear intent to provide an integrative evolutionary approach in the analysis, as shown by the discussion of the text, with references ranging from neurobiology to ecology. This book shows a field still poorly developed, although the study of human dwelling in an evolutionary perspective would be of high impact in many other dis-

ciplines, just to mention architecture and environmental psychology. Thus, this book will be of interest to anyone dealing with the behavioral ecology of African pongids in particular, and those interested in primate behaviour in general.

### The chimpanzees of Gombe: patterns of behaviour.

London: The Belknap Press of Harvard University, 1986, 673 pp., £19.95. By Jane Goodall.

Reviewed by J.W. Froehlich.

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

The primary contributions of this wonderful book are a detailed description of one chimpanzee community, based on 25 years of field work, and a thoughtful discussion of these data from the evolutionary perspective of shared behaviour patterns in our common ancestor. By studying chimpanzee aggression, for example, Goodall claims "... we can better comprehend why we are a potentially aggressive species." (p. 3) The same is true for other themes in the book, such as the cognitive and social manipulation skills which lead to an advanced social system, with cultural traditions and pronounced individual variation.

The book begins with historical discussions of previous laboratory studies, emphasizing chimpanzee cognitive capacities and their continuity with ourselves, a theme often returned to, especially in the final chapters. By rounding out the field data which follow, this introduction makes the book especially useful for students having minimal background. Given the potential implications of some of these cognitive studies, however, it is unfortunate that they have often only been intuitively recognized in the field situation. Indeed, these two introductory chapters conclude with a discussion of the problems of mostly anecdotal field evidence, compounded by confounding variables and small sample sizes.

The next four chapters introduce the study site and methods, the primary chimpanzee subjects in the study community, their demographic history spanning 19 years, and their communication skills. The book's theme of individual variation begins with delightful character sketches of unique personalities, based on separate life histories and maternal reproductive profiles. It is noteworthy that many adult males have simply disappeared with no cause of death known. One recognized skull, found near the eastern range perimeter, provides strong circumstantial evidence for even greater intercommunity conflict than that discussed later in the text. Also notable is the bimodality and large range in adult male body weights, with one individual (Satan) described at 105 kilograms, more than twice the average. This individual variation occurs after males, but not females, experience an adolescent growth spurt. The detailed descriptions of vocalizations greatly extend previous inventories and intuitively suggest unrecognized communication complexity, such as "culturally" variable dialects.

The two social structure chapters describe the complexity of a fusion and fission society, as elsewhere emphasizing the effects of individual development and life history influences. The specific descriptions of social relationships include superb case study commentaries on developmental changes. There are also excellent discussions of adaptive benefits of these relationships and their proximate motivations such as psychological support systems.

The three chapters on ranging, feeding, and hunting are sup-

ported by excellent graphics and detailed, well-tabulated descriptions, including the innovative "word pictures". Yearly, individual, and sex differences in ranging are described, but there is little discussion here of seasonal or long-term fluctuations. Documentation of "cultural" diversity in diet is especially interesting. With the highly significant hunting behaviors, I was again intrigued by the extent of individual differences; after 25 years of research it is unfortunate that there is no multifactorial analysis of these data, such as logistic regression, to discern the relevant life history parameters.

The following three chapters deal with agonistic behaviors. As our closest living animal relative, the chimpanzee is a useful subject for descriptions of the proximate and developmental factors in aggressive behaviour, providing an excellent background from which to study the ethology of human aggression. The discussions of coalitions and support systems demonstrate a continuum of social complexity between our two species. Functional discussions of aggression are especially useful for the classroom. The descriptions of friendly and grooming behaviors again emphasize the themes of development and individual differences. There is an intriguing discussion linking kin selection by extension to altruism and reciprocity, while grooming is also frequently described as social manipulation.

The consequences of agonistic behaviors are discussed in the next three chapters on dominance, reproduction, and territoriality. Here especially, I was impressed by the extent of individual skills alternative strategies in the pursuit of dominance and reproductive success. While consorting is clearly the most effective strategy, especially for subordinate individuals, I remain unconvinced by the deemphasis placed on a relationship between dominance and paternity. It is recognized that both large sperm production/competition (Harcourt et al., 1981) and a modest degree of sexual dimorphism (Goodall largely ignores both topics) are related to the *existing* social system in chimpanzees. Thus, male dominance strategies (in themselves flexible) and the sexual possessive behaviors of alpha males are probably *still* a successful alternative to reproduction (25% of all matings and 5 of 7 cycling females in a 2 month period, according to Tuin, 1979).

The documentation of territoriality is striking because of its extreme violence, without ritualized buffers, and its apparent attractiveness to some individuals as an end in itself. The discussion of a threshold for human warfare and cruelty is provocative. I am dubious, however, of the emphasis placed on the territorial explanation for strange female attacks, which largely discounts infanticide as an alternative objective. Supported by the Mahale data, which are cited but inadequately discussed, both evolved mechanisms are probably operating in the highly flexible chimpanzee social system.

The next chapter on tool use continues the theme of individual differences in skill or habit; and it suggests the possibility of different familial traditions. Very rare or possibly unique behaviors demonstrate versatile ingenuity and the potential origins of new technologies. There is a thorough discussion of the concept of cultural divergence applied to these technologies, with youthful inquisitiveness as the origin and emigrating females as the diffusers of new tool-using traditions.

The final chapter on social awareness and the separate conclusion resume the previous theme of cognitive capacities in an ecological and social context. The development of social awareness and examples of social manipulation highlight the descriptions. With the demonstration of these and the strong possibility of concept formation, innovation, and even imagination, Goodall argues that the new behaviors of "a gifted individual"



are rapidly shared, thus kin selection mechanisms are "confounded and the whole group can profit, at the expense of a neighboring group...." (p. 591). The individual differences in successful mating and status strategies maximize the genetic diversity for these talents. These conclusions are thought provoking in the quest to understand human origins.

A thorough discussion of field methods, with verbatim examples, follows in the appendix and is especially informative for advanced students. Other appendixes present observation hours on each individual over five years, association matrixes for three years, and additional data on sexual behaviour. These, together with the schematic diagrams and excellent graphical tabulations throughout the text, provide a storehouse of information for student and professional reference.

In terms of overall coverage, I was disappointed by the few comparisons to the pygmy chimpanzee studies, especially those of the Japanese. Essentially, there is but one paragraph on sexual receptivity, with the assertion that the bonobo "sounds like a utopian society — and viewed against this, it would seem that the Gombe chimpanzees have a long way to go" (p. 485). I also feel that more discussion should have been directed at the interpretation of chimpanzee society as comprised largely of "solitary" and unrelated female foraging units, adapted to by a group of related males (cf. Wrangham, 1979 a, b). On the positive side, I was impressed by the extent to which the Arnhem colony data on competition and coalition formation were utilized in the discussions. There is also a thoughtful comparative analysis of the social factors leading to differences or amplifications of latent tendencies in the Arnhem chimpanzees.

With the data laboriously hand analyzed and tabulated, sometimes for only a few of the 25 years of study, I was most disappointed by the paucity of statistical comparisons in the book. These would frequently enhance the excellent graphical tabulations and anecdotal case histories, especially for the analysis of topics such as social networks and life history variables. A footnote explains the circumstances which have thwarted computerizing the data. Moreover, there are examples of the effect of small sample size, as when an earlier conclusion regarding clumped conceptions was discounted by subsequent data. Nevertheless, I hope that these statistical shortcomings are rectified before many more years of data accumulate and the task becomes all the more difficult.

As it stands, however, the book is truly without rival for what it is. The descriptions are vivid and augmented by excerpts, primarily from field notes, at the beginning of each chapter. Case histories and "word-pictures" complement the numerous illustrations, including 22 colour photographs. There are detailed indexes of both names and subjects for quick reference. The text is carefully written, with terms explicitly defined and anthropomorphisms assiduously avoided, but the excellent style is *also* delightfully entertaining. There are fascinating anecdotes throughout and the prose frequently draws a chuckle, as for example when Goodall describes "sexual jamborees in which, some years, more than half of the community's females, each flaunting her pink flag, contribute to the sexual gratification of the males." (p. 485).

I personally found the artful layout of the book to be unnecessarily bulky (though obviously not inflationary in terms of the remarkably low price); but this "criticism" stems from the experience of writing this review from the field in Indonesia and attempting to read the book while on numerous airplanes. The beauty of the design, as well as the writing and photographs, will make the book attractive for most nonprofessional readers. For students at almost all levels, it could form the basis for a course. For all ethologists, it is essential reading before it joins

the reference section of their libraries.

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## CURRENT LITERATURE AND FILMS

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- cept. A. Edell, *Integrative Levels: Some Reflections on a Philosophical Dimension. Part II: GENETIC PROCESSES AND THE EVOLUTION OF SOCIAL BEHAVIOUR*. B.F. Skinner, *Genes and Behaviour*, M.-W. Ho, *Genetic Fitness and Natural Selection: Myth or Metaphor*. P.H. Klopfer, *Reseeding the Commons*, M.J. West-Eberhard, *Phenotypic Plasticity and "Genetic" Theories of Insect Sociality. Part III: ISSUES IN THE STUDY OF SOCIAL BEHAVIOUR*. G. Greenberg, *Levels of Social Behaviour*. S.B. Hrdy, *Levels of Complexity in the Study of "Adaptive" Sex Ratios*. T.M. Alloway, *Behavioral Development and Colony Life cycles in the Nestmate Recognition Systems of Social Insects*. D.M. Gordon, *The Development of Flexibility in the Colony Organization of Harvester Ants*. C.M. Ristau, *Thinking, Communicating and Deceiving: Means to Master the Social Environment*. A.F. Semiockhina, *Krushinsky's Concept of Elementary Reasoning and its Role in the Evolution of Social Behaviour*. B. Livant, *The Rise of Reproduction: Ten Propositions*. E. Tobach, *Non-Reproductive Aspects of Social Behaviour: Comments on the Need to Investigate*. T.E. Rowell, *What Do Male Monkeys Do Besides Competing?*
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This synthesis of research into the behavior of humans and other social animals ranges horizontally from a congruence of the perspectives of the life sciences, social sciences, and physical sciences and longitudinally from of that the most recent 60 million years, but emphasizing the the last 12 thousand years.

From a political science perspective, these essays focus on both individual and small-group political behavior. Schubert's work draws extensively on contemporary evolutionary theory, biosocial and psychobiological theory, ethology and primatology, behavioral ecology, experimental work in animal behavior, neurobiology, human development, and the philosophy of both life and social sciences. Introducing and concluding the book are essays that discuss the implications of biology and the life sciences for the study of the political sciences. The others center on five topics: political ethology (naturalistic study of human behavior as animal behavior); political evolution; evolutionary theory; evolutionary development (ecological, epigenetic, and ontogenetic); and the evolution of human thinking.

Glendon Schubert is University Professor at the University

## Books and Chapters

- Daly, M., & Wilson, M. (1987). *Homicide*. Hawthorne, NY: Aldine de Gruyter. (Uses an evolutionary theoretical perspective to derive hypotheses concerning the distribution and determinants of homicide and tests these hypotheses against alternative criminological models.)
- Gallup, G.G. (1986). Unique features of human sexuality in the context of evolution. In *Alternative Approaches to the Study of Sexual Behaviour*. Hillsdale, N.J.: Lawrence Erlbaum Associates Publishing. (SUNY-Albany, Albany, New York 12222).
- Greenberg, G. & Tobach, E. (1988). *Evolution of social behaviour and integrative levels* (the T.C. Schneirla Conference Series, vol. 3). Hillsdale, N.J.: Lawrence Erlbaum.
- Contents: *Part I: SOCIAL BEHAVIOUR AND THE CONCEPT OF INTEGRATIVE LEVELS*. M. Grene, *Hierarchies and Behaviour*. N. Eldredge, *The Evolutionary Context of Social Behaviour*. R.C. Lewontin, *R. Levins, Aspects of Wholes and Parts in Population Biology*. S.N. Salthe, *Notes toward a Formal History of the levels Con-*

of Hawaii, Manoa, and Research Professor at Southern Illinois University, Carbondale.

Willi, J. (1987). Some principles of an Ecological Model of the Person as a consequence of the therapeutic experience with systems. *Family Process*, 26, 429-436.

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### Vacancies

#### Experimental Psychologist position.

Assistant Professor to conduct research and teach courses in general experimental psychology. Specific area is open, but individuals in cognitive, biopsychology, or psychophysiology would best suit our needs. Research is encouraged and supported. Teaching load is 4-5 quarter-long courses per year. One-year position available September 1, 1988, with possibility of continuation and later tenure-track classification. Ph.D. preferred, but A.B.D. will be considered. Send cover letter, vita, copies of reprints, and three letters of reference by April 15, 1988 to Dr. Ruth Maki, Chair, Search Committee, Department of Psychology, North Dakota State University, Fargo, ND 58105. NDSU is an Equal Opportunity Employer.

### Announcements

The Evolution and Human Behaviour Annual Meeting will be held on April 8-10, 1988, at the University of Michigan, Ann Arbor, Michigan. To register for the meeting, or to request more information, please write or call: Judy Maas, Evolution and Human Behaviour Program, The University of Michigan, 1571 Rackham Building, Ann Arbor, MI 48109, U.S.A. Tel.: (313)936-2526 (10:00 a.m.-Noon or 1:00-3:00 p.m.).

The meeting of the International Association For Infant Mental Health on "At Risk Infants And At Risk Families" will be held in Providence, September 22-25, 1988. Contact: Janice Miller, Brown University Program in Medicine, Box G, Providence, RI 02912, (401) 863-3337.

The International Association for Cross-Cultural Psychology will meet in Newcastle, Australia on August 21-25, 1988. Two preconference workshops on the theme of "A Sense of Cultural Identity" will be held in Townsville, Australia and Hamilton, New Zealand. Contact: IACCP Congress Committee, Department of Psychology, The University of Newcastle, N.S.W. 2308, Australia.

A NATO Advanced Study Institute on "Social Competence in Developmental Perspective" will be held in Savoy, France July 8-18, 1988. Contact: NATO-ASI, c/o Laboratoire de Psycho-biologie de l'Enfant du CNRS, 41 rue Gay-Lussac, 75005 Paris, France.

The meetings of the International Society for the Study of Behavioural Development (ISSBD) will meet in Jyväskylä, Finland, July 9-13, 1989. Contact: Lea Pulkkinen, General Chair, Department of Psychology, University of Jyväskylä, 40100 Jyväskylä, Finland.

The Society for Behavioral Pediatrics will meet in Washington, DC on May 1-2, 1988 in conjunction with the SPR/APS/APA meetings. Contact: Noreen Spota, SBP Business Administrator, 241 East Gravers Lane, Philadelphia, PA 19118, (215) 248-9168 or Candace Erickson (212) 305-9862.

New Site and Date for the Fourth World Congress of WAIPAD: World Association for Infant Psychiatry and Allied Disciplines is Lugano Switzerland, September 20-24, 1989.

The Developmental Psychology Section of the British Psychological Society will meet September 16-19, 1988 at Coleg Harlech, in North-West Wales. Submission deadline is May 31, 1988. Contact: Gavin Bremner, Hon Secretary: Developmental Psychology Section, Department of Psychology, University of Lancaster, Bailrigg, Lancaster LA1 4YF, United Kingdom, (0524 65201 ext. 4485).

The University of Texas at Austin announces the initiation of a new doctoral program in Child Development and Family Relationships. For information: Ted Huston, Graduate Adviser, Graduate Program in Child Development and Family Relationships, Department of Home Economics, University of Texas at Austin, Austin, TX 78712.

The Fyssen Foundation will award 1988/1989 Fellowships to French scientists wishing to work abroad and foreign scientists wishing to work in French laboratories in fields including ethology and psychology, neurobiology, anthropology-ethnology, and human paleontology. Nominations are also invited for the 1988 International Scientific Prize on Epistemology: Logic of Knowledge. Send applications for fellowships by April 1, 1988 and nominations for the prize by September 15, 1988 to Secretariat, Fyssen Foundation, 194 rue de Rivoli, 75001 Paris, France.

A new study of Children's developmental growth and behaviour is being initiated by the Gesell Institute of Human Development in New Haven. The long-term, nationwide study will be guided by Robert Lichtenstein, newly appointed research director for Gesell Institute, a leading child development psychologist and expert in the preschool screening field. The new research will center on the revision, renorming and validation of the Gesell developmental examination, which is widely used by educators and professionals in child development. Lichtenstein plans to work with leading researchers and practitioners in the fields of child development, psychoeducational assessment, and neuropsychology to develop a battery that incorporates state of the art knowledge about the maturation process. He will also pursue research involving how test results are applied in making educational decisions, as research is desperately needed to guide policy in controversial areas such as school entry age, grade retention, and appropriate educational services for children experiencing educational problems.

In a recent interview in the *APA Monitor* (1987, Dec.), Gordon Gallup, the new editor of the *Journal of Comparative Psychology*, commented, "It seems to me that the *Journal of Comparative Psychology* is one of the few APA journals that would be an appropriate format for papers on *human ethology, human sociobiology, and human evolution as it relates to psychology* (emphasis added). I would be delighted to have papers on human evolution reviewed."

## Call for papers

Papers are invited for a special issue of *Child Development* that will focus on development in minority children (e.g., Afro-American, Hispanic-American, Native American, and Asian-American children). This special issue, which will be edited by Margeret Beale Spencer, Division of Educational Studies, Emory University, Atlanta, GA 30322, USA, and Vonnie McLoyd, Department of Psychology, 3433 Mason Hall, University of Michigan, Ann Arbor, MI 48109, USA, will appear in December 1989. All papers should present original research findings. All papers submitted for inclusion in this special issue will be reviewed through the regular editorial process of the journal.

Five copies of each paper must be received by June 30, 1988. Manuscripts should be addressed to Vonnie C. McLoyd, department of Psychology, University of Michigan, Ann Arbor, MI 48109, USA. (see recent issue of *Child Development* for more complete instructions)

## Unable to Forward

Newsletter(s) of the following member(s) were returned to sender, although they paid their membership dues recently. Would anyone who knows any of them be so kind to contact and advise them to send me their new address.

Prof. Dr. M.W. Waus, Gästehaus der Universität Marburg, Hansenhäuserweg 11, #609, 3550 Marburg/Lahn, WEST-GERMANY

### Membership Renewals

If the date on your mailing label is earlier than the current year, it is time to renew your membership. Renewal notices are not sent for economic reasons. No more than two warnings are given on the mailing label. Thereafter you are removed from the membership list.

Directions for payment are given on the last page of this newsletter. Payment reaching the treasurer before February 1, May 1, August 1 or November 1, will be processed in time for indication on the mailing label of the next newsletter issue.

Please, report any errors, changes of address, etc. to the editor.

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