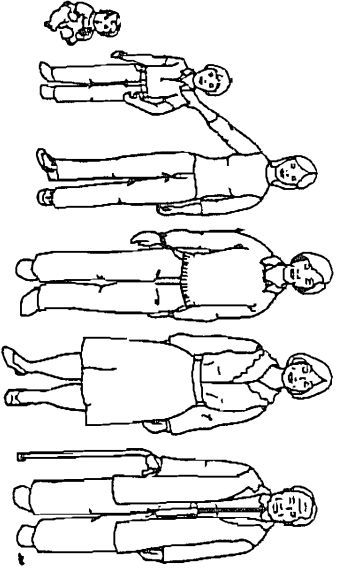


AGE-GRADED PHENOTYPES



HUMAN ETHOLOGY NEWSLETTER

JOAN S. LOCKARD, EDITOR VOLUME 3 UNIVERSITY OF WASHINGTON
OCTOBER 1982 ISSUE 7 SEATTLE WASHINGTON 98195

This issue's masthead depicts David Munro's contribution to Mini Communication, "Age-Grading and Rites of Passage." (Our appreciation to Joycelyn Penner who drew the logo.)

DIRECTORY

We are interested in compiling a directory complete with name, address, and telephone number (optional) of ISHE members, perspective field of work, research interests, disciplines, etc. and publishing it in the Winter issue. If you have not done so already, please fill out the membership form that is attached to the end of the newsletter and send it in. If for some reason you do not wish this information printed in the newsletter, please indicate so on the form. You may wish to pay your 1983 dues of \$10.00 (see below statement on Dues) at the same time. Early payment would be most welcomed!

NOMINATIONS FOR ISHE BOARD

The Executive Board of ISHE is composed of eight elected members who serve staggered two year terms. Each year four new members are elected. In order to insure a variety of viewpoints, theoretical perspectives, and methodological strategies the board is composed of people from several disciplines including animal behavior, anthropology, political science, primatology, psychology and sociology. This, of course, is not an exhaustive list of related disciplines.

Members of the Executive Board elected for the 1982-1983 term are Michael McGuire, Esther Thelen, Ian Vine, and Ronald Weigel; members whose terms will expire at the end of 1982 are Robert Adams, Gordon Burghardt, Wade Mackey, and Gail Zivin.

Please recruit and nominate members for election to the Executive Board. Self-nominations are entirely appropriate. The ballot will appear in the winter issue of the newsletter. Nominations should include: Name, affiliation, degree area, and research interests limited to 100 words. Send the nomination and necessary information to Esther Thelen (Chairperson of the Nominations Committee), Department of Psychology, 210 McAlester Hall, University of Missouri, Columbia, MI, 65211. Deadline for receipt of nominations is November 15.

AUGUST IN ATLANTA

ISHE Business Meeting

There was a consensus with respect to the following:

1. ISHE needs more structure and focus
 - a) Workshops would facilitate such objectives;
 - b) Any ISHE member may arrange a workshop;
 - c) The contents of these workshops might serve as a basis for an independent ISHE meeting as early as 1984;
 - d) There is the possibility of at least four workshops in the next several years: two at UCLA (McGuire and Weigel) dealing with life history strategies and behavior-physiology relationships; one at Montreal regarding development (Strayer); and one on demographic data and social behavior (Lockard) in conjunction with the ABS meeting in 1983.

2. Future ISHE meeting possibilities:

- a) 1983 with ABS;
 - b) 1984 ISHE alone in Montreal;
 - c) 1985 with APS;
 - d) 1986 ISHE alone in Germany.
- Let your reactions be known.

3. An increase in Dues,

Beginning in January 1983, membership dues will increase to \$10.00 for employed faculty; but remain \$5.00 for students and unemployed academicians; \$15.00 for librarians. The increase applies to all foreign and domestic members. (If any member is interested in back volumes of the newsletter, Volumes 1 and 2 covering the period 1973-1980, may be purchased at \$15.00 for each volume. Volume 3 will be available at the end of 1983 for \$25.00.)

Fred Strayer (University of Quebec at Montreal) has started a new tradition for ISHE membership dues. He very generously contributed a \$20.00 donation to the Society in addition to a \$10.00 subscription to the Newsletter for 1983. If enough others were to follow his example, ISHE could afford to help with the cost of workshops on timely topics in human ethology. THAT'S THE WAY TO GO, FRED !

4. A good showing.

a) Total number of ISHE members who attended the Congress was 54.

b) The number of papers presented in the field of Human Ethology were thirty-eight (see these under "Recent Literature") and the papers of several ISHE members received attention from local media services.

HUMAN ETHOLOGY ABSTRACTS

Please send your abstracts (150 words, APA format) of recent published or unpublished studies to Wade Mackey, Division of Social Sciences, Iowa Wesleyan College, P.O. Box 369, Mt. Pleasant, IA 52641. Wade is collating these for publication in Man and Environmental Systems.

FORUM

This issue is devoted to catching up on Book Reviews; Forum section will be resumed in the Winter issue.

LAMARCK REVISITED

An article published (1981) in a Canadian newspaper in Vancouver, the Province, gave an indepth review of the 1979 book by E.G. (Ted) Steele, Somatic Selection and Adaptive Evolution. It indicated that the author put "...forward a hypothesis that blends the traditional Darwinian view of evolution and a modified form of... the Lamarckian belief in the inheritance of 'acquired' characteristics." Steele and his colleague, Dr. Reg Groczynski, tested immunological tolerance in two different strains of mice and concluded that "...acquired tolerance was transmitted to the new generation through the germ line." Their method is similar to the technique of injecting a future recipient of, say, a skin graft when very young with cells from a future donor. For example, in a young laboratory mouse the immune system responsible for graft rejection is still incomplete. It comes to recognize foreign cells in the vicinity as "self." As an adult animal, it will then accept grafts from the donor from which the injected cells came. Groczynski and Steele started their experiment by making male mice from one strain (say, A) tolerant of grafts from another strain (B), in the way just described. They then mated the "tolerant" males with untreated females of the same A strain. When they tested the offspring of A strain, approximately half of them were tolerant of B strain grafts.

If such inheritance were confined to the immune system, it would be of restricted interest. However, Steele has suggested in his book that it operates possibly in the liver, the lining of the gastrointestinal tract and even in the nervous system. Traditional thought emphasized that mutations in antibody-producing cells were very different from mutations in reproductive cells. However, ten years ago Howard Temin of the University of Wisconsin was awarded a Nobel Prize for his discovery of viruses that can capture genetic material outside themselves.

Steele and Groczynski's initial results have appeared as well in the Proceedings of the National Academy of Sciences. British Nobel laureate Sir Peter Medawar is quoted in the Province article as indicating that if they are confirmed, it would "...represent one of the landmarks in the history of biology."

Also, the November, 1981 issue of Cell reported that molecular biologists at the University of Washington, working with researchers at the University of Pennsylvania, have succeeded in introducing a new functioning gene into animals. In their study, a gene was created and then injected into the nucleus of a fertilized mouse egg. The egg was implanted into a surrogate mother mouse that carried the fetus to term and reared the offspring. Biochemical tests on the offspring showed that the gene had become a part of the DNA of the animal. Of particular significance for our purpose here was the finding that the new gene was expressed in the offspring and was passed on to the next generation.

MINI COMMUNICATIONS

Age-Grading and Rites of Passage

David Alan Munro
Laguna Beach, California

The implicit age-grade assumption that we automatically acquire different characters at different ages fits the ethnological prescription very well. An intriguing aspect of age-grading for ethnologists is that it is, among other things, theory, and primitive theory at that. It is a theory of what the human being is, but not the kind of theory we are used to: with supporting evidence, derived from a definable range of data, complete with earlier formulations. It is almost the opposite of this. It is theory which, you might say, came first, and thereafter accumulated its own supporting evidence.

In sacred societies of our ancestors, innovation was frowned upon. Each such society had its fixed way of doing things: its own weapons, its own tools, its own shelters and system of government. All of them were very similar, as we see from the artifacts, but they were different enough from tribe to tribe so that one 200-member tribe could outbreed, outbid, outproduce or outfight another -- with the result that the slight innovation would slowly become general. Conservatism was thus a kind of virtue in this torpid advance; it assured that the winning tribe would keep the device of winning and that the spread of it would eventually become general.

Into this world with the fierce predators in retreat came Darwin's Law of Battle. The 200-member tribe needed to field an army. The conquest/defense side of intertribal competition required it. At some point, some ingenious tribe then invented or perfected "the warrior grade," composed of all the tribe's males inducted into the service at a pre-fixed age. For most of the males so recruited "glory" was a sufficient reward, but it soon became profitable and effective and in keeping with the readiness of the recruits to add loot and captured girls to the inducement. Thus, said William Jame (1910), "Our ancestors bred pugnacity into our bone and marrow...and if there were any tribes of other type than this they have left no survivors..." That is to say, the notion of a warrior grade became incumbent upon all tribes; it became 'protected by evolution.'

But more is needed than an effective army to make a tribe an efficient fighting unit. It had to be economically viable. To accomplish this, the next higher age-grade -- men in their thirties -- was officially set up to produce children and do the

hunting. A frequent straight-laced rule denied warrior-grade males the right to marry. Grades below warrior-grade were set up to give obligations and recognition to boys and point them toward warrior-grade status. Grades above included the governing tribal council and, highest of all, the "customary court," as it was known in British-colonial areas.

Needless to say, in these sacred societies, magical beliefs were the rule. Thus it seemed an obvious tribal obligation to invoke higher powers to transform the usual adolescent boy into the daring but responsible soldier upon whom the community depended. The rite of passage was therefore (variously) exacting. For example, a tribe could banish the young males for a month in the wilderness, and when they returned, shun them, give them new names, insist that they are no longer members of their biological families, and therefore make them gain a new identity and a new reputation in the field of battle.

No other age-grade initiation is so severe as this, but then no other group is on the front-line when the tribe is in danger of being wiped out.

Women were never included in the age-grade systems discussed here, a fact field investigators seem unable to explain, though it seems an unequivocal result of the centrality of the warrior-grade and the exclusion of women from battle. However, women were felt to proceed through comparable phases and many tribes had separate graded systems for their women.

Tribal theory, which is our topic of concern, would thus say that human beings "automatically" go through sharp personality changes as they age. True, the shamans claimed that their arcane manipulations caused the personality changes, but this is no more than professional propaganda. Other priests make crops grow, rain fall, etc.

Far more important is a timeless question: to what degree, over 100,000 years of age-grading, did the assigned roles by age and sex become ingrained and fixed? Certainly the primitive initiation into the warrior-grade bears a striking resemblance to "boot-camp," also consciously designed to destroy an old identity, to permit the boy to add "pfic" to his name, and to proclaim himself a man -- as well as an expendable commodity. Certainly the assigned characters by age and sex of primitive man are strikingly similar to characters observed today. Why is this so? Why do we not, after attaining an adult height, weight and cranial capacity, ride on an uneventual plateau from 20 to 70?

To take this question piecemeal. We do not know that age-grading has been in existence for 100,000 years. Baxter and Almagor (1978) give an estimate of only 1,000 B.C., as calculated "on linguistic evidence." Upon the evidence of war, we will opt for the 100,000 years. The most recent case for near-continuous war in the effective rise of mankind is made by Richard D. Alexander (1979), citing Bigelow's Dawn Warriors (1969), Keith's

New Theory (1949), and even Edward O. Wilson (1973, 1975). To this, we add age-grading as the effective primitive device of military recruitment/mobilization. It leads us to accept age-grading as sufficiently old to be a factor in the ethnological-evolutionary analysis of the human condition.

This enables us to explain the human addiction to rites of passage -- marking puberty, marriage, birth, death, high school graduation, etc. Animals, even ceremonial animals, have no such rites. Animals do, however, exhibit the beginnings of intertribal warfare, as Eibl-Eibesfeldt (1979) has shown. This indicates we did not invent intraspecific war; we invented mobilization for it: formalization and recruitment.

Thus the methods of ethnology become applicable to the successive role-ascriptions of age-grading. For purposes of expediency of communication, let us combine imprinting, as defined by Hess (1973) and innate learning dispositions, as defined by Lorenz (1966). We will then say that young-male behaviors, at or about 18 years of age, are precipitated by a maturational cycle, that inclines him to learn and exhibit activities called rowdy, aggressive, reckless, violent, vicious, and willful, and that are subject to being channeled toward outside targets or "enemies." In a word, he comes to his "military readiness" developmentally. The Draft and/or warrior-grade induction merely certifies and accommodates changes that have already taken place within himself.

Equally dramatic changes are in the developmental schedules for young women, though far more directly a function of their sex-life. The puberty rite, important in all tribes, is a female affair. Elaborate ceremonies are involved in first marriage and first child -- all under the care of older women of the tribe. Again, the schedules are a mixture of obligations and privileges. And again, tribal survival has shaped behaviors: for the production of the next generation is certainly as important as defending the frontiers. This indicates that the development of the human female, from her unknown animal forebears, deserves equal or better ethnological attention. One could argue that her change in form and behavior has been greater than her male consort's -- over a relatively short span of time.

Thus the case for age-grading as a part of ethnology rests upon its primal incidence (though unproven), followed by the effect of primal role ascriptions upon inherited behaviors. Unfortunately, we have only an inferential knowledge of these role ascriptions: age-grading was directly attacked as a regressive influence by the colonialists, report Bakker and Almagor (1978); it had previously been forced into recession by the rise of familism, notes Eisenstadt (1971); and it must have suffered a mortal blow when notions of territory were transmuted by the agricultural revolution into the compulsions of property.

Again, in the name of expediency, let us assume that ethnology is interested in preprogrammed behavior and age-grading

is a rough guide to that end; then, ethnology plus age-grading would predict, for example, that change is in the cards for the male of forty and that the "midlife crisis" which Gail Sheehy found (1976) is not surprising. Ethnology plus age-grading might warn girls not to delay marriage and boys to delay it. Ethnology plus age-grading might help us avoid assigning people age-inappropriate jobs. Age-grading could be the scaffolding, the framework, for an ethnogram of man.

Age-Grading: a Classical Definition

An age-grading system is a life-long series of memberships through which every male in a tribe passes. He will be first recruited with all other boys his age in the lowest grade, and move up to the next grade after a fixed span of years when the next batch of recruits are inducted. Thus his age-mates will be the same individuals throughout life, but their identities will change according to a tribal prescription: from clean-up boy to soldier to worker to administrator to counsellor to retiree.

REFERENCES

- Alexander, Richard D. (1979) *Darwinism and Human Affairs*
Bigelow, R.S. (1969) *The Dawn Warriors: Man's Evolution toward Peace*
Eibl-Eibesfeldt, Irenaus (1979) *The Biology of Peace and War*
Eisenstadt, S.N. (1971) *From Generation to Generation*
Hess, Eckhard H. (1973) *Imprinting*
James, William (1910) "The Moral Equivalent of War" (article: see collected works)
Lorenz, Konrad Z. (1966) *On Aggression*
Sheehy, Gail (1976) *Passages: Eminentable Crises of Adult Life*
Van Gennep, Arnold (1960) *Rites of Passage* (belatedly Englished, first published as *Les Rites de Passage*, 1908)
Wilson, Edward O. (1973) *The Queerness of Social Evolution*, *Bull. Entomol. Soc. Am.* 19:20-22, (1975) *Sociobiology*

BOOK REVIEWS

THE EXPANDING CIRCLE: ETHICS AND SOCIOBIOLOGY.
Clarendon Press, Oxford. 190 pp. (1981)

By Peter Singer

Reviewed by Ian Vine
University of Bradford, England

Despite distinctly hostile and dismissive attacks from some quarters, especially those allied to Marxist sociology, philosophers who have taken the trouble to assess sociobiology's claims dispassionately have served it rather well - notably, Michael Ruse (1979) and Mary Midgley (1978). To this list can now be added Peter Singer, an incisive ethical theorist, probably best known for his advocacy of animal liberation (Singer, 1976). In this generally well-informed, lucidly argued, and eminently stimulating book he provides surely the best analysis yet of the complex relationships between facts about human nature and prescriptive ethics.

Although the book itself is short, it is impossible here to do justice to the subtlety of much of his argument; but it is at least possible to identify his more central conclusions, and the approach on which they are based. After a brief but adequate exposition of kin, reciprocity, and group selection processes, he starts from the premise that sociobiology gives us good grounds for supposing that self-interest and limited social loyalties are indeed rooted in the human genotype, as are related dispositions concerning gratitude, fairness, cheating, etc. He then surveys attempts to construct an "evolutionary ethic," from Spencer to E.O. Wilson, and finds them all guilty of failing to see that evaluative prescriptions can never be simply and solely derived from facts about human nature, society, or the world. Ethics presupposes human choice and responsibility, however much, some basic values may be shaped by our genes. One very generally adaptive evolved capacity of our species, the ability to reason, enables us to resist these semi-imperatives, or even to act in ways which do not maximize biological fitness.

Singer sees reason as both leading us to construct systems of morality and specifying the ultimate prescriptive standard for evaluating alternative moralities. As to its role in the evaluation of morality, he supposes that early hominids began with the "genetically-based social practices" explained by sociobiology, but that cultural processes began to refine customs, and collective disapproval of deviancy became a potential sanction. Reasoning about customs would encourage their formalization as normative rules; and appeals to custom in settling disputes would involve giving publicly acceptable reasons, invoking the rule as an impartial standard and

presenting one's case in an impersonal, disinterested way. Singer sees reasoning as inherently tending towards an impartial standpoint and seeking universalizable generalizations and consistency. In fact, it ultimately subverts established customs; for attempts to refine categories to deal with conflicts between rules, cope with other cultures' alternative customs, etc., push us towards more general principles and away from arbitrary distinctions. Thus, reason is seen as the motor of moral evolution, taking us beyond egoism and narrow in-group moral loyalties as cultural knowledge advances.

Singer essentially sees moral codes as rational human inventions, evolving towards an ideal specified by the nature of reason itself. Here he argues for a variant of utilitarianism, whereby we should ideally assess choices of conduct according to what would maximize the satisfaction of preferences of all persons concerned. Rationally, such assessments must be completely impartial, giving equal consideration to the interests of all parties affected. Thus, an actor has no moral justification for giving special weight to his or her own interests, those of close kin and kin, or those of other in-group members. Here Singer goes so far as to deny the legitimacy of "speciesist" preference for human interests over those of other animals.

These claims are clearly controversial but, unlike many analyses in philosophical ethics, Singer's does not entail denying any part of the central core of sociobiological theory as applied to human beings. Indeed, he acknowledges that all societies' moral codes presently do appear to recognize special obligations to close kin and kin, and advocate preferential concern for the welfare of one's own rather than other societies. Essentially, he sees reason as opposing our biologically conditioned natural preferences, and demanding expansion of our "circle of altruism." Only slowly are cultural processes being molded by reason in this direction, so that normative moral codes progress likewise. Where he sees sociobiology as useful is in enabling us to understand biologically based obstacles to this advance, in warning us to expect progress to be slow, and in debunking some alternative ethical theories to his own.

Perhaps most interesting is Singer's insistence that ethical philosophy has often paid too little attention to the realities of our biology and social relationships, with liberals being reluctant to admit that "some of the problems of human life have their roots in human nature rather than in the corrupting effect of society" (pg. 156). In particular, it is precisely because our natural sympathies are relatively limited, and are most easily evoked by face-to-face appeals rather than by commitment to abstract principles, that real societies must largely rely on specific and often partial moral rules. Otherwise, our natural biases would often unfairly distort the complex calculations involved in applying the ultimate ethical principle directly. Thus, public morality must always be a compromise - but paradoxically in our own private morality we cannot excuse our

failures of impartiality by blaming them on our genes, or on society, or on the imperfect and never sacrosanct moral rules it upholds.

Ultimately, I remained unconvinced that while moral progress based on developing our sympathetic and other affective capacities may only "lengthen the leash on which our genes have us," reason is potentially fully autonomous and can totally transform our social motives. Singer pays rather too little attention to our cognitive departures from perfect rationality, which surely can operate even at the most concrete levels of moral evaluation. He also ignores the complex structural processes within and between societies which reinforce in-group loyalties, selfishness, and so on. And, in any case, there are well-known philosophical inadequacies with his particular candidate for the ideal ethical principle - especially when extended beyond humanity to encompass the interests of other species. That said, this is a refreshing book because of his eminentlly same attitude to sociobiology. It should also be illuminating to most sociobiologists, not just philosophically for the ethical challenges it poses and often clarifies, but also because it suggests some intriguing empirical ideas which may be well worth pursuing. Overall, its attractions definitely outweigh its faults - and I would urge human ethologists both to read it and to respect such interdisciplinary endeavours.

References

- M. Midgley. *Beast and Man: The Roots of Human Nature*. Harvester Press, Hassocks, Sussex, 1978.
- M. Ruse. *Sociobiology: Sense or Nonsense?* D. Reidel, Dordrecht, Holland, 1979.
- P. Singer. *Animal Liberation: Towards an End to Man's Inhumanity to Animals*. Jonathan Cape, London, 1976.

ETHNOLOGY: ITS NATURE AND RELATIONS WITH OTHER SCIENCES By Robert A. Hinde

Fontana Paperbacks, 320 pp; 1982

Reviewed by P.A. Russell
University of Aberdeen
Scotland

There is no particular shortage of overviews of ethology but one from Robert Hinde compels attention. Hinde's aim here has been to capture the essence of the discipline by illustrating and illuminating general issues and themes through relatively in-depth consideration of a limited number of specific examples.

The book begins with a section on 'core' ethology, comprising two chapters devoted to each of the 'four whys' of immediate causation, development, function and evolution. This section, drawing on examples from classical ethology, mainly bird behaviour, will be familiar ground to many but provides an admirably clear introduction for newcomers to ethology.

The remainder of the book, rather more than half, is devoted to consideration of the relationships between ethology and a variety of other behavioural disciplines, which receive a chapter apiece. This reflects Hinde's thesis that not only is it difficult to define and delineate ethology but particularly intriguing and fruitful developments are likely to occur at those overlapping zones where ethology meets and shades into other disciplines. One group of chapters deals with biological disciplines. In chapters on behavioural endocrinology and neurophysiology, Hinde argues that advances in our understanding of the physiological substrate of behaviour are critically dependent on the ethological cornerstone of detailed descriptive analysis of behaviour in natural or semi-natural settings. A brief chapter on comparative psychology is devoted to a historical account of its divergence from and subsequent reconciliation with ethology. Given its startling recent rise, it is initially surprising that the new discipline of sociobiology does not rate a chapter to itself but this is evidently a deliberate play reflecting Hinde's dissatisfaction with the proselytizing stance of some sociobiologists. The subject is aired as part of a chapter on behavioural ecology, where Hinde regards sociobiology as an unnecessary new term and takes the opportunity for a gentlemanly riposte to Wilson's (1975) attack on ethology and psychology, arguing that Wilson's rejection of the usefulness of such ethological concepts as aggression and drive is unnecessary and unjustified and showing that, moreover, Wilson's own ideas on the feasibility of dissociating ontogenetic and causal factors and on the reduction of behaviour to physiology are naive and misleading.

The third section of the book is devoted to relations between ethology and the social sciences where, in an introduction, Hinde confesses that it implies an ethology which has detached itself from its essential comparative roots. Material conventionally dealt with under this heading is separated into separate chapters illustrating how ethology has contributed to and in turn been enriched by developments in social psychology, developmental psychology, anthropology and psychiatry. In keeping with the comparative theme, Hinde draws on the examples of non-verbal communication, interpersonal relationships, attachment, mother-infant separation, social organisation and psychopathology to illustrate how it is possible to abstract from the study of a range of animal species general principles the applicability of which to understanding the human case can then be appreciated. Comparative studies thus serve to point up key differences as well as similarities between the behaviour of humans and animals. Any social scientist doubting the value of comparative studies should read this section.

The anthropology chapter also addresses the difficult and controversial question of the validity and usefulness of ecological and evolutionary analyses of human social systems and customs. A key question here is how far social systems and customs are constrained by environmental factors to the extent that they can be regarded as adaptations to local conditions. Hinde concludes that the broad features of a culture must be compatible with environmental constraints but that since there may be more than one cultural 'solution' to a given set of constraints, detailed differences between cultures may be unrelated to environmental factors. Even more problematic, through what mechanisms are social adaptations achieved? Hinde shows that various features of human social systems such as reproductive strategies, kinship systems and the incest taboo are explicable in terms of natural selection and the concept of inclusive fitness and believes that the question is not whether this sort of analysis is appropriate but how far it can be taken. Although Hinde is not unaware of the numerous problems in this area and here, as elsewhere in the book, frames his conclusions with suitable circumspection, the necessarily brief treatment can hardly do justice to the potential intricacies and subtleties of the issues.

On a more general level, Hinde's policy of concentrating on the fruitful points of contact between ethology and other disciplines does mean that the limitations and weaknesses of the ethological approach are not exposed and also sometimes results in a rather misleading picture of a discipline. This is particularly highlighted in the chapter on experimental psychology, in which he focuses entirely on the contribution of ethological thinking to the development of laboratory studies of relatively simple kinds of animal learning. Hinde gives no inkling of the fact that not only do these studies form just a small part of contemporary experimental psychology, but this discipline is now largely given over to the study of cognitive processes, about which ethologists have traditionally had little say. Moreover, it is surprising that the recent tentative moves in the direction of a 'cognitive ethology' (Griffin, 1978) receive no mention in the book.

This carp aside, Hinde's book is undoubtedly the most masterful brief survey of ethology available.

References

Griffin, D.R. Prospects for a cognitive ethology. *Behavioural and Brain Sciences*, 1: 527-538 (1978).

Wilson, E.O. *Sociobiology*. Harvard University Press; Cambridge, Mass. (1975).

THE HUMAN PRIMATE. By Richard E. Passingham
W.H. Freeman and Co., San Francisco, 390 pp. (1982)

Reviewed by James R. Anderson
University of Stirling, Scotland

Three aspects of Passingham's book combine to make it a thoroughly informative and enjoyable account of behavioural primatology and neuropsychology: it is simply well written; it is up to date; and there is a nice comparative slant to it, often taking in examples from non-primates.

With regard to the style of the book, there is little to say except that issues are set out clearly and unhurriedly. Topics potentially dry and shapeless to, say, the average psychology undergraduate, are structured from the outset by a few guiding questions. For example, discussion of sensory apparatus and abilities (Chapter 2: "Senses") is introduced by three initial questions: Why is the human sense of smell relatively poor? Is there evidence of our hearing being specialized for speech perception? How does our perceptual world compare with that of our nearest nonhuman neighbours? The author then goes on to consider the issues in terms of the lifestyles of various species, with appropriate pauses to examine particularly interesting or anomalous examples, and to take stock. At many points throughout the text, there are suggested topics for further research. Some of these represent (often surprising) gaps in basic knowledge, e.g., How does sensitivity to touch stimuli compare in various primates? - to more theoretical questions - e.g., Why should colour vision of New World monkeys be less well developed than that of Old World primates? In this general fashion, the author goes on to tackle a variety of issues, including intelligence (Chapter 5), reproductive systems in nonhuman primates and marriage in humans (Chapter 9: "Family"), and tool-use (Chapter 6: "Technology"). The book is well organized, with only a few peculiar placements of topics. For example, the tapetum (the light-reflecting membrane found in the eyes of many nocturnal species) turns up in the section on smell but not sight. (Even so it serves as an example of an adaptive structure clearly related to lifestyle - one of many such examples to be found in the book.) Another example: Chimpanzees' use of stones to hammer open nuts is briefly mentioned only in the section on cultural traditions (Chapter 7: "Culture"), and not in the chapter entitled "Technology," where other types of tool-use in nonhuman primates are introduced and followed by consideration of the stone tools of early humans.

The book is up to date. A quick check through the references (and there are getting on for 1,000 of them) revealed that around 25% are five years old or less; over 50% are less than ten years old. This clearly reflects the rapid growth of new information in brain and behavioural sciences, and a modern synthesis that focuses on implications of the research on primates is very welcome. Examples: it is nice to see recent findings on tool-use and meat eating in West African chimpanzees

being given careful consideration, and conclusions reached from the early studies in east Africa being updated in the light of the new material (Chapters 6 and 7). The current controversy surrounding the linguistic abilities of great apes is also dealt with thoroughly, with space given to some (though not all) of the recent criticisms of the language projects by Terrace and his colleagues.

The book contains many comparisons of structural and behavioural traits across species, and this aspect has two major effects. First, it frequently refreshes the reader during passages concentrating on one topic as it relates to primates. Second, the comparisons serve to illustrate different solutions to ecological problems. Although the book is mainly concerned with primates, lions, raccoons, squirrels, sparrows, hyenas, and many other nonprimate species are used to good effect. In Chapter 10 ("Competition"), for example, territorial behaviour of male sticklebacks and speckled wood butterflies is used to illustrate the usual pattern of victory to the resident male in male-male encounters, before the difficulties in the concept as it applies to primates (human or otherwise) are tackled. This broad comparative approach will clearly increase the general appeal of the book.

There are also many comparisons of adaptations across and within primate species. Consider, for example, brain-behaviour relationships. Increased direct connections between pyramidal fibres and motoneurons across monkeys and apes corresponds well with increased opposability of thumb and fingers (Chapter 4: "Limbs"). In humans, the foot is represented in the sensory cortex by an area about half the size of that devoted to the hand, whereas in the rhesus monkey, there is equal representation (Chapter 2). Facts of this type, when set comfortably into a framework of the species' ecological niche, prepare one well for later discussions of other topics, e.g., intelligence, tool-use, bipedalism, etc.

It should be pointed out that there are some areas where potentially enlightening comparisons seem to have been neglected, although this is perhaps inevitable in a book which packs in so much from diverse areas. For example, mention might have been made of the gorilla's apparent inability to show self-recognition in a mirror, as assessed by the Gallup dye test. Passingham is aware of the first report of this finding. Perhaps he was being prudent in not mentioning it until more data were available; they are available now, and support the initial finding. Such studies may turn out to have implications for our ideas on the extent of self-awareness in primates. Elsewhere, the tool-using abilities of great apes are described, but without reference to the curious fact that tool-use has virtually never been observed in wild-living orangutans, despite many thousands of hours of observation. However, such omissions are of minor importance in such a book, and it might be expected that diligent students will eventually discover for themselves that, for example, despite Passingham's confidence, observation learning in monkeys remains

very difficult to show under controlled conditions, or that in addition to hamadryas and gelada baboons, most chacma and many anubis baboons do not sleep in trees but on cliff ledges.

The Human Primate deals largely with the ways in which research on nonhuman primates contributes to our understanding of human evolution. It is fairly complete in its subject matter, with only few current comparative topics escaping mention (microwear patterns on teeth in relation to diet, and Piagetian-type cognitive tasks are two that come to mind). In conclusion, the book consists of ten chapters and a conclusion, and all of them could comfortably provide a good basis for seminars. Teachers looking for a modern, stimulating textbook covering topics ranging from social behaviour in primates, through comparative neuropsychology, to the role of language in human intellectual functioning are strongly advised to look at this fine book.

NIM By Herbert Terrace, Knopf (1979)

Reviewed by David Alan Munro
Laguna Beach, California

I read Herbert S. Terrace's Nim on vacation and must remark the lack of ethnological thinking in the recent rise and fall of "chimpanzee language." Terrace is an unabashed behaviorist, student and disciple of B.F. Skinner, believer in Skinner's Verbal Behavior (1957) as a true picture of how humans acquire language, even a proper specialist in pigeon behavior. Yet, he has also, in Project Nim, made the most thorough -- and devastating! -- analysis to date of the chimpanzee's accomplishment/limitations in a human language. In a sense, after Nim (1979) the subject is closed, and has gone into history as another false lead, like Clever Hans, the horse. Too vaudevillian to last.

Yet, language most certainly did originate with a human ancestor very like a chimpanzee, and the linguistic accomplishments of Nim, Washoe, Sarah and others may well reflect a pristine state of the art. Therefore, the "chimp chapter" in the history of communication science may not be closed, after all. It may have been barely opened.

The proper research question is certainly not how well can a chimpanzee (or gorilla) perform in a human language, but how do they "talk" in their own interchimp (or intergorilla) language. What's Chimpanzee, the language, like? What does it tell us about our Ursprache?

To attack this problem, we would make the linguistic-ethnological working assumption (not made by Terrace) that learning Chimpanzee for a chimpanzee is an imprinting process: specifically that 1) it is controlled by a critical period, 2) it is (near-)instantaneous, 3) it is "by exposure" to the communicative behavior of other chimps, 4) it is learning that is (relatively) irreversible, and 5) what is to be learned is in outline "known in advance."

It is ironic that imprinting in language-learning was an early Chomsky assumption (1957), yet the only attention Terrace pays the great linguist was in the sportive name he gave his animal-subject, Nim Chimpsky.

Terrace, the Gardner and others, have shown that a chimp can "sign," i.e., employ an arbitrary symbol for a concept not present. Nim does it by gesture. We do it by vocalizations. Other species may use smells, or sonar reflections, etc. And, while, no doubt, interchimp communication is largely visual, we know little further about it. Certainly to impose the straightjacket of human language and human syntax upon chimp communication is to thwart its understanding.

Chimpanzees, not unlike the Harlows' rhesus babies and human babies, begin by identifying "mama," and finding a symbol for her. Possibly all primates use symbolic smells to begin with. In any case, this first identification within a single-species community leads to the identification and finding of symbols for other conspecifics. Relevant members of other species are similarly identified and symbolized. Call these symbols "names" and the process "signing." It is the beginning of language.

Whatever is learned that is of social import by individuals in a social community must be symbolized to continue to exist. Therefore, the study of Chimpanzee must begin with studying how these animals exchange necessary and/or enjoyable symbols. Goodall reports an on-going resistance to mother-son incest among chimpanzees, for instance, and we must stand in awe of the symboling involved, over years, in the maintenance of this taboo. Terrace informs us that Nim "groomed" his teachers, though he had never seen it done, indicating the innate nature of this symbol-loaded chimpanzee activity. The real communication mysteries remain. We are not very close to decoding Chimpanzee, despite the work of the last twenty years.

In fact, decoding Chimpanzee does not seem to be the objective. Terrace talks wistfully of someday asking a chimpanzee what it's like to be a chimpanzee. But this seems an absurd question, one which Terrace himself could not answer if the situation were reversed. More meaningful, as we have indicated, is the study of chimpanzee signs and symbols, as possibly ancestral, for light on how we came by our own.

Chomsky, Noam. *Syntactic Structures*, Mouton, 1957

Skinner, B.F. *Verbal Behavior*, Appleton-Century-Crofts, 1957

THE WOMAN THAT NEVER EVOLVED. By Sarah Blaffer Hrdy
Harvard University Press, Cambridge. 256 pp. (1981)

Reviewed by Clara B. Jones
Museum of Comparative Zoology, Harvard University
Cambridge, MA

The anthropologist, Sarah Blaffer Hrdy, has demonstrated a remarkable ability to detect patterns within primate behavioral phenomena that may have broad evolutionary significance. Her work with Hanuman langurs led to the first identification in vertebrates of the hierarchical system whereby rank is negatively correlated with age, and therefore, positively with reproductive value. This social feature has subsequently been demonstrated in other primate groups and offers researchers a powerful predictive basis for the analysis of the relative genetic costs and benefits of particular social acts by individuals within population sub-units. For example, "altruistic" behavior is expected to correlate positively with age and negatively with reproductive value since old individuals have less to gain than younger ones from expected selfish reproduction. Hrdy's most publicized achievement has been her "sociobiological" interpretation of infanticide. In this view, infanticide may be employed selectively by some males against others' offspring in the selfish maximization of reproductive success where such behavior triggers estrus in potentially receptive females and permits insemination by the infanticidal male. While this behavior pattern has not been established as a barrier to gene flow, Hrdy's analysis suggests that infanticide may be a significant determinant of a population's genetic architecture.

Not only is Hrdy a skilled naturalist, but she also possesses the rare ability to translate her experiences as a field primatologist into entertaining reading for a general audience. Her highly regarded *The Language of Abi: Female and Male Strategies of Reproduction* stands, in my view, with Wilson's *On Human Nature* as the most accessible, straightforward and readable popularization of a "genetical" approach to social behavior. It is against this professional background, then, that one anticipates a new book by Hrdy and with regret that one registers serious but not unqualified reservation. Its contents address somewhat unsuccessfully a sorely-neglected question of seminal importance to behavioral scientists: how should (genetically) self-interested females behave?

The *Woman That Never Evolved* is a difficult book to review because Hrdy includes many fascinating, indeed, chatty, details drawn from many sources but fails to provide relief or contrast. Such breadth however, may enhance circulation of the book for it asserts numerous "beliefs" loosely connected to empirical work that many individuals within and without the academic community want to hear in this historic phase. In this volume, Hrdy re-views non-human primate mating systems, emphasizing, in particular, patterns of "social inequality based on sex." This value orientation derived from "feminist" politics is, by Hrdy's

admission, a bias that leads her to stress a concern for the quality of social and private life reflected in a division of labor by sex. As such, an otherwise straightforward literature review (revealing the overwhelming prevalence among the primates of male dominance and selfishness relative to females in similar conditions) is employed as a counterpoint to a discussion of those interesting but occasional species (48 by my estimation) exhibiting some degree of "female emancipation." (I have taken the latter term from the bird literature and would define it informally as the relative degree of control an individual female has over her reproductive career.) Without her political message, Hrdy might have interpreted these data directly in terms of several conventional paradigms derived from evolutionary formulation (e.g., sexual selection; kin selection; stable strategies; behavioral ecology), employing the same models to analyze human cultural patterns. Instead, she demonstrates a "paradigm shift" when focusing upon the human species, emphasizing arguments based upon proximate factors (e.g., politics; religion) rather than ultimate ones.

In effect, Hrdy claims that since non-human primate species vary with respect to mating system and female role and since intrasexual competition for food resources may have favored "assertive" females, human females are therefore inherently plastic behaviorally with respect to "role." This non sequitur and Hrdy's discussion of human phenotype (reminiscent of Watson) fail to address major theoretical concerns that are appropriate to a consideration of evolution in human as well as non-human societies. Some of these concerns are the following: (1) On purely logical, not to mention ethological, grounds, if non-human primates vary with respect to social traits, one must infer that humans will vary as well. Moreover, any attempt to mold human societies into phenotypically "egalitarian" patterns will incur serious physical costs for certain individuals who are likely to be female if this sex is more "canalized" than the male sex: (in similar environmental conditions), as G.C. Williams, among others, has pointed out. (2) Hrdy fails to address the question of "units of selection," in particular, whether individual females might vary with respect to particular behavioral traits, or whether individuals will vary as components or sub-units of "trait groups". (3) If selection has acted on males and females differently, Hrdy's conclusion "that there are no important differences between males and females in intelligence, initiative, or administrative and political capabilities" is untenable, if only because, as B.F. Skinner has pointed out to me (personal communication), the sexes will be expected to respond differentially to environmental (including social) stimuli. (4) If Hrdy is correct that (intraspecific) "competition is the trial by fire from which these [competitive] capacities emerged", then egalitarian, rather than egalitarian, patterns may be most likely to arise (except in particular regimes that Hrdy does not identify or discuss). (5) The literature of sociobiology as well as anthropology suggests a strong negative correlation between social complexity and egalitarianism, and economists and systems theorists have identified strong associations between equality

and inefficiency. (6) As Rawls has argued, hierarchical social organization might be favored because the least advantaged individual in an egalitarian structure may receive relatively greater benefits than the least advantaged individual in an egalitarian society (all other things being equal). (7) Hrdy's claim that folivory favors larger groups than frugivory is inconsistent with (Crookian) ecological theory; this apparently results from her confusion of patterns of food dispersion with food type.

It is currently fashionable to stress -- in the technical and popular literature -- the (hypothetical) role of female-female competition in structuring populations and to give such competition equivalent weight in evolutionary "adaptive stories" with the role of male-male competition. While it is important to evaluate the potential for female behavior to have evolutionary effects, such evaluation by scientists must be constrained by biological theories based on "first principles" rather than the humanistic concern for "equal time" and an "egalitarian" approach I believe that justification exists in the theoretical and empirical literature for looking much more closely at the possible evolutionary effects of female-female and female-male behavior in mammals. However, it is important to keep in mind that male "strategies" are a function of what is best from the male, and not the female, (genetic) point of view. Since evolution proceeds on the basis of asymmetries between individuals, "egalitarianism" must be understood as a phenotypic (reproductive) strategy that may serve genetic self-interests in some environmental mosaics.

It has been said that anthropologists realize and humanize God, and I am genuinely interested in Hrdy's civilized views. Nonetheless, myth cannot substitute for science. It is my opinion that civilized principles can best be served by informing the scientifically uninitiated about the probabilistic and rather scary universe of "first principle" science and its implications for human social patterns. Hrdy's very readable analysis continues a tradition, very strong in the social sciences, whereby metaphor substitutes for evidence and hypothetical-deductive reasoning. In *The Woman That Never Evolved*, Hrdy's metaphors about human behavior (and, sexual behavior in general) derive from belief, not from evolutionary biology. To her credit, she is explicit about that bias, and her readers, especially students, should be explicitly informed.

RECENT LITERATURE

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

Books and Book Chapters:

- Barrett, S.A. Models and Morals: Biological images of man. In F.F. Brain and D. Benton (Eds) *Multidisciplinary Approaches to Aggression Research*. New York: Elsevier/North Holland Biomedical Press, 1981.
- Craig, G.J. Human Development. Third Edition. Prentice Hall, New Jersey. Approx. 608 pp. Examination copies available November 1982, publication date January 1983.
- Cunningham, M.R. Sociobiology as a supplementary paradigm for social psychological research. In L. Wheeler (Ed.) *Review of Personality and Social Psychology Vol. 2*. Beverly Hills, CA: Sage, 1981.
- Kirsch, J.A.W. and Rodman, J.E. Sexuality and selection: The Darwinian view of homosexuality. In W. Paul and J.D. Wiener (Eds), *Homosexuality: Social, Psychological and Biological Issues*. Beverly Hills, CA: Sage, 1982.
- Rajecki, D.W. and Planery, R.C. Social conflict and dominance in children: A case for a primate homology. In M.E. Lamb & A.L. Brown (Eds.), *Advances in Developmental Psychology Vol. 1*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1981.
- Weinrich, J.D. Is homosexuality biologically natural? In W. Paul and J.D. Weinrich (Eds.), *Homosexuality: Social, Psychological, and Biological Issues*. Beverly Hills, CA: Sage, 1982.
- Weistfeld, G.E. The nature-nurture issue and the integrating concept of function. In B.B. Wolman (Ed.), *Handbook of Developmental Psychology*. Englewood Cliffs, NJ: Prentice-Hall, 1982.
- Articles:
- Ahern, F.M., Johnson, R.C., Wilson, J.R., McClearn, G.E. & Vandenberg, S.G. Family resemblances in personality. *Behavior Genetics*, 1982, 12, 241-280.
- Asendorpf, J. & Wallbott, H. Contributions of the German "expression psychology" to nonverbal communication research. *Journal of Nonverbal Behavior*, 1982, 6, 135-147.
- Braggio, J.T., Braggio, S.M., Weber, A., and Nadler, R.D. Degrees of familiarity differentially influence the quality and quantity of social interactions in 2 species of great apes. *Journal of Human Evolution*, 1982, 11, 359-366.
- Catell, R.B. Inflation and business cycles from the standpoint of psychology and sociobiology. *The Journal of Social, Political and Economic Studies*, 1982, 7, 35-54.

Davidio, J.F. and Ellyson, S.L. Decoding visual dominance: Attributions of power based on relative percentages of looking while speaking and looking while listening. *Social Psychology Quarterly*, 1982, 45, 104-113.

Ekman, P., Friesen, W., and Ancoli, S. Facial signs of emotional experiences. *Journal of Personality and Social Psychology*, 1980, 39, 1135-1151.

Feingold, A. Do taller men have prettier girlfriends. *Psychological Reports*, 1982, 50, 810-811.

Feyerisen, P. Temporal distribution of co-verbal hand movements. *Ethology and Sociobiology*, 1982, 3, 1-10.

Hackney, H. Facial gestures and subject expression of feelings. *Journal of Counseling Psychology*, 1974, 21, 173-178.

Haug, G., Hemminger, H., and Schumacher, A. Aggressive interactions in a kindergarten group. *Aggressive Behavior*, 1982, 8, 238.

Herbert, M., Stuckin, W., and Stuckin, A. Mother-to-infant bonding. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 1982, 23, 205-222.

Jensen, G.D. and Oakley, F.B. Ageism across cultures and in perspective of sociobiologic and psychodynamic theories. *The International Journal of Aging and Human Development*, 1982, 15, 17-27.

Jensen, J.M. and Candland, D.K. Facial expression in nonhuman primates - a structural approach. Paper presented at the meeting of the Animal Behavior Society, Ft. Collins, CO, June, 1980.

Keating, C.F., Mazar, A., Segall, M., Cysneiros, P. Culture and the perception of social dominance from facial expression. *Journal of Personality and Social Psychology*, 1981, 40, 615-627.

Klinner, M. Infants' use of mothers' facial expressions for regulating their own behavior. *Society for Research in Child Development* 1981.

Knowles, P.L. Facial expressive cues in person perception. *Perceptual and Motor Skills*, 1979, 48, 119-122.

Lamb, M.E. Paternal influences on early socio-emotional development. *Journal of Child Psychology and Psychiatry and Allied Disciplines*. 1982, 16, 185-190.

Lambourne, R.D. and Wheeladall, K. Estimation by microcomputer of interobserver agreement in duration recording of behavior. *Behavioral Psychotherapy*, 1982, 10, 48-53.

- Lewontin, R., Rose, G., and Kamin, L. Bourgeois ideology and the origins of biological determinism, *Race & Class*, 1982, 24, 1-16.
- Ley, R.G. and Bryden, M.P. Hemispheric Differences in Processing Emotions and Faces, *Brain and Language*, 7, 1979, 8-17.
- Major, B. and Heslin, R. Perceptions of cross-sex and same-sex nonreciprocal touch: It is better to give than to receive, *Journal of Nonverbal Behavior*, 1982, 6, 148-162.
- Martin, D., Wilson, M., and Weghorst, S.J. Male sexual jealousy, *Ethology and Sociobiology*, 1982, 3, 11-28.
- McEachron, D.L. and Baer, D. A review of selected sociobiological principles: Application to hominid evolution. II. The effects of intergroup conflict, *Journal of Social and Biological Structures*, 1982, 5, 121-140.
- O'Hair, H.D., Cody, M.J., and McLaughlin, M.L. Prepared lies, spontaneous lies, Machiavellianism, and nonverbal communication, *Human Communication Research*, 1981, 7, 325-339.
- Ragan, J.M. Gender displays in portrait photographs, *Sex Roles*, 1982, 8, 33-43.
- Schubert, G. Infanticide by usurper human males: A sociobiological myth, *Social Science Information*, 1982, 21, 199-244.
- Schwartz, B., Tesser, A., and Fowell, E. Dominance cues in nonverbal behavior. *Social Psychology Quarterly*, 1982, 45, 114-120.
- Strube, M.J. and Werner, C. Interpersonal distance and personal space: A conceptual and methodological note. *Journal of Nonverbal Behavior*, 1982, 6, 163-170.
- Swartz, K.B. A comparative perspective on perceptual, cognitive, and social development. *Journal of Human Evolution*, 1982, 11, 315-320.
- Swartz, K.B. Issues in the measurement of attachment in non-human primates. *Journal of Human Evolution*, 1982, 11, 237-246.
- Thomas, R.K. The assessment of primate intelligence. *Journal of Human Evolution*, 1982, 11, 247-256.
- Vauclair, J. Sensorimotor intelligence in human and non-human primates. *Journal of Human Evolution*, 1982, 11, 257.
- Weisfeld, G.E. An extension of the stress-homeostasis model based on ethological research. *Perspectives in Biology and Medicine*, Autumn 1982.
- Weisfeld, G.E. and Beresford, J.M. Erectness of posture as an indicator of dominance or success in humans. *Motivation and Emotion*, 1982, 6, 113-131.
- Weisfeld, G., Weisfeld, G., and Callaghan, J.W. Female inhibition in mixed-sex competition among young adolescents. *Ethology and Sociobiology*, 1982, 3, 29-42.
- Weischilling, H.R. The manifestation of aggressive behaviour in the kindergarten and its relation to some aspects of the child's status in the group. *Aggressive Behavior*, 1982, 8, 237-258.
- Whittaker-Bleuler, S.A. Use of nonverbal behavior in detecting winning and losing in tennis. *Perceptual and Motor Skills*, 1982, 54, 1139-1144.
- Audiotapes:
- Barnett, S.A. Biological images of man: 1 and 2. (Parts 18 and 19 of the Science Show), ABC Radio. (Available from ABC Merchandising, GPO Box 487, Sydney 2001 Australia)
- Papers presented at the 19th Congress of the International Ethnological Society, August 1982, Atlanta, Georgia:
- Bailey, W.T. Affinity: an ethologic perspective of the infant-father relationship in humans.
- Braggio, J.T. Use of Rumbaugh's transfer index task to evaluate the complex learning skills of nonhuman primates, human children, and rodents.
- Buchanan, J.P., Hall, A.D., and Braggio, J.T. Assessing the cognitive capacities of human and nonhuman primates by using nonverbal, Piagetian-type tasks.
- Camras, L. Friendship, dominance, and children's behavior in a conflict situation.
- Dienske, H. and de Jonge, G. Ethologic explication of criteria for psychiatric assessment of children.
- Dolgin, K.G. and Azmitia, M. The use of emotional displays in decisions about intention by children of different ages.
- Dolgin, K.G. and Sabini, J. Tongue-shows do have an effect upon observers' willingness to interact.
- Elias, M.F. and Konner, M.J. Two subcultures of maternal care in the United States.

- Essock-Vitale, S.M. and McGuire, M.T. Self-deception in social support networks.
- Hand, J.L. Egalitarian vs. dominance/subordination mechanisms for resolving social conflicts.
- Hartung, J. Deceiving down: conjectures on the management of subordinate status.
- Hausser, M.D. Some behavioral ramifications of old age in non-human primates and their similarity to behavior in older-aged humans.
- Haynes, O.M. and Stettner, L.J. A microanalytic description of the forms of smiling in mother-son dyads.
- Hold, B., Attili, G., and Schleidt, M. Friendship among preschool children - a cross-cultural study.
- Hinde, R.A. Signal movements: Expressions or negotiation?
- King, G.E. New perspectives on predator defense by primates and early hominids.
- Kirkevoid, B.C. and Lockard, J.S. Adult-child retrieval signals: maternal vs. paternal success.
- Krakauer, D. The evolution of self-deception.
- Lancaster, J.B., Allen, M.L. and King, B.J. Sexual dimorphism in body size among humans and the African apes: evolutionary implications.
- Levine, D.W. and Hill, E.M. The ethics of naturalistic observation: participants' vs. role players' views.
- Lockard, J.S. Proximal mechanism(s) of self-deception.
- Loigman, G.A. and Stettner, L.J. Response of judges to baby faces selected to depict specific emotion signals.
- Loigman, G.A. and Weisfeld, G.E. Association of social success in humans with attributes related to dominance displays.
- Malatesta, C.Z. An overview of the development of emotional expression in the human infant.
- Mason, W.A. Developmental aspects of primate social interaction and the perception of intention.
- Mathews, K. Acquisition of concepts by autistic children can result in the structuring of spatial-temporal behavioral sequences.
- McGonigle, B.O. & Chalmers, M. Strategies for inference taking in child and monkey.
- Michael, R.P. & Zumpe, D. Sexual aggression and the influence of season in man.
- Moore, M.M. Male and female responses to invitation and solicitation behaviors in women.
- Munro, D.A. The destabilization of Freudian concepts by ethology.
- Parsch, W.S. Cultural systems and genetic change: a bio-cultural model of rapid evolution.
- Perloe, S.I., Blumberg, S.H., & Solomon, G.E. The effect of cultural rules on male and female differences in smiling at infants.
- Rosenblum, L.A. Effects of foraging requirements on mother-infant relations.
- Smith, M.S. Grandparenting as kin investment.
- Stettner, L.J. & Haynes, O.M. Form and function in human smiling: an empiric and methodologic analysis.
- Strayer, F.F. A cross-sectional study of social dominance and cohesive behavior among young children.
- Suomi, S.J. Primate models of psychopathology: origins and current status.
- Tardieu, C. Osteology, dissection, and cineradiography of the knee joint in three hominoid primates: implication for the evolution of hominoid locomotion.
- Thelen, E. Ontogenetic adaptation and prolonged motor immaturity in human infants.
- Trevathan, W.R. Delineating an ethogram of human maternal behavior in the first hour after birth.
- Watts, E.S. Adolescent growth and development in monkeys, apes, and man.
- Wergel, R.M. The application of decision theory to the study of children's social conflicts.
- Welles, J.F. Self-deception as a social paradigm. (Retitled, Self-deception as a positive feedback mechanism.)
- Whittaker-Bleuler, S.A. Deception and self-deception in competitive sport. (Retitled, Dominance and deception in competitive sport.)

Wynn, T. Piaget, stone tools, and the evolution of human intelligence.
Zivin, G. On lacking a framework for developmental transformations of communicative elements.

BULLETIN BOARD

Donald C. Johanson, author of the book LUCY, is currently hosting a new television series for PBS called "Nature." Dr. Johanson was a guest lecturer at the IPS conference in Atlanta. His speech, entitled "Recent Fossil Discoveries in East Africa: a View of Early Hominid Evolution," was well received by the Congress. He is also director of the Institute for the Study of Human Origins in Berkeley, Ca.

ISHE member, Clara Jones expounded on the issue of whether comparative psychology has been cannibalized by the neurosciences and sociobiology. Her article appeared in the December 1981 issue of Comparative Psychology.

Phillip H. Gray, another ISHE member, has a recent book review on The Origins & Rise of Ethology: the Science of the Natural Behavior, authored by W.H. Thorpe, published in Contemporary Psychology, Vol. 27:5, 1982. His article is entitled "Ethology at the Crossroads."

JGPP Transitions: After considerable debate over the future of the Journal of Comparative and Physiological Psychology, the Ad Hoc Committee on Editorial Policy Issues decided last December "to incorporate a much broader spectrum of animal behavior research" by publishing two journals - one in the field of comparative psychology and the other in behavioral neuroscience. "The new journal will depart from its emphasis on multi-experimental laboratory studies to include equal emphasis on field studies or any methodology that yields valid empirical information. Ethological, ecological, and applied sciences will be welcomed along side the traditional developmental and learning studies. Occasional review articles will also be published." The new journal's title will be Comparative Psychology and Behavior with Jerry Hirsch as the editor. The first issue is due for publication in March 1983. Manuscripts should be addressed to: Jerry Hirsch, Editor, Comparative Psychology and Behavior, Psychology Building, 603 East Daniel Street, Champaign, IL 61820-6267.

Newly elected president of APA is Janet Spence, a University of Texas educational psychologist whose recent research has focused on gender and gender differences.

ISHE members nominated for ABS terms beginning in 1983 are: Jeanne Altmann as Second President-Elect and David E. Miller as Parliamentarian. The ballot and resumes of the candidates will appear in the November ABS Newsletter.

Perception Press, Ltd. of Oxford University has recently established a periodically updated list of zoological journals, textbooks, and reference works to aid in continuing education objectives. Two recent journals are: ZOOLOGICAL SCRIPTA of the Royal Swedish Academy of Sciences covering taxonomy, phylogeny and biogeography; and ACTA ZOOLOGICA from the Norwegian Academy of Science and Letters concentrating on functional cytology, histology, and gross morphology. They are registered at Headington Hill Hall, Oxford OX3 0BW; their registration number is 46518/England.

Human Neurobiology is a new international journal focusing on current research on the normal and abnormal human brain and claims to stay up to date with data...correlated in such areas as perception, cognition, memory, emotion, sleep, speech, etc. Volume 1 (which includes four issues) is due for publication November 1st. Chairman of the Editorial Board is Dr. D.H. Ingvar, Dept. of Clinical Neurophysiology, University Hospital, S-22185 Lund, Sweden.

Applied Psycholinguistics edited by Sheldon Rosenberg, Dept. of Psychology, University of Illinois at Chicago Circle, Chicago, IL 60680 "...encompasses work on both normal and disordered language and communicative development in children and normal and disordered language and communicative function in adults."

Emotion in the Human Face 2nd edition charts "...the developments of the last decade: the Facial Action Coding System and other methods for directly measuring facial movement; better understanding of the phylogenetic substrate of human facial behavior and of the neurological implications of facial asymmetry." The author is Paul Ekman, Human Interaction Laboratory, University of California, San Francisco.

