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ISHE to meet in Ghent, Belgium July 27th - 30th 2004

The 17th Biennial Conference of the The International Society for Human Ethology will be held in Ghent, Belgium next summer from the 27th to 30th of July. The Program Committee is busy with advance preparations and will soon list plenary speakers and issue a Call for Papers.

Ghent is one of Western Europe's most attractive historical cities, known for its excellent gourmet dining and extensive cultural life. Its university was founded in 1817 and is one of the largest universities in the Low Countries. The city is located 55 km to the west of Brussels, covers 156 sq. km of which 36 sq. km is port area. It is the second largest city of the region 'Flanders', and the third centre in Belgium. Ghent is the core city of a metropolitan area of 515,000 inhabitants; 290,000 people live in the villages of the Ghent commuting belt outside the city limits. Every day, 35,000 people commute to Ghent.

The city combines an impressive past with a vivid present. In summer, Ghent is visited by tourists from all over the world. The historic heart of the city offers a lot of places of interest. From St Michael's bridge there is a wonderful view on the skyline of Ghent with the three impressive towers of St Nicholas' Church, the Belfry with its bell tower and St Bavo's cathedral with the world famous painting "The Adoration of the Mystic Lamb" by Jan van Eyck. Traces of the Middle Ages were preserved at a lot of places. The old port with its guild halls on the Graslei and Korenlei is merely one example of the beautiful views this town has to offer. Not far from the Graslei arises the Castle of the Counts, once the medieval fortress of the Count of Flanders. Ghent can be discovered by boat, carriage, bicycle or on foot.

The official language in Ghent is Dutch but most people also speak French, English and/or German. The Belgian currency unit is the euro. There are exchange offices and banks in the city centre, credit cards are accepted in most places.

Transport

International air travellers usually arrive at Brussels International Airport. From there, a regular train service connects to Ghent, either at Ghent St-Pieters or at Ghent Dampoort railway station. Visitors to the city center take trains to Ghent St.-Pieters. The conference venue is located in the city center, as are the hotels.

Lodging

The meeting will take place at the Sofitel Gent Belfort, Hoogpoort 53 B-9000 Gent. Through Sofitel, we reserved 50 rooms at the IBIS Kathedraal Hotel at two minutes walking distance from the conference venue. We obtained a special conference discount, rooms here are 95 EURO single room, breakfast included. In addition, 20 rooms are reserved at the NOVOTEL hotel, next to the Sofitel. Here too, room rates are discounted at 127 EURO single room, breakfast

included. These rooms are reserved on a first come, first serve basis. Both the conference location as the hotels suggested here for lodging are right in the middle of the historic city center. Lodging at university dormitories will also be offered later on, as well as contact details for other hotels.

Room reservations can be made directly at the hotel:

Sofitel Gent Belfort
Hoogpoort 53
B-9000 Gent
Belgium
Phone: + 32.(0)9. 233.33.31
Fax: + 32.(0)9. 233.11.02

General information about Ghent can be obtained from:

Tourist Office City of Ghent Administration

Predikherenlei 2
B-9000 Ghent
Tel. +32 (0)9 225 36 41
Fax +32 (0)9 225.62.88
E-mail toerisme@gent.be

Inquiry desk

Crypt of the Belfry
Botermarkt 17A
B-9000 Ghent
Tel. +32 (0)9 266 52 32
Tel. +32 (0)9 266 52 33
Tel. +32 (0)9 266 52 34

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Closed: 25/12 and 01/01

Or at:

www.gent.be/gent/english/index.htm

Or by contacting the ISHE conference organizer:

kristiaan.thienpont@ugent.be

More details on the conference will be provided in the next issue and on our website.

Maintaining a Holistic View of Human Behavior

Glenn E. Weisfeld, Department of Psychology, Wayne State University, Detroit, MI 48202 USA, weisfeld@sun.science.wayne.edu.

Every discipline proceeds by addressing various topics in fits and starts, rather than by progressing pari passu on a broad front. Nevertheless, our field may be in danger of allowing some topics to fall by the wayside. This possible danger is suggested by the coverage found in current evolutionary psychology textbooks. A privileged set of topics seems to be emerging across these textbooks that leaves behind many important aspects of human behavior.

Compounding the problem, publishers of evolutionary psychology textbooks seem to be exerting pressure on authors to restrict themselves to this canon. The same thing has happened in the case of textbooks in various branches of psychology. Textbooks on adolescence, for example, perennially present the same rather arbitrary set of topics, and have done so for at least 60 years. The danger of this approach is that students and researchers will neglect whole bodies of knowledge, and will receive and portray a truncated view of human behavior in evolutionary perspective.

What topics are being neglected? A cursory inspection of four current evolutionary psychology textbooks reveals that mating strategies and kin selection receive extensive coverage. Fear, friendship, and dominance hierarchies gain some mention. However, parent-offspring attachment, sleep, play, feeding, anger, pride/shame, and esthetics (including humor) are given short shrift, as are behavioral sex differences besides those pertaining to mating behavior. If the evolutionary approach is to be seen as more than just a different slant on a limited group of topics, we need to convey its breadth to students.

How might this narrowness of focus have developed? Certainly, the seminal theories of parental investment and kin selection, which launched the field that came to be called sociobiology and, later, evolutionary psychology, provided a great spur to evolutionary analysis. However, perhaps because of the "sexiness" and novelty of these topics, other aspects of human behavior came to be neglected.

To be sure, some of these topics are covered in other psychology courses, but usually in an incomplete fashion. Some topics are included in courses and textbooks on ethology or animal behavior, but these courses usually restrict coverage of human behavior, naturally enough. Texts on emotion or motivation usually cover many of these neglected topics, although play, dominance, parental behavior (including breastfeeding), and esthetics are usually omitted--with the notable exception of deCatanzaro (1999). Child psychology textbooks include attachment and, often, play, but seldom give appreciable recognition to the evolutionary approach. These psychology textbooks, of course, usually overemphasize cognition and learning, neglect motivation (especially in other species) and the evolutionary perspective generally, and treat emotional expression as a minor issue.

A better balance might be achieved by referring to the classical idea of the ethogram. What observable behaviors do people exhibit everywhere? Eibl-Eibesfeldt's (1989) touchstone volume illustrates the value of a comprehensive framework for studying human behavior. This framework can be augmented by Panksepp's (1998) model of basic neural mechanisms of our affects. As exciting work proceeds on brain mechanisms, hormones, and pheromones, it would seem important to bear in mind all of the main motivational mechanisms that organize and prioritize our behavior.

DeCatanzaro, D. A. (1999). Motivation and Emotion: Evolutionary, physiological, developmental, and social perspectives. New York: Prentice-Hall.

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Panksepp, J. (1998). Affective Neuroscience: The foundations of human and animal emotions. New York: Oxford University Press.

BOOK REVIEWS

The Origins of Human Nature: Evolutionary Developmental Psychology

By David F. Bjorklund & **Anthony D. Pellegrini**. 2001. Washington, DC. American Psychological Association. 444 pp. ISBN:1-55798-878-1. US$39.95 (hardcover).

Reviewed by Peter LaFreniere, Dept of Psychology, University of Maine, Orono, ME 04469 USA (e-mail: peterlaf@maine.edu)

For the past 25 years I have been perceived by two separate sets of colleagues either as a developmental psychologist with somewhat suspect interests in evolutionary perspectives, or as a human ethologist specializing in developmental issues. In one setting I would lament the lack of an informed evolutionary perspective on child development and in the other setting, I would remind evolutionists that humans not only evolved but they develop as well. Throughout the past quarter century, I can name only a handful of colleagues who truly overlapped these settings, now I can name two more: David Bjorklund and Anthony Pellegrini.

Both of these scholars have come to their evolutionary senses after a long period of incubation within developmental psychology, with specializations in cognitive development (Bjorklund) and play (Pellegrini). Both subscribe to the most recent school of evolutionary thought (evolutionary psychology), one of four contemporary evolutionary approaches recently assessed and compared by Laland, K. N., & Brown, G. R. (2002).

Overview

After a brief introduction, the authors present the main assumptions of the two models they hope to integrate: evolutionary psychology and "the developmental systems approach". While the former is well known to most HEB readers the latter is familiar to a much smaller percentage. Of course, this is the raison d'etre for this book and the very problem that the authors would like to remedy.

The thesis of the book is presented in 11 chapters, beginning with a statement of purpose and precedent. The authors claim to have found no "overarching evolutionary perspective in developmental psychology" (p.3). Thus, the book is intended to fill this niche. The integration of ontogenetic and phylogenetic concerns leads to a fundamentally different perspective on human psychological functioning than an evolutionary psychology that is not developmentally informed. Among other things, the authors address the following set of issues: "how gene-environment interactions are interpreted, the role of domain-general mechanisms in explaining behavior, the significance of individual differences, an examination of the role of behavior and development in evolution (as opposed to only the inverse) and a belief that higher order cognitions should also be examined from an evolutionary perspective" (p. 4). This is a good list but one that falls well short of a comprehensive treatment of human nature. Conspicuous by its absence is equal treatment of the evolution and development of human emotions (higher or otherwise), an enduring topic in both evolutionary and developmental circles. What is one to make of a view of human nature that does not confront the reality of human emotion? Still as a reviewer I believe it more important to critique what the authors did write about – and there is much to admire in their ongoing synthesis, even if it is incomplete in its current incarnation. I will highlight several aspects of the book that I found most synthetic.

Domain-Specific vs. Domain-General

One of the central ideas in evolutionary psychology is the notion of domain-specific adaptations. I agree with the authors of this book that this concept is particularly valuable to understanding the architecture of the human mind, particularly when it is empirically supported by neurological data. However, it is true that domain-general mechanisms are equally important to human adaptation. It could be argued that they are the hallmark of human adaptation and give our species its unique flexibility to successfully adapt to a wide range of

environmental demands. They key to this flexibility is the unique position of *homo sapiens* as a cultural, linguistic, technological species with an open program designed for socialization and learning. In particular, domain-general mechanisms are much better suited than domain-specific mechanisms in environments where individuals face novel and fluctuating problems requiring flexibility and insight (Chiappe & MacDonald, 2003; MacDonald, 1991).

The either-or camps on this issue are doomed to early extinction, and I applaud the balanced treatment of both perspectives by Bjorklund and Pellegrini throughout this book, but especially in their discussion in Chapters 4: The Benefits of Youth, 5: Classifying Cognition, 6: Prepared to Learn, and 7: Social Cognition. This is required reading material for students of cognition and/or human evolution.

Homo Ludens: The Importance of Play

Another compelling read is Chapter 10 which is an up-to-date summary of the developmental and ethological literature on children's play. This classic topic, as Peter Gray observed in a recent HEB (4,2002) review of Power (2000), has suffered from a contemporary neglect. We are getting too serious for our own good. As director of a university preschool center, I am reminded daily of the ubiquitous importance of play in the lives of preschoolers, and they certainly view it as important! Anthony Pellegrini brings 20 years of research on play, including recent collaborative work with Peter Smith, to the crafting of this comparative, functionalist perspective on the topic.

This chapter could stand on its own, apart from the other chapters, but placed within this book it provides an effective portrayal of how productive it is to combine sophisticated ideas from developmental psychology with an evolutionary perspective. The study of play behavior from this broader perspective can provide an effective counterpoint to the more narrow and utilitarian vision of the public school system and child psychiatry. For example, the systematic suppression of rough and tumble play in American boys through the prescription of Ritalin and other drugs designed to treat their high energy antics as a disease provides an excellent example of a culturally defined psychiatric disorder. When percentages of young boys (mis-)diagnosed with ADHD soar as high as 20% in some communities (only in the U.S. and only in the past decade), it is possible that a functionalist perspective may help to restore a more natural order.

What it Means to Be Human

The book concludes fittingly with an epilogue in which the authors return to the fundamental questions anticipated in the title. Reminding evolutionary psychologists of the importance of linking ontogeny and phylogeny, the authors recapitulate their six basic principles:

1. Evolutionary developmental psych-ology involves the expression of evolved, epigenetic programs.

2. An extended childhood is needed in which to learn the complexities of human social communities.

3. Many aspects of childhood serve as preparation for adulthood and were selected over the course of evolution.

4. Some characteristics of infants and children were selected to serve an adaptive function at specific times in development and not as preparations for adulthood.

5. Many, but not all, evolved psych-ological mechanisms are domain-specific in nature.

6. Evolved mechanisms are not always adaptive for contemporary people.

In conclusion, I recommend this inter-disciplinary volume to scholars and graduate students interested in a unified vision of evolution and development. It represents a useful step towards the integration of two disciplines concerned with human behavior that are likely to remain highly specialized and fractured well into the 21st century.

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Power, T. G. (2000). Play and Exploration in Children and Animals. Lawrence Erlbaum.

Peter LaFreniere is Professor of Psychology at the University of Maine. He completed his Ph.D. at the University of Minnesota's Institute of Child Development in 1982. He is the editor of the Human Ethology Bulletin and the author of Emotional Development: A Biosocial Perspective (2000).

Bulletin Submissions

All items of interest to ISHE members are welcome: Society Matters; articles; replies to articles; suggestions; announcements of meetings, journals or professional societies; etc. These sorts of submission should be sent to the editor. Book review inquiries should go to the book review editor. All submissions should be in English, and sent to the appropriate editor via e-mail, as an attachment in order to maintain formatting. If e-mail is impossible, hard copies will be accepted, as long as they are accompanied by the same text on diskette (preferably in Microsoft Word version 6.0 or earlier). Shorter reviews are desirable (1000 words). **Please include complete references for all publications cited.** For book reviews, please include **publisher's mailing address and the price of hardback and paperback editions.** Political censorship is avoided, so as to foster free and creative exchange of ideas among scholars. The fact that material appears in the Bulletin never implies their truth of those ideas, nor ISHE's endorsement of them.

Second Nature: Economic Origins of Human Evolution

By **Haim Ofek**. Cambridge University Press, The Edinburgh Building, Cambridge CB2 2RU,UK, 2001, 254pp. ISBN 0 521 62534 3 [Pbk] $28.00.

Reviewed by **Dori LeCroy**.

Pointing out that mercantile exchange is an inexorable aspect of human affairs that thrives in spite of laws, moral persuasion, persecution and political pressure, *Second Nature* asserts that this predilection for trade is the result of specific selection pressures. The claim is that the adaptive value of exchanges of goods and services was an early agent of human evolution and not a class of behaviors that emerged out of mental capacities and social structures that formed for other purposes. Further, Ofek reasons that the inflation of human intelligence beyond that necessary for stone-age subsistence, and culminating in the explosion of human symbolic capacity 40,000 years ago (painting, sculpture, ritual, personal adornments, etc., and eventually currency as mercantile lubrication), was due to a self-reinforcing, cognitive arms race of trade strategies.

According to Ofek it all started 1.5 to 2 million years ago with *Homo habilis*, bipedal creatures with brain and body size about half that of modern humans but whose brain was significantly larger than that of their *australopithecus* ancestors. This increase in brain size and the stone tools and animal bones bearing butchery marks found at East African archaeological sites imply that unlike *australopithecus* they were tool making, regular meat-eaters. All this suggests a life style change from an australopithecine-like, feed-as-you-go strategy, still typical of our primate cousins, to a hunter-gatherer strategy of central place foraging that included food sharing. To Ofek it also suggests a change to pair-bonding supported by loss of estrus (more continuous female sexual availability) to felicitate female access to meat protein obtained by males.

Acquiring meat on a regular basis, whether by hunting or scavenging, required an array of abilities: finding meat, defending it, making and using tools and weapons, butchery, etc. Ofek reasons that the most efficient way to optimize this array of skills is through specialization and division of labor. Consequently the challenge of obtaining meat shaped us into a species devoted to skill specialization resulting in populations comprised of highly skilled specialists that enabled greater efficiency. At some point, the importance of fire furthered division of labor and exchange. Fire use preceded ignition and this necessitated specialization in fire maintenance by some group members not involved in foraging activities. Later, ignition ability would be a valued specialty.

Ofek describes the growth of trade over the millennia as an increasing array of commodities (e.g., tools, raw materials, and food items) traded over increasingly larger geographical ranges. He supports his arguments with evolutionary and economic principles and evidence from paleoarcheology. According to this theory, habits of specialization and exchange conferred an unprecedented adaptive advantage and account for the competitive advantage of our early hominid line over contemporary ones, and through a runaway arms race, are responsible for human encephalization.

In Ofek's view, the particular role of natural selection was selection for psychological mechanisms that facilitated specialization, specifically those that enhance individual differences through developmental plasticity that encouraged individuals to mature with different talents and inclinations. Such diversity supports a division of labor that, according to Adam Smith, the 19th century social philosopher and economist that Ofek often refers to, is the engine of exchange.

Division of labor phenomena across a range of organizational levels, between tissues of the body, in symbiosis, in haplodiploid species and in mammals is discussed to illustrate the frequent occurrence of division of labor and exchange in nature. Ofek also points out that, in not being exclusively nepotistic, the human version is unique among animals. Ofek sees nepotistic exchange as evolutionarily ancient and based on the mechanisms of kin selection and sexual selection and shared by humans and other animals alike. But exchange among humans also occurs on a different level of interaction where exchange, is determined exclusively by the merits of the commodities exchanged rather than social and emotional considerations evolved as reflections of inclusive fitness. His argument is that nepotistic and mercantile exchange are phylogenetically and psychologically distinct, and therefore we cannot look to our primate past for precursor systems. Consistent with this he sees mercantile exchange as distinct from reciprocal altruism. Because mercantile exchange as an ordinary routine of subsistence doesn't exist in any other animal he sees no overlap of mechanisms between it and reciprocal altruism which he writes off as a rare event reserved for life threatening circumstances.

This conclusion is arguable, as presented. In addition, it ignores infra-human primate capacities fundamental to reciprocal altruism that are also essential for the adaptive exchange of commodities. For example, chimpanzee and bonobo groups consist of intra-group grooming, foraging, and protective networks. Yes, these commodities are social and emotional rather than physical. There is no division of labor, and nepotism is involved. But there is a social intelligence at work, and what is that but exchange intelligence? These animals must know the histories and personalities of every individual in order to assess readiness to exchange, to cheat, to change loyalties, and they must also have a sense of the relative value of every exchange act. All of this "accounting" intelligence is unlikely to have been jettisoned with the shift to mercantilism, as defined by Ofek (unconstrained by inclusive fitness considerations).

Because of his eagerness to establish that human trade psychology and attendant encephalization resulted from specific selection rather than from characteristics natural selection supported for other reasons, Ofek eschews not only reciprocal altruism as a relevant mechanism but sexual selection as well. He states that there "are instances where such a self-reinforcing process takes place in the course of competition for food instead of mates" (p. 75), but how could trade be an agent of evolution if the more successful traders were not also reproductively more

successful as well? Are we to think that success in trading did not translate into status hierarchies? Or that female choice played no role?

Failure to consider female preferences is only one aspect of the male-centric orientation of this book. Ofek's view of strategic adaptations focuses on males. He says little of changes in female strategies beyond those that he believes resulted from participating in pair bonds. However, his assumption of pair bonding so early in hominid history is troublesome. Although larger brains increased dependence upon meat provided by males 1.5 to 2 million years ago, pair bonding may not have been the immediate solution. Evidence that sexual dimorphism persisted to a considerable degree past the time of *habilis* argues more for chimpanzee-like male-female relationships that include female promiscuity and little paternity certainty – paternity certainty being an important element for male provisioning of mates and offspring. Diminutive (compared to males) females toting brain-hungry offspring may simply have relied on the primate tradition of trading food for sex. (This would also have been a solution for the problem of infanticide.) If we are going to consider valued commodities and trade as an agent of human evolution, what about sex? Is there any reason to leave out the "world's oldest profession"? I don't know what the evidence for loss of estrus is, but if Ofek is right about the timing, it argues as much for the advantages of year-round receptivity for trade advantages as it does for pair-bonding.

Also missing, from the female point of view, is a scenario about division of labor and exchange for females foraging around a home-base and therefore spending more time in close proximity. Sarah Hrdy (1999) has suggested that early hominids were cooperative breeders. Is it not likely they also developed systems of exchange of goods and services including sharing child-care? I suspect that in his emphasis on excluding reciprocal altruism as a mercantile element Ofek might have missed a good argument here.

In summary, despite the puzzling exclusion of important evolutionary principles (reciprocal altruism and sexual selection) and consideration of female reproductive strategies, Ofek makes a strong case that division of labor and exchange strategies figured strongly in the evolution of the human mind. Although he does not specifically discuss it, his theory is also an interesting argument for human group selection. Some may take exception to this characterization of humankind. For them the word "mercantile" may bring to mind images of exploitation, deception, and misuse of power. Recent scandals at Enron and WorldCom reinforce the stereotype of trade as fundamentally venal. Refreshingly, in Robert Wright (2000) has published a treatise that represents mercantilism as networks of mutually beneficial exchanges that were central to human history and the progression of civilization. Similarly, Vernon Smith, 2002 nobel laureate and the father of experimental economics, stated, "I think we're born traders. We're social animals, very much into social exchange. This propensity of humans is very likely what led ultimately to trade and markets".

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Dori LeCroy is an independent scholar with a doctorate in biopsychology from the City University of New York. 503 N. Broadway, Upper Nyack, NY 10960. E-mail: dorilecroy@aol.com.

From Prejudice to Intergroup Emotions: Differentiated Reactions to Social Groups

By **Diane M. Mackie** & **Eliot R. Smith** (Eds.). Psychology Press, 2002. 352p., 16 tables, 16 figures. US$75.00 (hardback). ISBN: 1841690473

Reviewed by Jeffrey Goodman, Department of Psychology, University of Maine, Orono, ME 04469 USA
Email: Jeffrey.Goodman@umit.maine.edu

Who can deny that current events mandate a careful examination of the root causes of international conflict? How timely then is the publication of *From Prejudice to Intergroup Emotions: Differentiated Reactions to Social Groups*? So timely in fact that the publisher's release date was delayed by two months to include several hot-off-the press journal articles. Additionally, the inter-national cast of American, European, and Middle Eastern contributors facilitates a comprehensive consideration of a broad range of real-life and theoretical intergroup phenomena.

Historically, psychological and sociological theories of intergroup relations have conceptualized prejudice as a relatively stable positive or negative evaluation of a given social group that affects how an individual thinks and behaves toward members of that group (e.g., Jones, 1997). Numerous studies examine specific traits that comprise the stereotype of specific groups (e.g., for African Americans, the stereotype may include aggressive, unintelligent, and lazy). However, a major theoretical barrier has been the unreliability of an individual's stereotypes about a group in predicting actual behavior toward that group (Dovidio, Esses, Beach, & Gaertner, Chapter 9). While most researchers acknowledge that prejudicial attitudes contain an affective component, relatively little research has moved beyond the positive/negative distinction to investigate the spectrum of complex human emotions evoked in interactions between groups (Dijker, 1987). As noted by Mackie and Smith (Chapter 1), the current volume serves as a forum for research that aims to advance the study of intergroup phenomenon by elucidating context-dependent, complex, and cognitively and affectively differentiated reactions to social groups. There are several dominant themes.

I. The Socially Extended Self

Self-Identity Theory (Tajfel & Turner, 1986) suggests that individuals look to their social groups for valuable information about who they are. Thus people consider their group memberships as indicators of their attitudes, beliefs, and self-concept. Self-Discrepancy Theory (Higgins, Klein, & Strauman, 1985) proposes that individuals have three distinct levels of self representation: the *actual* self, what one actually is; the *ideal* self, what one wishes or hopes to be; and the *ought* self, what one believes they have a moral responsibility to be. These authors provide evidence for the existence of actual, ideal, and ought group concepts, and the relative independence of the self and group comparison levels. Additionally, they suggest that individuals' assessment of their group and resultant perceived group discrepancies (i.e., actual-ideal, actual-ought) are associated with specific types of emotional reactions (i.e., dejection and agitation, respectively).

Aron and colleagues (Aron, Aron, & Norman, 2000) have provided evidence that, in the context of close relationships, the self and the close other share cognitive and affective reactions to the extent that representations of the self and other overlap. Yzerbyt, Dumont, Gordijn, and Wigboldus (Intergroup Emotions and Self-Categorization: The Impact of Perspective-Taking on Reactions to Victims of Harmful Behavior) present their research program extending this notion to show how identification with a group influences the type and strength of emotional reactions that individuals experience when confronted with hypothetical situations. In a series of experiments with Dutch participants, Yzerbyt and colleagues provide evidence that the degree to which people perceive themselves to be similar to a wronged victim influenced both their emotional reactions and action tendencies towards the victim and perpetrator.

Two additional chapters explicate situations in which identification with one's ingroup may result in specific context-dependent emotions for the individual. Branscombe, Doosje,

and McGarty (Antecedents and Consequences of Collective Guilt) provide evidence for the notion that individuals may experience affective reactions of guilt from simply belonging to a group that has mistreated an outgroup. These feelings of guilt may occur, regardless of whether the individual was personally responsible for the mistreatment of others, assuming that: 1) the individual self-categorizes as a member of the dominant group; and 2) the individual perceives their group as being responsible for a salient illegitimate action that violates the moral values of their group. Somewhat conversely, Kramer and Jost (Close Encounters of the Suspicious Kind: Outgroup Paranoia in Hierarchical Trust Dilemmas) provide evidence that one's membership in a lower-status minority group may result in paranoid-like beliefs (e.g., suspicion and mistrust) and associated affective reactions (e.g., fear and anxiety) when one's group is dependent on a dominant majority for group-relevant outcomes. Taken together, these chapters expand the study of intergroup relations by advancing the notion that social groups function as a basis for the production and experience of affective reactions at the level of the individual.

II. The Complexity of Prejudiced Reactions

A second major theme highlighted by this text is the inherently complex structure of prejudicial reactions. Blascovich, Mendes, and Seery (Intergroup Encounters and Threat: A Multi-Method Approach) summarize their research investigating the physiological underpinnings of affective reactions to challenge and threat arousal states evoked when individuals interact with an outgroup member. An important point advanced by these researchers is that traditional methods of assessing prejudice (i.e., paper and pencil scales) are often unrelated to physiological indices of arousal. This divergence of expressed attitude and experienced arousal leads the authors to suggest that future research should address both overt and covert forms of reactions to outgroup members. Ironically, the equipment required for such physiological measurement currently has a price tag of approximately $20,000, a sum large enough to restrict this brand of research to an inherently small group

Devos, Silver, Mackie, and Smith (Experiencing Intergroup Emotions) and Stephan and Renfro (The Role of Threat in Intergroup Relations) have explored the real and perceived relationships between groups to thoughts (e.g., threat, challenge), resultant feelings (e.g., fear, anger, resentment), and action tendencies (e.g., moving against, moving away from) experienced in varied contexts. Additionally, Fiske, Cuddy, and Glick (Emotions Up and Down: Intergroup Emotions Result from Perceived Status and Competition) offer an explanation of the linkage between group stereotypes and affective reactions. Based upon evaluations of outgroups on the dimensions of warmth and competence, Fiske and colleagues offer an explanation for the development of emotions towards outgroups including envy, pity, contempt, and pride. Similarly, Alexander and Brewer (Intergroup Emotions and Images) provide a theoretical account of the development of intergroup emotions as the result of evaluations of other groups on the dimensions of goal compatibility, status, and power. The specific evaluations of relationships between groups result in differentiated emotional reactions (i.e., admiration or trust, anger, disgust or contempt, fear or intimidation, jealousy or resentment), concurrent behavioral orientations (i.e., cooperation, containment or attack, exploitation or paternalism, defensive or protection, resistance or rebellion) and resultant outgroup images (i.e., ally, enemy, dependent, barbarian, imperialist).

Finally, Leyens, Demoulin, Desert, Vaes, and Philippot (Expressing Emotions and Decoding Them: Ingroups and Outgroups Do Not Share the Same Advantages) provide further evidence of emotional complexity, and contribute to the debate concerned with whether human display of emotions has evolved towards greater accuracy or increased deception. Leyens and colleagues suggest that individuals' accuracy in the expression and decoding of emotions may be contingent on whether one is interacting with an ingroup or outgroup member. They conducted an experiment in which White participants were required to display specified emotions to a Black photographer. In the color-blindness condition, the participants were asked to pretend that the photographer was White, while in the color-consciousness condition, the difference in ethnicity was stressed and participants were

urged to be themselves. Although participants in the color-blind condition believed that their expressions had been clear, experimenters rated their expressions as significantly less clear than participants in the color-consciousness condition. Additionally, only participants in the color-blind condition reported feeling anxiety during the interaction with the photographer. Concurrent with the notion that inhibition of negative affect is an ineffective method of concealing one's internal state (Ekman & Friesen, 1969), the authors concluded that attempts to attenuate perceived differences between groups may actually lead to deteriorated displays of emotion. In an intergroup context, such inhibition without sufficient substitution may ultimately contribute to deleterious consequences for social contact between members of different groups.

III. A New Functionalist Perspective of Prejudice

Perhaps the most covert and understated theme that can be extracted from this collection involves the new class of theorists who have attempted to construct an overarching theoretical framework for the existence of prejudice. Such functionalist perspectives provide a more cohesive account of normative and universal processes underlying intergroup relations. Stephan and Renfro (The Role of Threat in Intergroup Relations) delineate an updated version of threat theory that incorporates individual and cultural variables, realistic and symbolic threats, and concurrent emotional and behavioral reactions. Jost and Kramer explore the framework of system justification: the notion that cultural and institutional norms exist that serve to substantiate and perpetuate the status quo of dominance hierarchies in societies. They effectively delineate system level attitudes (e.g., endorsement or criticism) with reactions to the social system (e.g., paranoia, distrust, suspicion, trust, legitimacy, idealization) and resultant affective reactions (e.g., depression, paranoia, fear, anxiety). As previously mentioned, Brewer and Alexander's (Chapter 12) Image Theory draws a picture of the development of prejudice from group comparisons of goal relatedness, status, and power. From this assessment, specific intergroup emotions, and resultant behavioral tendencies can be predicted. The associated image of the outgroup (i.e., ally, enemy, barbarian, dependent, imperialist) serves to perpetuate the existing relationship between groups. If the evaluation of a group changes (e.g., an outgroups' power increases), the theory is readily able to account for stereotype change. Fiske et al. (Chapter 14) offer a similar account of stereotype development and self-perpetuation based upon evaluations of individuals and outgroups on the dimensions of warmth and competence. These evaluations lead toward specific outgroup attitudes, affective reactions, and behavioral tendencies. In varying degrees, each of the functional theories presented broaden the scope of intergroup relations and should be viewed as complementary rather than competitive.

Through diverse methodological approaches and theoretical starting points, every chapter in this text serves to advance the conceptualization of prejudice from a reductionistic valence approach toward a more inclusive model reflecting the interplay between cognitive, emotional, and behavioral reactions to members of social groups. *From Prejudice to Intergroup Emotions: Differentiated Reactions to Social Groups* is intended primarily for social scientists interested in advancing knowledge of stereotyping, prejudice, and intergroup relations. However this text should be assessable to most professionals in the behavioral and social sciences and could serve as an excellent text for graduate and upper-level undergraduate courses.

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Jeffrey A. Goodman is currently enrolled in the PhD Social Psychology program at the University of Maine. He completed his undergraduate studies in Psychology at the University of Pittsburgh, Bradford in 2000. His primary research interests include intergroup process, stereotyping and prejudice, and stigma.

The Ancestress Hypothesis: Visual Art as Adaptation

By **Kathryn Coe**. Rutgers University Press, 100 Joyce Kilmer Avenue, Piscataway, NJ 08854-8099, 2003, xvi + 213p., 43 B&W illus., Pbk. US$29.00, ISBN 0-8135-3132-2. [Cloth $65.00, ISBN 0-8135-3131-4]

Reviewed by **Ellen Dissanayake**, 1605 E. Olive Street, #104, Seattle WA 98122 [edissana@seanet.com]

Over the past decade or so, a new field has emerged within evolutionary psychology, producing a stream of journal articles, conference sessions, and even books. Its subject is, broadly, the place of the arts in human evolution. Currently, the field has several labels ("biopoetics," "evolutionary [Darwinian, adaptationist] study of the arts," and "evolutionary [or Darwinian] aesthetics"), reflecting a variety of approaches and even subjects that attest to the complexity and ambiguity of the concept "art."

Despite problems, interest by evolutionists in art seems long overdue. As Kathryn Coe notes, "For thousands of years, humans living in even the harshest environments have managed to decorate a multitude of objects and have used significant amounts of resources to do so. It seems curious, given the assumption that humans regularly conduct cost-benefit analyses, that time and resources would be devoted to the production and viewing of [something that contemporary Western society] … sees as peripheral or even frivolous" (p.108). Clearly, art should be an important subject for the evolutionary approach to human behavior, and it is interesting that those who first engaged with the subject were ethologists – notably Eibl-Eibesfeldt (see 1989 and earlier writings) and Desmond Morris (1962). Today the majority of scholars in the field are concerned with literature (see Carroll [1995] and volumes edited by Abbott [2001], Cooke [2001], and Easterlin [2001]).

But what exactly is the subject of study? The term "art" is seldom defined and is frequently not distinguished from apparently related (but not necessarily synonymous) concepts such as play, creativity, symbol-making, or beauty. "Aesthetics" may be so broadly considered as to refer to any preference (e.g., "Darwinian aesthetics" studies by Kaplan, 1992; Orians & Heerwagen, 1992; Thornhill, 1998). Proceeding more restrictively, is there a common denominator to all the arts? Should one examine the *artifact* (e.g., the actual painting on a cave wall? its subject matter? the skill of its execution?) or the *activity* (behavior)? Which behavior: the activity of painting, or of choosing the subject, or of perceiving and appreciating? In which of these did fitness inhere? Similar questions arise for music/dance, literary language, and dramatic presentation. Only two theorists (Dissanayake, 1988, 1992, 2000; Miller, 2000, 2001) have offered systematic evolutionary expositions of these matters, and now Kathryn Coe has added her important and challenging contribution.

Coe's study is of particular interest to ethologists for several reasons. She (1) specifically confines her subject to visual art (i.e., it is observable, can be defined, and may have an observable social effect that influences its own future replication [p. 17]); (2) defines the subject of study; (3) conceives of art as a behavior (of making and responding to an art object) that is potentially measurable; and (4) sets out four strict empirical tests for validating her hypothesis. Restricting and carefully defining the subject of study gives her work a kind of rigor and testability that has been otherwise absent in

adaptationist studies of the arts. Coe brings other desirable attributes to her study, including a doctorate in evolutionary anthropology, as well as 30 years of field experience living and working with indigenous artists in Ecuador (where she also raised a family), Colombia, Spain, and the American Southwest.

Coe defines visual art as "the modification of an object or body through color, line, pattern, and form that is done solely to attract attention to that object or body" (p. 76). By attracting attention to messages of appropriate behavior, art's proximate aim, she suggests, was to identify individuals who shared descent from a common ancestor and to encourage cooperative, unselfish behavior among all individuals so identified. Visual art's ultimate function (insofar as it is an adaptation) was "to influence social behavior in ways that promote success in leaving descendants" (p. 76).

From this hypothesis, Coe draws a number of provocative and well-supported claims. Of particular interest is her challenge to Geoffrey Miller's influential sexual selection hypothesis, replacing his focus on males, mating, competition, and creativity with one on females (specifically mothers), descendants, cooperation, and tradition. Successful "reproduction" requires not just attracting mates and siring offspring, but producing descendants (p. 3 & 163). Necessary to the successful raising of descendants is social behavior -- which requires kinship amity, generosity, sacrifice of individual interest, and restraint of competition among codescendants, even though these may be at the expense of a particular individual's reproduction and survival.

While agreeing that competition is not irrelevant to the arts (indeed, once any behavior has evolved, it can be used competitively), Coe claims that Miller's hypothesis, with its emphasis on creativity, pertains to only a small portion of the visual art produced by humans. In fact, Coe asserts, copying has been more important than creativity (p. 109), which occurs under circumstances involving the breakdown of traditions and respect for ancestors -- as in particular historical periods in the West since the Renaissance, or among societies, like the Greeks, who abandoned their ancestors. "What is unique in art history is the explosion of creativity and the evidence of change seen in Greek and Roman art and in much of the visual art produced since the Renaissance" (p. 47). To support her claims, Coe provides numerous examples of continuity of style (persistence) in prehistoric and non-Western arts, as well as of visual art used in contexts related to kinship, descent, and ancestry (including mortuary practices). She convincingly shows that it is difficult, if not impossible, to study traditional, prehistoric, or ethnographic art without studying ancestors and, by extension, the group's religious and moral system.

The Ancestress Hypothesis is firmly situated within contemporary Darwinian thought, and goes well beyond its immediate subject of visual art. Coe offers cogent revisionist amendments or replacements for a number of accepted theories or even axioms in evolutionary psychology, as in Chapter 9, where she boldly uses her findings to challenge current assumptions in the concepts of kin selection (inclusive fitness), reciprocal altruism, and group selection. Additionally, in Chapter 10, she reexamines, in terms of the hypothesis, definitions and assumptions of such widely-used terms as reproduction, competition, social behavior, selfishness, and "good" genes. She emphasizes the evolutionary importance of selfless and generous mothers (rather than fertile young females), and of long lasting mothering (rather than transitory copulation). Her discussion of these and other matters is informed and always interesting, and could foster lively discussions in advanced classes on human evolutionary psychology.

I found the book to be extremely stimulating and relevant to my own thinking. My few criticisms have mainly to do with the omission of material that would have strengthened the hypothesis. For example, although she specifically situates her work within ethology, Coe does not make the obvious point that her definition of a behavior of art can usefully be connected with ethological concepts such as ritualization (where formalization, exaggeration, repetition, and elaboration attract attention to important "messages" [see Dissanayake 2001; Miall & Dissanayake, *forthcoming*]), or with that of a supernormal stimulus. Additionally, the ethological concept of play as contributing to skill-acquisition and social practice would support her claims about the importance of copying. Coe does not suggest an origin of the

behavior of art other than in women teaching and entertaining children and grandchildren, or by accident (pp. 111-12). Is play the antecedent of art? What would cause the teachings of adults and imitations by children to become patterned and colorful? Similarly, some of her claims about the effects of poor mothering are established findings in life history theory within evolutionary psychology, a body of theory that reinforces other papers that she cites (see, e.g., Chisholm 1999). Also her discussion of the evolutionary importance of religion and supernatural claims echoes and would have benefited from familiarity with the work of Boyer (1994, 2001) and Rappaport (1999).

Although Coe specifically distances herself from group selectionist claims, she occasionally uses her hypothesis to describe effects that are compatible with group selection theory. E.g., she states that "what seems to occur is that codescendants of one ancestor compete with codescendants of another" (p. 121). Also she says "Just as art can be used to promote cooperation among kin, it can be used to promote animosity against nonkin" (p. 169).

Although Coe specifically treats visual art, her definition could be adapted to apply to the other arts (e.g., for "object", substitute "movement" or "sound"; for "color", "perceptual salience" or "vividness"). The virtues gained by treating only one art come at the expense of recognizing that the visual arts in small-scale (and probably ancestral) societies are typically part of a larger ceremony that includes music, dance, poetic language, and performance. Coe is aware of this, as shown by her discussion of ritual and religion, but her hypothesis would be strengthened, I feel, by incorporating the "sequential" (temporal, processual) arts.

In her study, Coe deliberately eschews discussing cognitive processes or emotions, even though she says her definition assumes them (p. 77). Yet without including these, it is difficult to explain how visual art alone can *promote* or even encourage cooperation (even though it of course can identify kin). The temporal arts not only identify kinsmen and codescendants but, by means of their ability to entrain brain rhythms and encourage active physical participation, also promote cooperation and accord among kin and kin-like associates (see Dissanayake 2001; Miall and Dissanayake, *forthcoming*). Indeed, one might suggest that visual art was an "add-on" to these perhaps even more ancient arts that *iconically act out* messages about cooperation, thereby making them even more vivid and compelling. There is a behavioral/emotional gap between identifying kin and choosing to cooperate with them. The message to cooperate may be encoded in the body decoration or textile or mask, but in the joined rhythms and movements of music/dance/recitation it is recreated analogically (physically and emotionally).

Despite these omissions, Kathryn Coe has written an original and important book whose arguments will have to be addressed not only in further discussions of the evolution of art, but with regard to other current orthodox assumptions in evolutionary psychology. Hers is a stimulating, challenging, and welcome achievement.

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Ellen Dissanayake is Visiting Scholar at the Walter Chapin Simpson Center for the Humanities, University of Washington. She has published three books and a number of scholarly papers on the arts and human evolution.

Brief Reviews

Nightwork: A History of Hacks and Pranks at MIT.

By **T. F. Peterson**. 2003, M.I.T. Press, xi + 178p. ISBN 0-262-66137-3 (Paperback, US$19.95). http://hacks.mit.edu.

The author, an M.I.T. historian, defines "hack" as "an inventive, anonymous prank". Hacks are a long standing part of the student culture at M.I.T., and include a wide variety of verbal, structural, virtual and technical activities. ["Hacking" as a more malicious meddling with computers is a different and more recent denotation.] The volume chronicles numerous hacks, most from the past 30 years, including such classics as the Campus Police Car on the Dome, and the Disappearing Door (to the President's office).

So what is an ethologist to make of these pranks and other seemingly non-productive and typically nocturnal behaviors? Clearly the life of a present day university student is far from the human environment of evolutionary adaptedness. Hence the behaviors could be dismissed simply as artifacts of a highly 'artificial' environment.

There is more to hacks than this, however. They do not appear to be completely unadaptive or frivolous activities. Instead, they are typically harmless and intrinsically motivated activities that have educational benefits. These benefits include learning social skills (working productively in teams) and creative problem solving involving engineering skills and unorthodox communication systems. As such, they can be seen as exceptionally complex play behavior. Indeed, the author sees hacking as a "sport". And like most sports, hacking also reflects competition, with the cognitively gifted students using their intellect rather than their brawn to create displays of competence.

In any case, the activities described, analyzed and illustrated (with 125 illustrations including 4 pages of full color photographs) provide an entertaining, sometimes even inspiring, examples of the human spirit. In addition to Peterson's text, this book includes 8 short essays on hacking contributed by Nobel laureate Richard Feynman and 7 others.

Handbook of the Psychology of Aging (5th ed.)

By **J. E. Birren & K. W. Schaie** (eds.). Academic Press, 2001, xx + 677p. ISBN 012-101263-8 [paperback; US$54.95].

This new edition of a book that originally appeared way back in 1977 is one of three volumes in a series on aging. [The other two volumes cover the Biology of Aging and Aging and the Social Sciences.] The editors are two of the best known scholars in the field, and each contribute one chapter to Part 1 of this edition. Birren (with Schroots) offers an opening chapter on history while Schaie (with Hofer) provides on overview of longitudinal research. Part 1 contains three other chapters dealing with statistical issues, genetics, and behavioral intervention research.

Part 2 contains four chapters on biological and social influences on behavior. None of these concern evolutionary influences. Indeed, according to the subject index, evolution only comes up on two pages of the entire volume and the discussion of genetics is almost exclusively confined to just 1 (Chapter 5) of the 24 chapters.

Part 3 has 12 chapters, including ones covering visual and auditory changes, attention, speed and timing, motor control, memory, language, emotions, social relations, gender differences and roles, personality, creativity, and mental health. Three additional chapters constitute Part 4, "Behavior in Social Contexts". These concern technology and older workers, abuse and victimization of the elderly, and quality of life issues.

In such an otherwise thorough volume, the lack of attention to evolutionary perspectives is unfortunate. Nonetheless, the book contains many good chapters. Each presents a fairly up to date overview of one or more aspects of aging, and each contains a potentially valuable reference list. Thus, this book makes a fine reference volume and is appropriate for both experts and graduate students.

Reviews by Thomas R. Alley, Department of Psychology, Clemson University, Clemson, SC 29634-1355, USA.

New Books

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CURRENT LITERATURE

Compiled by
Johan van der Dennen

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