

Human Ethology Newsletter

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SOCIETY NEWS

1994 CONVENTION UPDATE

The 1994 ISHE convention will take place 3-7 August in Toronto, Ontario, Canada, as previously announced. The venue is Victoria University of the University of Toronto. Irwin Silverman is the chief organizer. Krista Phillips and Leon Sloman are assisting with local arrangements. Linda Mealey is organizing the program. Glenn and Carol Weisfeld are coordinating publicity.

Victoria University is located in downtown Toronto, readily accessible to museums, galleries, shopping areas, and other points of interest. Dormitory rooms are available at \$60 per night, twin, and \$42 single, including breakfast (\$50 and \$35, respectively, for undergraduate students and persons 65 and over). Alternative arrangements have been made at the Park Plaza, a deluxe hotel several minutes' walk from the University, at \$99 for a single or double room. All prices are in Canadian dollars, which are presently at about 75% of US dollars.

In the interests of economy and efficiency, Irwin will establish an inclusive registration fee, covering the welcoming reception, lunches, refreshments, barbecue, banquet, and Book of Abstracts. He will also arrange individual fees for each of the above events for spouses and guests.

Additional information will appear in the next Newsletter, along with the Call for Papers and registration forms for the convention and accommodations. Questions about

arrangements should be directed to Irwin by phone at 1-416-736-5822, fax at 416-736-5814, E-mail at ISILV@VM1.YorkU.CA, or mail at Psychology Department, York University, 4700 Keele St., North York, Ontario, Canada, M3J 1P3. Questions about the program should be directed to Linda Mealey by phone at 1-612-363-3135, E-mail at LMEALEY@csbsju.edu, or mail at Psychology Department, College of St. Benedict, Collegeville, MN 56321 USA. Linda will be unavailable until February.

Now is the time to begin talking up the convention with your colleagues and students, and thinking about what you might present there. Toronto is a great, safe, manageable, cosmopolitan city with numerous nearby attractions such as Niagara Falls. Montréal is just a few hours away by rail.

If you have any suggestions on how to publicize the convention, please contact Glenn Weisfeld. This includes the name and address of any appropriate newsletter or journal that will run an announcement, or any professional society that will give us their mailing list. Now is the time to call in those markers!

ETHOLOGY AND SOCIOBIOLOGY

Now that *Ethology and Sociobiology* has been taken over by the Human Behavior and Evolution Society, a dispute has arisen concerning its name. Some individuals have proposed a name change, perhaps to the *Journal of the Evolution of Human Behavior*. Those who take this position seem to be some of the people who call themselves "evolutionary

psychologists" and want to avoid the political stigma of the term "sociobiology." Others oppose a name change, saying that the journal is very frequently cited in indices and has an excellent reputation. There is also the matter-not unimportant to ISHE members, who were instrumental in founding the journal and remain frequent contributors--of retention of the term "ethology."

Another issue that has arisen is whether or not to make any changes in the editors, a possibility that was broached at the 1993 HBES convention. Some individuals have voiced support for the efforts of Michael McGuire, the editor-in-chief. The reasons for adding a fourth editor, one proposal, have not been made clear. The other current editors are Nick Blurton Jones and Peter K. Smith.

This dialogue has occurred through a new electronic bulletin board arranged by an HBES member. The address is HBES-L@ARIZVM1.cit.arizona.edu. You may wish to express your views on these topics by addressing the users of this bulletin board en masse or by contacting the Secretary of HBES, Margo Wilson, at Main Office, Psychology Department, McMaster University, Hamilton, Ontario, Canada L8S 4K1, tel. 1-905-525-9140, ext. 23000, fax 1-905-529-6225, E-mail WILSON@MCMASTER.CA. The bulletin board may prove serviceable to members for other reasons also.

A reduced rate for *Ethology and Sociobiology* is now available for HBES members. The rate is \$60 US, or \$150 for three years (half price for students). Payment may be sent to Margo Wilson at the address above.

MEMBERSHIP DIRECTORY

Everyone who has renewed his or her membership to ISHE for 1994 will be listed in the Membership Directory soon to be prepared. If you have not yet paid your dues, please complete the form on the last page. Whether you have already renewed or not, please complete the form on the second-last page (or a photocopy thereof). If you do not complete this form, the same information will be used that appeared in the last directory. If you do not

pay your dues promptly, your name will be excluded from the directory. The last calendar year through which you are paid is mentioned on your address label.

Please note that we have a new Treasurer, Barbara Fuller; all payments should go directly to her. Members may now pay by credit card (VISA, Master-, or Eurocard). Please use this method if at all possible, as it saves us currency conversion charges.

1993 ESS MEETING

The European Sociobiological Society held its annual conference in Amsterdam 19-21 August 1993. Approximately 50 members attended the conference, entitled "Sociobiology and the Arts." A list of the papers follows.

"Why we make art," by Nancy E. Aiken, P. O. Box 27, Guysville, OH 4535 USA.

"Painterly attraction and the prejudices of perception," by Paul van den Akker, Vakgroep Kunstgeschiedenis en Archeologie, Vrije Universiteit, De Boelelaan 1105, 1081 HV Amsterdam, The Netherlands.

"The Pythagorean perspective," by Robin Allott, 5 Fitzgerald Park, Seaford, East Sussex BN25 1AX, England.

"Apotropaic iconography in a non-territorial context," by Jan Baptist Bedaux, Vakgroep Kunstgeschiedenis en Archeologie, Vrije Universiteit, De Boelelaan 1105, 1081 HV Amsterdam, The Netherlands.

"Art and domestic morality," by Kathryn Coe, Hispanic Research Center, Arizona State University, Tempe, AZ 85287-2702 USA.

"Alexander Pushkin and the memetics of reputation," by Brett Cooke, Dept. of Modern and Classical Languages, Texas A & M University, College Station, TX 77843-4238 USA.

"The biology of Dostoevsky's *Crime and Punishment*: cultural text as adaptive mechanism," by Gary Cox, Dept. of Foreign Languages, Southern Methodist University, Dallas, TX, USA.

"Evolution, brain and arts," by Valery Dinev, Dept. of Philosophy, Sofia University, 15 Rusky Boulevard, 1000 Sofia, Bulgaria.

"Music as a human behaviour: an hypothesis of evolutionary origin and function," by Ellen Dissanayake, 329 W. 20th St., New York, NY 10011 USA.

"Biology as scientific argument in political debates: a resurgent problem in Europe," by Vincent S.E. Falger, Dept. of International Relations, University of Utrecht, Janskerkhof 3, 3512 BK Utrecht, The Netherlands.

"Art and aspects of creative behaviour in rhesus monkeys," by Cor Goosen, TNO Medical Biological Laboratory, Lange Kleiweg 151, P. O. Box 5815, 2280 HV Rijswijk, The Netherlands.

"Art making behavior in sentient mammals: implications for therapeutic enrichment, motivation and aesthetics," by David R. Henley, The School of the Art Institute of Chicago, Dept. of Art Education and Art Therapy, Columbus Drive at Jackson Blvd., Chicago, IL 60603 USA.

"Effects of factors influencing the sex ratio of newborns following wars," by Lajos Hüse, Tizashonvéd u.i. 3300 Eger, Hungary.

"Animal aesthetics and human art," by Thierry Lenain, Avenue Wannecouter 1-bte 11, B-1020 Bruxelles, Belgium.

"Adaptive role of the aesthetic experience--an epistemological approach," by Andras Ludmany, Heliophysical Observatory of the Hungarian Academy of Sciences, P. O. Box 30, H-4010 Debrecen, Hungary.

"The utilitarian value of human aesthetic judgement," by James W. McAllister, Faculty of Philosophy, University of Leiden, P. O. Box 9515, 2300 RA Leiden, The Netherlands.

"Vegetable, animal, human: the perils and powers of trespassing (sociobiological) boundaries," by Eric S. Rabkin, Dept. of English Language and Literature, University of Michigan, 7611 Haven Hall, Ann Arbor, MI 48109-1045 USA.

"Phylogenetic behavioural valences as an 'organizing factor' in the development of cultures and civilizations," by Antonio Santangelo, Piazzale Giovanni dalle Bande Nere 2, 20146 Milano, Italy.

"Preliminary findings on testing biological principles of art," by Wouter W. van der Schaar, Laagschardammerweg 3, 1476 ND Schardam, The Netherlands.

"Art in the head: about teaching, about thinking, about art," by Stephen W. Shipps, 22 Prospect, Newburyport, MA 01950 USA.

"The line between science and politics: comments on recent revisions to ESS policies regarding the use of sociobiology for political purposes," by Irwin Silverman, Psychology Dept., York University, 4700 Keele St., North York, Ontario, M3J 1P3 Canada.

"Guardians of the network of human altruistic exchange," by Arthur M. Squires, Virginia Polytechnic Institute and State University, P. O. Box 10098, Blacksburg, VA 24062 USA.

"Ethological aspects of apotropaic symbolism in art," by Christa Sutterlin, Forschungsstelle für Humanethologie, Max-Planck-Institut, vorder-Tann-Strasse 3-5, D-82346 Andechs, Germany.

"Beauty: an evolutionary and chaos-theory perspective," by Frederick Turner, University of Texas at Dallas, Box 830688, Richardson, TX 75083-0688 USA.

Membership Renewals for 1994

It is time to renew your membership for 1994 if you have not already done so. Membership is by calendar year, so dues are to be paid by the first of the year. If the date on your mailing label is earlier than the current year, it is time to renew your membership. For economic reasons, renewal notices are not sent. Those who do not renew their memberships will be removed from the membership list. Please report any errors, change of address, etc. to the editor. Current dues and directions for payment are given on the last page.

CRIMEAN CONFERENCE

An international conference on "The Biology of Politics" will be held in the Crimea 26-30 May 1994. The conference is one of the annual series sponsored by the Crimean Medical Institute, Simferopol State University, and Crimean Ethological Association.

Topics will include (1) biological roots of politics, (2) political changes and human psychopathology, (3) politics and behavior, and (4) politics and childhood. Invited speakers are H. J. Eysenck, I. Eibl-Eibesfeldt, R. D. Masters, M. T. McGuire, V. P. Samohvalov, A. N. Kornetov, W. Schiefenhövel, D. Ploog, R.

A. Hinde, J. Maynard Smith, R. L. Trivers, and R. Dawkins.

Deadline for abstracts is 15 April, 1-2 pages in English. Send to Dr. Vitaly Egorov, M.D., Department of Psychiatry, Crimean Medical Institute, Simferopol, 333000, Republic of Crimea, Ukraine, CIS.

Registration fee is \$70 before 1 April, \$80 thereafter. Send name, address, academic degree, telephone, fax, and E-mail information to Dr. Egorov.

Single rooms are \$90 per night, double rooms \$75 per person per night; lodging is to be purchased in cash upon arrival. These fees include all meals, transportation, excursions, and cultural activities. Banquet tickets may be purchased for \$10 upon arrival.

REPLIES TO AN ARTICLE

Homosexuality, Sociobiology, and Stress

By George Kocan, 27 W 179 Galusha Rd., Warrenville, IL 60555 USA

Frans Roes has indeed tackled a perplexing subject in the September 1993 issue of HEN. He proposed to explain human male homosexuality using sociobiological theory.

He argued that heterosexual men normally compete with each other over women. Homosexual men, on the other hand, would not compete but, instead, would form bonds, which would in turn facilitate cooperation between them and allow them to rise in male dominance hierarchies. However, in order for homosexuals to take advantage of their superior positions in social hierarchies, Roes assumes that they must eventually become heterosexual. Otherwise they will not pass on their genes to another generation.

Roes contrasted his theory with Trivers' (1985) explanation based on kin selection. Genes for homosexuality would be

adaptive if their phenotypes somehow improved the reproductive fitness of their kin, "as helpers at the nest," for example. However, Trivers' (and Roes) rejected this possibility because such helpers should be asexual rather than sexual.

In my opinion, Roes is having trouble with his theory because it is essentially self-contradictory. He starts out with the assumption that homosexuality is something inherited and genetically specified--why else attempt a sociobiological explanation? Then he is forced to abandon that assumption to permit some reproduction.

Roes argues that homosexuals would compete with each other in a social hierarchy. But men form strong bonds anyway during their climb up the social ladder, without the need for sexual relations. On the other hand, homosexual relations are known to be unstable (Nicolosi, 1991) and, therefore, unreliable in dominance competitions.

Homosexuality presents a challenge to the theoretical biologist because it persists and yet should not persist. It is truly a paradoxical

situation.

The most parsimonious approach is to view homosexuality as it has traditionally been viewed in the behavioral sciences, as pathology. The persistence of diabetes or prostate cancer in the human population does not make them adaptive and in need of any sociobiological analyses. They are simply diseases.

Perhaps the clues to the etiology of homosexuality can be found in biopsychology. Ward (1974) stressed pregnant rats and found that the male offspring exhibited more female sexual behavior, lordosis, and less male behavior, mounting, than controls. Harlan et al. (1979) reported that stress *in utero* was associated with compulsory effeminate behavior in boys, without any changes in sex organs. Boys expressing conflict in sexual identity show a high frequency of severe stress in their backgrounds, e.g., a stay in the hospital (Green, 1974).

Margolese (1970) found a biochemical difference between homosexual and heterosexual men in the ratio of androstene to etiocholanolone (A/E). Homosexual men's A/E values fell closer to the female range than did those of heterosexual men. Non-healthy heterosexual men, ones suffering from diabetes or severe depression, also had A/E values near the female range.

Homosexuality, in other words, implies an early psychophysiological history of severe stress. This does not rule out a sociobiological explanation. But its existence may suggest the need for another line of theorizing.

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Response to Frans Roes' Explanation of Male Homosexuality

By Kent G. Bailey, Linda B. Roswell, and Helen E. Wood, Virginia Commonwealth University, Richmond, VA 23284-2108 USA.

Roes raises a number of interesting issues in his commentary on male homosexuality (*HEN*, September 1993). He suggests that male homosexuality may have evolved as a device to improve social dominance among unrelated males who were unwilling to engage in typical male-male competition. Along with Trivers (1985), Roes rejects the inclusive fitness, or "helpers at the nest," notion set forth by Wilson (1978), and, thus, *some* heterosexual activity in homosexuals must be assumed if their genes are to survive. We have several responses to the issues raised.

(1) Roes seems to take the approach of first observing a current human behavioral phenomenon (viz., male homosexuality), and then "creating" possible scenarios in original evolutionary environments where predispositions toward the behavior might have been selected. Thus, (a) homosexual males in current highly populated environments tend to band together, perhaps to improve their social dominance; (b) therefore, let us look for some similar substrate for this

phenomenon in the original environment of evolutionary adaptiveness (EEA).

The current approach in evolutionary psychology (Tooby & Cosmides, 1992; Tooby & DeVore, 1985) is to *first* determine what the original EEAs were like, how they shaped the complex design characteristics of the adaptation in question (e.g., proneness to homosexuality), and only *then* to look for (or attempt to predict) expressions of the original mechanism in current environments. By definition, expressions of an evolved trait in the original EEA are adaptive, but expressions in the current environment may or may not be. Current expressions may exaggerate, attenuate, or distort the original trait characteristic. Indeed, much physical and mental pathology seems to reflect "mismatches" between the original design characteristic (e.g., xenophobia or a taste for sweet fruit) and current expressions (e.g., racism or excessive consumption of refined sugar); see Williams & Nesse, 1990.

(2) It is unlikely that homosexuality, as such, evolved as a specialized adaptation in the first place. Early human groups in the Pleistocene probably numbered 25-50 people divided into 5-7 families of mostly blood kin and perhaps a few "psychological kin" (Bailey & Wood, 1993). With such sparse numbers, how could ipsisexual non-breeders or rare-breeders be adaptive relative to adult heterosexual men who were all potential breeders? If we assume that one male of the 15 or so adult males in a band of 50 is homosexual, then male potential reproductive success is reduced by 7%. If we further assume that he must have at least one collaborative homosexual partner so that "improved social dominance" may be selected for, then male reproductive success will be reduced by nearly 14% for the band. If we compute by *family* rather than by band, then one homosexual is likely to reduce male RS by as much as 50-100%. It is difficult to see how any benefits from homosexuality would increase overall fitness in view of these large losses in RS. If more than two homosexuals per band were needed to form a core group of sociosexual allies, then the reproductive loss would be proportionately greater.

(3) There is one way that the thrust of both Wilson's (1978) "helpers at the nest"

notion and Roes' argument for improved social dominance might be preserved. If we assume that a very small proportion of males in the band or family does help around the "nest" by aiding women and offspring, then it is clear that the homosexual's alliance is with *women* rather than other homosexual men. This view gets around the dramatic losses in male RS associated with certain males collecting in non-breeding clusters for some ostensible social purpose. Moreover, the homosexual may accrue benefits in the form of protection and support from the women in the band when he is put upon by more dominant male heterosexuals. Indeed, this form of social organization could conceivably produce higher levels of inclusive fitness than a group where all males are potential breeders. Here the homosexual would facilitate *survival* of offspring but not their *reproduction*. Note that this argument stretches the notion of inclusive fitness quite a bit and hints at group selectionism.

(4) To circumvent these problems, we argue that *effeminacy*--and not altruism or homosexuality per se--was the primary precursor of modern homosexuality that was selected for in the EEA. That is, perhaps effeminacy was normal for a small minority of males in original ancestral bands, thereby helping to cement the alliance between male homosexuals and women in the group. Male heterosexuals probably tolerated them, and no one was in the closet. Perhaps adult heterosexual males would even engage in brief and occasional dalliances with homosexuals, somewhat like the facultative homosexuality that occurs today in prisons. That many current homosexuals appear just as masculine as heterosexuals may reflect the severe bias against overt homosexuality in modern society. This prejudice notwithstanding, childhood gender nonconformity (effeminacy) is the only reliable predictor of later homosexuality in modern contexts (Wenegrat, 1984).

This evolutionary scenario is consistent with the hypothesis that a small proportion of the peripheralized males in the ancestral group may have opted for effeminacy as a reliable means of avoiding violent attacks from dominant males (Wenegrat, 1984). Such effeminate peripheralists might have enjoyed relative safety and freedom while ensconced in their submissive, effeminate gender roles.

Reproductive success was probably mediated by some indirect or attenuated form of heterosexuality. Note that this explanation emphasizes individual and not group selection.

(5) The peripheralist male who opted for effeminacy in the EEA would not have been truly homosexual but, rather, a submissive and probably weakly heterosexual male (see Ellis & Ames, 1987) who was unwilling to risk injury in what was often violent sexual competition. Yet, when most of the group's males went off hunting, he would have been (a) freed from male attack for heterosexual overtures and (b) "in the land of plenty" in terms of friendly women. It is easy to imagine *some* heterosexual activity in this setting of low sexual competition and high sexual access. Ergo, homosexual genes are transmitted into future generations in a steady but trickling stream.

Badcock (1991) points out that homosexuals of both sexes lead active sex lives, often have children, and seldom are completely exclusive in their sexual preference. He concludes that a pattern of fluctuating bisexuality characterizes most modern homosexuals, and that the male homosexual is especially prone to deceive "other males by appearing to be less-than-male in appearance or behavior" (p. 153). Such deception serves to relax both the sexual competitiveness of other males and the defenses of the female against seduction. This strategy may offer the only route to reproductive success for effeminate peripheralist males unable to compete directly against other males for RS.

(6) If the effeminacy-deception strategy was adaptive for a small proportion of peripheralist males in ancestral bands, then today it ought to be evident in less developed, preindustrial societies. In America, homosexual customs have been observed in numerous native tribes and, since ancient times, men have dressed as women and lived with other men as "wives." Westermarck (1906) tells of similar practices around the world where homosexuality is associated with cross-dressing, renunciation of the heterosexual role, assumption of female domestic duties, and friendships and alliances with women. Homosexual roles are often assigned to effeminate males who cannot attract a woman or who fail in competitive rites of passage (e.g.,

the berdaché; see Wenegrat, 1984). These males are generally of low status, but they sometimes hold special roles in the group. Sometimes adopting this sex role is a precondition for future shamanship and other spiritual duties, and homosexual prostitution occasionally plays a role in religious observances.

(7) We suggest that true homosexuality did not evolve either as an altruistic adaptation or as a homophilic adaptation for increasing male social dominance (see also Wilson, 1983). What evolved much earlier was a basic mammalian bisexual continuum that allowed for wide behavioral flexibility depending upon environmental circumstances. In humans, this behavioral continuum proceeds from highly feminized-weakly heterosexual males to minimally feminized-strongly heterosexual males. Mellen (1981) hypothesizes that gene mutations that reduced heterosexual masculinity may have contributed to progressive cultural advances during hominid evolution. The more neotenized, sensitive, communicative male was not only more "cultural," but also a better prospective mate and parent in the eyes of women. Modern homosexuality may be a by-product of this progressive softening of ancient male traits of physical violence, dominance conflict, and male bonding.

In summary, highly feminized males in the EEA were on the periphery of the group (along with other nondominant males) and were forced to achieve reproductive success in indirect and deceptive ways. Being a helper at the nest, therefore, provided two major individual benefits: escape from male competition and formation of alliances with sympathetic women who provided reliable social support and occasional sexual access.

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BOOK REVIEWS

The Sexual Brain

By Simon LeVay. The MIT Press, 55 Hayward St., Cambridge, MA 02142 USA, and London, England. 1993. xvi + 168 pp., \$22.50 (hdbk.).

Reviewed by David G. Hays, 25 Nagle Avenue, Apt. 3-G, New York, NY 10040 USA

For most ethologists, most of the information in this book is essential. (Specialists who review the work will have to say whether the information is complete, unbiased, and accurate.) LeVay, whose field was the neurobiology of vision, who published one laboratory paper on sexuality and the brain, and who has become an academic administrator, intends his book on sexuality to be "accessible to any interested reader" (p. xv). I think it is, and it contains much that is new to me.

LeVay begins by defining sex and discussing its evolution and development. A gene, the testis-determining factor (TDF), is triggered in the male embryo some 2 months after conception; its action leads to the release of androgens, which masculinize the organism. The female grows without sexual hormones.

The androgens "bring about many different effects in different regions of the body, both during development and later during adult life" (p. 26). For example, testosterone determines, during a critical period, that two perineal muscles and associated spinal neurons survive in the male; in the female, some of these cells die, and the two muscles, involved in penile erection, are smaller (pp. 48-49).

In his chapter on brain organization, LeVay concludes that the evidence for localization of function is "overwhelming," but that a complex activity ("playing the clarinet") must require skills "distributed over many systems and circuits" (pp. 35-36). He gives particular attention to the hypothalamus, and he discusses several techniques. The behaviors and neuro-glandular mechanisms of sexual intercourse are treated in a few pages. A chapter on courtship is mostly about birdsong and eye contact.

Maternal behavior in the rat follows from "a reorganization of the brain under the influence of at least four hormones ..." that are released just before delivery (p. 64). A long pathway leads from the sensations that accompany suckling back to muscular expulsion of milk. In that pathway are cells of the hypothalamus, separated from each other by glial cells that withdraw "A few hours before

the birth of the pups" (p. 66). LeVay grants that maternal behavior can be learned in the absence of the hormones, but he cites studies suggesting that the presence of androgens shortly before birth alters at least "the range of circumstances in which such [maternal] behavior is exhibited" (p. 69).

In chapter 9 (pp. 71-81), LeVay defends the assertion that "There are separate centers within the hypothalamus for the generation of male-typical and female-typical sexual behavior and feelings." Chapter 10 deals with development; a striking finding is that adult behavior of male rats castrated just before or after birth depends on timing; their "sex-typical behavior is organized during the critical period" during the first few days (p. 87). In 1972, Ingeborg Ward reported that male offspring of rats held "in a Plexiglas tube under bright lights ... for 45 minutes, three times a day, for the last week of pregnancy" (p. 90) show bisexual behavior at maturity. Experience has effects both before and after birth.

Differences between male and female not related to sexual behavior (chapter 11) include, for example, performance on "the water-level test: the subject is asked to indicate the surface level of some water in a drawing of a tilted flask. ... in one study by Sandra Witelson at McMaster University 92% of the (heterosexual) men but only 28% of the women passed the test" (p. 100). LeVay cites some evidence for effects of fetal hormone levels on the abilities and tendencies treated in this chapter.

Chapter 12, on "Sexual Orientation and Its Development," is twice as long as the runner-up, the only chapter to say much about history, and perhaps the least conclusive. Only the brief chapter 13, on gender identity, has less definite results to report.

Epitomizing his views in an Epilogue, LeVay tells us that genetic inheritance and life experience combine to determine our nature, and that "even environmental and cultural influences on the mind operate through biological mechanisms" (p. 138). In my opinion, his book will lead many readers to understand

these two points and to agree with him on them. I am delighted to see the growing neurobiological explication of ethograms.

The Ant and the Peacock: Altruism and Sexual Selection from Darwin to Today

By Helena Cronin. Cambridge University Press, The Pitt Building, Trumpington Street, Cambridge CB2 1RP, England; 40 W. 20th St., New York, NY 10011 USA (\$39.50 hdbk.), 1991.

Reviewed by William A. Abruzzi, Rt.1, Box 75, Leicester, NC 28748 USA

Professor Cronin performs a great academic service by tracing the history of Darwinism and neodarwinism, especially as they relate to the issues of sexual selection and altruism. Many writers have addressed these matters and have provided us with cogent arguments as to how natural selection and survival might be compatible with concepts of altruism and sexual selection. However, on reading this intriguing volume, one is tempted to cry out, 'Eureka! It's really simple!'

Cronin has a way with words. She is able to take ideas, distill them, and funnel them into shorter, more intelligible conclusions. What entire books have tried to do (such as *Janus*, *Panda's Thumb*, and *Hen's Teeth and Horses' Hooves*), i.e., to point out that adaptations resulting from natural selection do not have to be perfect in order for us to eschew creationist concepts, Cronin manages to do in a few succinct early in the book. Suddenly, the notions of 'contraptions as opposed to contrivances' and of the 'skillful tinkerer' become clear and simple.

Like most of the adaptations that Cronin discusses, this book is not perfect. A long section is devoted to a defense of how Darwin's theory explains both 'prodigious diversity', or adaptive complexity, and 'fundamental likenesses'. There would seem to be some needless repetition here which begins to resemble a somewhat petulant polemic, even

with some exhortative proselytizing.

On the other hand, the theories of Lamarck and deMonet are beautifully expounded and rebutted, and should be put to rest for most informed readers. Also discussed are the differences between classical Darwinism and so-called modern Darwinism. The author points out that the latter has a much greater conception of the inevitable costs of adaptation: "When classical Darwinism looks at a mix of hatched and spoiled eggs it sees above all an imperfect instinct that points to absence of conscious design. For modern Darwinism, the same mix is the result of selection for mixed tactics."

It would be difficult to imagine not finding in such a book a thorough discussion of the differences among various leading evolutionists, especially regarding diversity (specialization) and adaptation (phyletic evolution). Indeed, beginning on page 81 Cronin presents a discussion of the possible scope of natural selection. This section is superbly crafted, and makes fascinating reading as a result of the author's impeccable research and her command of colorful anecdotes and descriptions.

To make sense, within a natural selection framework, of some seemingly unadaptive characteristics of many animals, including the peacock's flamboyance, the bee's suicidal sting, and the widow bird's dysfunctional long tail, requires a scholar and talented communicator. Cronin is both. She says in effect that for sexual selection to occur, mate choice must act as a selective force. It must bring about differential rates of reproduction favoring those individuals that have the preferred characteristic.

Her rebuttal of the arguments against sexual selection is similarly effective. Again, perhaps there is too much detail on each and every inconsistency between Darwin's and Wallace's views, especially regarding sexual dimorphism as it relates to protection and recognition. However, for those readers interested in sexual selection, there is a fine description of the evolution of female choice: its adaptive advantages, the selective pressures that have given rise to these preferences, and how they are maintained (pp. 174-188).

The connection between selection of the most vigorous and attractive male on the one hand and, on the other, the female's sense of robustness, possibilities of male investment in offspring, and overall survivability, is well made. At the same time, Cronin does not hesitate to deal with the issue of the costs that may be involved in selecting for these characteristics. Information about parasites, Zahavi's handicap principle, and the selection pressures caused by the male's manipulating female taste, are all woven well into the author's paradigmatic fabric. As Fisher said in 1915, "'good taste makes good sense,' and at the same time selection is busy refining female judgement...favoring the females who can spot an honest advertisement, and weeding out those who are taken in by cheats."

The 'saintly self-abnegation' of ants is symbolic and central to the message of the second half of the book, in which the author discusses the possible congruity of altruism with natural selection. The usual examples of nonhuman altruism, such as predator warnings, food sharing, companion grooming, orphan adopting, and fighting without seeming desire to maim or kill, are given full shrift. However, the author is not reluctant to discuss other examples of altruism that do not seem to have such obvious survival advantages and that seem to involve not inconsiderable costs. Tennyson's 'red in tooth and claw' and the often referred to 'greater-good view' serve as a latticework for Cronin's discussion of altruistic behavior, Hamilton's prisoner's dilemma, kin selection, 'outlaw genes', the sterility of social insect workers, human morality, and human sterility. Credit is given to the contributions of Mendel, and the arguments of Lorenz regarding aggression are highlighted in a treatment of 'species-level advantage'.

The author dons her cap of philosopher in the same lucid and concise style in a discussion of human morality. The Darwinian explanations of reciprocal altruism, and especially that which suggests that individual sacrifice for the sake of the group can evolve because it pays off in competition between groups, are simply the introduction to the lengthy discussion of 'morality as natural history'.

Even our understanding of evolution as modern Darwinism describes it is enhanced by

this volume. The sense that Darwinism implies a relentless and deterministic, gene-over-culture concept is dispelled, and Darwinism's optimism about the altruistic potential of humans can be seen in a recent quote of Richard Dawkins: 'We have the power to defy the selfish genes of our birth...we can even discuss ways of deliberately cultivating and nurturing pure, disinterested altruism--something that has no place in nature, something that has never existed before in the whole history of the world. We are built as gene machines...but we

have the power to turn against our creators. We, alone on Earth, can rebel against the tyranny of the selfish replicators'.

Cronin's discussion of speciation and the conflicts between those who believe in gradual evolution and those who favor 'punctuated equilibrium' is perhaps a trifle tedious. Instead of frequent references to such and such author, some of that time and space might have been better used in the discussion on breeding and sterility.

However, in general, this is an excellent book. As inferred above, the author is brilliant, exceedingly well informed and trained, able to think independently, and above all, able to communicate her ideas in simple, logical, and irrefutable style. The description of geographic isolation and its relationship to speciation is a perfect example of these remarkable skills put to excellent use. This is a 'must' book not only for thinkers, scholars, and researchers in the field of ethology and evolution, but for biologists, philosophers, and historians in general--as well as for those who might aspire to enter those fields.

THE PURSUIT OF PLEASURE

By Lionel Tiger. Boston: Little, Brown & Co., 1271 Avenue of the Americas, New York, NY 10020 USA, 1992, \$22.45 (hdbk.).

Reviewed by Eric A. Salzen, University of Aberdeen, Department of Psychology, Old Aberdeen AB9 2UB, Scotland.

Tiger attacks the questions of what is pleasure, is it good for you, and why do authorities--religious, governmental, educational, parental--try to forbid it, restrict it, or regulate it. He seeks the answers with the fundamental question of what is the meaning of pleasure, i.e., what is its evolutionary history and function. His treatment of these issues is encapsulated in the opening paragraph of the introduction (p. 3):

The sexual spasm is the most physically pleasurable human event.

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How does a person become introduced to it? What meaning does it have? How does it fit into the larger picture of personal and communal life? Let me begin this book about pleasure by telling how a newly adolescent Montrealer first experienced willful orgasm.

The first two chapters take a speculative stroll through human evolutionary history. First there are the sensory adaptations to the hunter-gatherer existence—the sweet taste of ripe fruit, the bitterness of plant alkaloids, the warmth of freshly killed meat, the taste of salt to replace sweat loss, and of fat for future lean times. In the case of smells there is fresh air, other humans in the cave, the female sensitivity to male odor and to smells generally for food gathering. Then there are the physiological adaptations to the intermittent availability of food—gorging with no “stop” mechanism, fat stores in the female, social feeding and food sharing, and infant care.

More speculatively, Tiger postulates the existence of inherited responses to burned meat by the campfire. Leisure too is a pleasurable entitlement with its roots in the time between hunts. (So that’s why in so many cultures the men take their leisure while the women keep busy! Sorry. I am emulating the Tiger—a dangerous thing to do, but speculation is so pleasurable, nearly as good as hunting; perhaps it is related to hunting!) Although Tiger then raises the issue of social control of pleasure, he does not look into the possible adaptive origin and function of such controls.

Tiger’s free associations on human adaptations and their relation to modern pleasures include one systematic piece of thinking in the form of an inventory, or classification, of pleasures. This consists of *Physio-pleasures* based on bodily sensations, *Socio-pleasures* based on social interactions, *Psycho-pleasures* based on feelings of competence and individuality, and *Ideo-pleasures* involving mental states and manipulations. However, apart from one chapter on the senses as *Physio-pleasures*, this framework is not used to structure the rest of the book. Rather, Tiger takes a motivational approach, citing the pleasures of sex, eating,

drugs, and power, or dominance. Such topics are more immediately appealing to the prospective book buyer.

Chapter three explains the modern abuse of these pleasures by the altered circumstances of humans. Thus, pure sugar is now constantly available. Sex, however, is not so simple; orgasmic pleasure is too short-lived to be pursued so persistently (Dear me, what are all those sex manuals for?). So, a sociobiological explanation is required, namely adaptive mechanisms that ensure a maximum number of breeding offspring. Addictions also require a different explanation.

Drugs are substances that act directly, either on neurons associated with states of comfort, warmth, and social security, or on neurons associated with states of high performance. This is “...the cortical equivalent of the sweet tooth” (p. 99). Drugs are addictive because there are no physiological “stop” mechanisms and, being taken in private, drugs are not easily subject to social restraint.

The next three chapters explore these ideas. The chapter on sex has aggression thrown in because of its association, both behaviorally and neurally, with dominance, power, access to females, and fitness of offspring. In the food chapter, Tiger free-associates, drawing on his personal knowledge and experience of foods and restaurants. But we do not get away from sex in the form of one-liners. Some of these are meaningful, e.g., “The joy of sex is concealed, the joy of eating is obvious” (p. 174). Others are simply striving for effect: “If the mouth were a male sex organ, it would be erect all the time” (p. 180). And what can one say of an imagination that associates the “double-humped-M logo” of McDonald’s fast food restaurants with “the image of heroic breasts: the distillation of Dolly Parton” (p. 174)?

The chapter on sensory pleasures deals with choices of where to live, forms of recreation, and the arts. Tiger uses the arts to show how authority tries to restrict pleasure. Apart from the arguable question of whether abstract art and modern music *do* give pleasure, it surely is necessary to consider other plausible explanations, e.g., innovative art represents a public display of individual initiative and

nonconformity, and this is a challenge to authority.

In the final chapter Tiger discusses the relations between power and pleasure, including his own pleasure at knowing powerful people. He recounts evidence of the effects of dominance on serotonin levels and on general health, and then launches into a free association on social hierarchies, clubs, subgroups, games, and dominance in sex.

He concludes by pleading for society to recognize the right to enjoy pleasure as much as the right not to suffer pain, and for people to "...believe in the evolutionary entitlement to pleasure" (p. 287). He asserts that "There need be no inevitable contest between order and desire" (p. 298). However, as in so much of this book, assertion is not enough. The balance between individual desires and social requirements is itself an evolutionary adaptation which is sensitive to environmental change.

Perhaps I have taken this book too seriously. It is clearly not intended as a scholarly work. No, this is an airport bookstall paperback with an appropriate eye-catching sexy (but arty, of course) cover picture. It will be a good read for the public. What could be more pleasurable than a book putting the case for the pleasures of sex, food, power, leisure, good company, golf, even a moderate drink?

Seen in this light, it still seems insufficiently structured, too repetitive, and inclined to free-association and digression, almost as if tape-recorded while on a long flight. It is full of bland assertions, one-liners, and self-indulgences. The book says things in which I believe; but it says them in ways that frequently evoke reservations, dissent, and irritation because they are unnecessarily vulnerable to criticism and outright dismissal.

Certainly this book cannot be recommended to professionals in human ethology, sociobiology, or anthropology. But it will convey to the general public some very important ideas and attitudes toward pleasure and personal behavior. A little more attention to its construction, to the line of thought, and to the other factors that could affect pleasurable

behaviors might have conveyed the message more effectively and convincingly. But no doubt the air traveler will enjoy reading this book, and Tiger can take pleasure in the thought that he will be giving ideo-pleasure to others—and of course earn royalties too!

ANNOUNCEMENTS

Bibliography of Human Behavior

Faithful readers of the newsletter will recollect that a call was issued for information about *Human Ethology Abstracts*, which have appeared irregularly in the journal *Man-Environment Systems*. Since this ISHE project has lain fallow in recent years, it is timely that a book of abstracts of works on human ethology and related fields has just appeared. Entitled *The Bibliography of Human Behavior*, it is edited by Hiram Caton and his associates, Frank K. Salter and J. M. G. van der Dennen. The bibliography contains 6700 entries from journals and books. This is by far the largest collection of titles concerning biological approaches to human behavior, a literature estimated at 60,000 titles. About 80% of the entries were published after 1979, but classic works are included. ISHE and the Forschungsstelle für Humanethologie are among the collaborators acknowledged. The entries are organized under 19 headings, including human evolution, prehistory, human biology, sociobiology, behavior genetics, parenting, sexuality, and ethology (over 1000 titles). There are author and subject indices. The 600-page volume is available from Greenwood Publishing Group, 88 Post Road West, Box 5007, Westport, CT 06881 USA for \$95 (hdbk.; no plans for a paperback edition). Credit card orders can be placed by calling 1-800-225-5800, a toll-free (*gratis*) number.

Correction

In the September issue Bill McGrew was incorrectly identified as European editor of *Ethology and Sociobiology*. Since July 1992 that position has been filled by Peter K. Smith. The editor apologizes for this error.

Delwart Foundation Proceedings

The proceedings of the Brussels International Symposium on "Biological Evolution and Ethical Conduct" of 1991 have just been published by the Fondation Jean-Marie Delwart. Edited by Georges Thinès, the book contains chapters by Edouard Boné, Hubert Montagner, Jacques-Dominique de Lannoy, Patrick Lemoine & Bernard Lachaux, Luis Miguel dos Santos Sebastião, Léon Sann, Luc de Heusch, and Thinès in French, and by Robin I. M. Dunbar and Richard W. Byrne in English. The book is available for 1050 Belgian francs from L'Académie Royale de Belgique, Palais des Académies, Rue Ducale 1, B-1000 Bruxelles, Belgium.

Behavioral Genetics Methods

Article

Nancy Segal, has published an article in the *American Psychologist* on methods used by behavioral geneticists to test evolutionary hypotheses. The article, "Twin, sibling, and adoption methods: tests of evolutionary hypotheses," appeared in the September issue (vol. 46, no. 9), pp. 943-956. For Nancy's address should you wish to request a reprint, see the Officers' Box.

International Primatological Society

The 15th Congress of the International Primatological Society will be held in Kuta, Bali, Indonesia on 3-8 August 1994. For information, contact the Congress Secretariat: PT Buana Gelar Pariwisata, Wisma Bank Dharmala--19th Floor, Jend. Sudirman Kav. 28, Jakarta 12910, Indonesia. Abstracts are due 30 March.

Orangutans Conference

The First International Conference on Orangutans: The Neglected Ape will take place in Fullerton, California, USA on 5-8 March 1994. For information, contact Norm Rosen, Dept. of Anthropology, California State University, Fullerton, CA 92634-9480 USA.

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American Society of Anthropologists

The annual meeting of this society will be held in Seattle, Washington, USA on 27-30 July 1994. For information, contact Dr. Carolyn Crockett, Primate Center SJ-50, University of Washington, Seattle, WA 98195 USA.

ISHE members may wish to attend this convention and then travel by rail to Toronto for our meeting 3-7 August. The US train is the "Empire Builder," from Seattle to Chicago. From Chicago, depending on time of arrival, take either the "International" to Toronto or one of three daily trains to Detroit (then take a taxi to the Windsor, Canada train station and take a VIA Rail train to Toronto). The Seattle-Chicago train has sleeping cars (*wagons-lit*) and takes two days. For information, call Amtrak at 1-800-872-7245 in the US or Canada, or your travel agent. The Canadian train goes

from Vancouver (Canada) to Toronto and takes three nights. It is also very scenic. The current price is \$355 Canadian (plus \$284 for a sleeper), or about \$265 US; students and those over 60 pay \$308 Canadian (plus \$256). This is about a 4000km trip; costs about the same to fly. For information, call VIA Rail at 1-800-561-3949 from the US, or your local VIA Rail office elsewhere. Canadian trains are more dependable than US ones, and cost about the same.

ESS Conference

The seventeenth meeting of the European Sociobiological Society will take place 25-28 August in Krems (near Vienna), Austria. The major theme will be "Sociobiology and Social Intelligence." Local organizer is Dr. Anton Furlinger, Isbarygasse 13, 1140 Vienna, Austria, tel. 222-949598.

CURRENT

December 1993

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

Please send reprints or citations of articles or books to the Current Literature Editor, Bob Adams. Please be sure that the publications has not already been cited in this space.

Archer, J. (Ed.) (1994). *Male Violence*. Routledge, Cheriton House, North Way, Andover, Hampshire, SP10 5BE, U.K. £14.99, \$19.95 (ppr.). Needs Reviewer.

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