ASCAP NEWSLETTER

Across-Species Comparisons And Psychiatry Newsletter
Volume 2, No. 2, 15 February 1989

How does it happen that the deeper we go into nan's behavior as a social animal,the more we find of evolution? Jonas and Klein, 1970 [1]

(c/o Russell Gardner, 1.200 Graves Building (D29), University of Texas Medical Branch, Galvescon, TX 77550)

For the philosophy guiding this newsletter, see footnote on p. 7 [21. Newsletter, aims: 1. A free exchange of letters, notes, articles, essays or ideas in whatever brief format.
2. Elaboration of others' ideas.
3. Keeping up with productions, events, and other news.
4. Proposals for new initiatives, joint research endeavors, etc.

Notes: We catch up on correspondence this issue, but don't neglect Ricarda Mussig's featured essay starting p.4. She puts her findings and speculations simply and holds interest.

Publications:
Hartung, John: Deceiving down: Conjectures on the management of subordinate status. In Self-Deception; An Adaptive Mechanism (Eds) JS Lockard and DL Paulhus, Englewood Cliffs, NJ: Prentice-Hall, 1988

Kriegman D: Self psychology from the perspective of evolutionary biology: Toward a biological foundation for self psychology. Progress in Self Psychology 198?;3:253-74.

Slavin MO, Kriegman D: Freud, biology & sociobiology. American Psychologist 1988;Aug:658-661.

Kriegman D, Slavin MO: On the resistance to self psychology: clues from evolutionary biology. Presented at the Annual Conf on the Psychology of the Self, Wash DC, Oct 88

Kriegman D: Compassion and altruism in psychoanalytic theory: an evolutionary analysis of self psychology. Presented to Amer Acad Psychoanalysis Annual Meeting, Montreal,, May 88

Kriegman D, Slavin MO: The myth of the repetition compulsion and the negative therapeutic reaction: An evolutionary biological analysis. Progress in Self Psychology In Press/Vol 5. Presented at Annual Conference on the Psychology of the Self, Chicago, Oct 87.

Hobson JA: The Dreaming Brain. NY: Basic Books, 1988. (From the publisher's material) During a single lifetime a person devotes at least 50,000 hours to dreaming. Despite extensive study, our understanding has been obscured by psychoanalytic theories that see dreams as efforts to disguise undesirable thoughts and emotions, claims Harvard['s] Hobson.. Instead of being seen as defensive, the distinctive features of dreams — visual imagery, bizarre distortions, emotional intensity, even the tendency to forget dreams ~ can be explained as transparent psychological phenomena resulting from specific brain activity at the cellular and molecular levels.

To illustrate the notion of dream transparency, Hobson uses reports and pictures from a recently discovered dream journal. Drawing [also] on..lab..experiments, the author shows how..content and form of ..dreams are ..created by the brain's own dynamics.

Hobson traces the development of neurobiological ideas, from the pioneering work of the neurobiologist Ramon y Cajal through the .. discovery of RBM sleep in 1953 up to today's .. research on the brain-mind.

Hobson JA: Psychiatry as scientific humanism: A program inspired by Robert Unger's Passion. Northwestern University Law Review 1987;81:791-816

Letters: Oct 27, 1988

Thought you might enjoy an article on the evolutionary perspective of panic disorder in the recent Psychiat Annals: Nesse *RM:* Panic Disorder: An Evolutionary View. Psychiat Annals 1988;18:478-483.

Oct 29, 1988

I ran across this article that I thought you might like a copy of: *Senay EC:* Toward an animal model of depression: A study of separation behavior in dogs. J Psychiat Res 1966;4:65-71. Howard Boland

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Randy Nesse's work has come up in several contexts, most recently for me from Jerome Kagan speaking at the 89 American College of Psychiatrists Annual Meeting [3] on shyness and fear as stable and inherited traits in small children; he cited Randy's work on autonomic activation in anxious patients. Kagan noted also work on the "shy" qualities of basenji dogs (eg, compared to beagles) and told us other findings relevant to across-species comparisons, summarized here telegraphically: the most shy child in more than 130 Boston area grade-schools was almost invariably blue-eyed, a correlation he had noted before. The suppression of melanin pigments in blue eyes occurs with greater activation of the norepinepherine system. He noted that 18 inbred generations were needed to tranform silver foxes in Russia from wildness (shyness) to tameness (selected on that variable only) but that they were developing melanin spots in their fur near the end of this breeding experiment. Strains of cod that must adapt to the cold far north deploy norepinepherine activation more than southern varieties, suggesting this first messenger system relates to the need for heat generation/preservation that our hairless selves required for living in the north after leaving Africa 75 millenia ago. Hence, a bias towards shyness and fearfulness might have coordinated with melanin suppression. A tall blue-eyed blond psychiatrist sitting next to me (himself a distinguished speaker at the meeting) suggested that the Vikings encountering the "tamer" Mediterranians might have been interested in hearing themselves characterized as "shy." Of course, I suppose for those of us focused more on "leadership," than on anxiety, the norepinepherine system may be activated for the "fight" as well as for the "flight" facets of the fight-flight norepinepherine system. I recall a lunch with Jim Eaton in which he described how the basenji, a barkless dog from Africa, is very aggressive in fights with beagles.

December 7, 1988

For some time I have been aware of the Ann Arbor, MI, Conference on Evolutionary Psychology and Psychiatry, but I was unable to attend any of them. I suggested to them that they fix the date far ahead of time so that interested people can firmly put it on their schedule.

What an exhilerating surprise to receive your newsletter (Vol 1, #12) and read on the evolutionary significance of depression. This fits very well into ideas I have been developing in the past 3-4 years. But, typically, I say these things - for instance, about the affective temperaments - in invited addresses and interviews in newspapers, radio or TV, rather than in scientific articles. The main problem concerns criteria of validating evolutionary interpretations of psychopathology. I was interested to read about a presentation that Nancy Segal gave .. How can one obtain this?

I would be roost grateful to receive the previous issues in Vol. 1.

..I am convinced that theories of the origin of mental disorders are doomed to fail if not placed within an evolutionary perspective.

Has the group come up with a bibliography? It seems to me such a list would be a must reading for psychiatrists-in-training. I an afraid it may be too late for most of the "well trained" ones.

Hagop Akiskal, Dept Psychiatry, University of Tennessee, Memphis

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Indeed, at a previous meeting of the American College of Psychiatrists I heard you articulate some of these ideas. I hope you feel free to share some of them with us in this format, realizing that these are simply exchanges of a brain-storming group of far-flung friends.

Randy Nesse (U Mich) is one person with a well developed teaching module for residents in psychiatry on these topics. He also is a meeting information source.

Jan 21, 1989

Thank you for letting me know that my research presentation at Michigan sparked interest among some readers of ASCAP. I'll be happy to send further references to anyone. ...

Nancy Segal, Minn Center for Twin and Adoption Research, Psychol Dept, Elliott Hall, 75 East River Road, V Minn, Minneapolis, MN 55455

Dec 21, 1988

Firstand foremost, many thanks for sending me the ASCAP Newsletter and its many stimulating contents. Secondly, but not much less importantly, please find enclosed a short note which I thought that you might include in a future edition as a means of balancing the account you gave in .. [ASCAP#12] of Daly and Wilson's attack on what they understand to be the evolutionary dimension to the odipus complex.

Although what they say bears little resemblance to the true evolutionary meaning of Freud's central discovery, space does not *allow* an adequate rejoiner. The issue, you understand, is—punning aside—a complex one and fully addressed in my forthcoming book [4].

1 do not know whether you can indeed find room for my s*hort* report in a future number of ..[ASCAPJ, but I would appreciate it if you could give the matter your attention. I am considering submitting a longer version to the *ISHE Conference organizers* for this year's meeting in Edinburgh, where - who knows - we might meet. Keep on with the good work ..

Christopher Badcock, London School of Economics, *U London*

Thank you for the offering. It has a welcome home in the March issue !

December 15, 1988

Thanks so much for the copy of the ASCAP Newsletter. I found it extremely interesting and thought provoking... Although not quite in keeping with the tone of the newsletter, I've enclosed with this note a copy of a New Yorker article [5] that I hope you will enjoy.

Herndon P. Harding, Jr., Harding Hospital, Worthington, OH

Vicki Hearne's enjoyable piece presents an animal model of "craziness" in a horse. She also describes well her "psychotherapy" of the horse's "paranoid" behavior, highly akin to "fearfulness." She is very aware of psychiatry, quoting two mental health professionals; one, concerned about troubled adolescents, came to see Ms Hearne's work with the troubled horse.

17 Dec 1988

Happy Christmas !

I don't know if you received my preceding letter, so I thank you once more for the chapter about intra-speclflc communication that you sent me. It's very interesting and useful for my work, because I develop just such communicative models of psychiatric symptoms on rats and monkeys, testing, in addition, the biochemical changes in CSF and the specific features of individual behavior of the same animals in various situations. I hope these are exactly suitable methods for experimental psychiatry.

I'll be grateful to you for the information about symposiums on this topic (it's rather difficult to take it here) and for the reprints of future publications.

Dr.I.V. Zhdanova, Institute of Physiology, Acad. Sci, nao. Makarova 6, Leningrad, USSR

I suspect that I did not receive your previous letter. I send you this and earlier issues of ASCAP because these may also suit your needs. Please keep me and other readers acquainted with your experiments and publications.

Readers! Please send Dr. Zhdanova materials that would be helpful.

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26 Dec 1988

Thanks for...the new issue. I've now read the ASCAP philosophy, which ..answered..[some] objections...As for self-evaluation (in ASCAP #13) I agree in principle with the objectives. I think perhaps various people have been doing something like it all *along,* without defining it as such, and not in relation to psychopathology. Would I be right in saying that Harlow, on the other hand, was studying it in relation to psychopathology? My interest is not too far distant... I'm interested in the normal functions of the self of the hunter/gatherer society. Knowing this, I think we could have a better grip on what functions of the self we now see are really fundamental, and which are pathological. Perhaps some functions of the self that are currently taken for granted are really screwed up reactions to an abnormal society.

Kalman Glantz, Cambridge, MA

January 4, 1989

I enjoy receiving your ASCAP Newsletter. Considering our mutual interests in evolution and psychiatry, I thought you might appreciate some of the work I have been doing. Therefore, I've taken the liberty of enclosing some of my recent work. If you are interested I would love to hear your reactions.

Also, please add two names to your mailing list. Both are very active in developing applications of evolutionary theory to human psychology. I'm sure they would appreciate receiving your newsletter: Irving Biederman (U Minn) and Don Burke (Felton, CA) Daniel Kriegman, Newton,, Mass.

Your publications/manuscripts are listed on page 1. Thanks for sending them! I'm impressed with the vitality of evolutionary thinking in various realms of psychiatry and allied disciplines. You make the important observation that Freud knew the science of his time did not allow cellular-molecular speculation.

The Head-Legs Schema: An Innate Releasing Mechanism (IRM for Basic Trust Between Mother and Child and An Important Organizer in the Development of Cognition. Ricarda Mũssig, Karlsruhe, V. Germany [6]

When I began to explore human figure drawings of 3-5 year old children ("draw-a-man" test), three questions occurred to me:

1. Why do children generally begin with a head-legs schema? (Figure 1)

2. Why during the transition to a more complete representation of the human figure are children initially so uncertain about where to add arms and trunk?

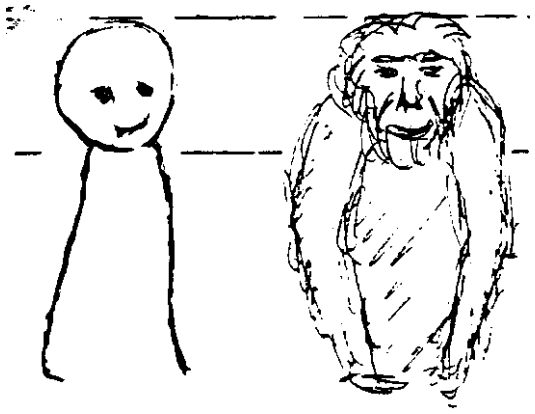
3. What do the drawings represent to the child: self-portraits, playmates, or parents?

I tried to answer the third question first by comparing the proportions of the head to the vertical (leg-trunk) of primitive child drawings to proportions of real persons.

In children aged 3.5 to 3.11 years, the proportions were 1:1.7. When one year older, the proportions changed to 1:2.2 and at 6 y.o., the proportions were 1:2.7. These proportions were lower than even those of human new-borns (1:3.3) and much lower than those of adults (1:6.6). Were they not human at all? Had I found an inherited schema?

Figure 1

3-4 yrs 1:1.7 Chimpanzee 1:1.7



For comparison, I measured the proportions of sitting chimpanzees (see figure 1) and found proportions that corresponded to those of the children's, from 1:1.5 to 1:2.5. For all these reasons, I supposed that the head-legs-schema is an inherited mother schema: the frontal view of a mother ape sitting or on four legs. I further supposed that this schema represents an Innate releasing mechanism (IRM) with the function of releasing clinging behavior in the infant.

At once it seemed clear why children experience such difficulties in integrating arms and trunk in the head-legs schema. The legs, as forelegs, coincide with the human arms. And the trunk has always been implicitly seen between the legs.

There is more support for this hypothesis: if we look at the mother surrogates Harlow (7] used for his experiments with rhesus monkeys, we see without doubt a head-legs-schema (though the trunk is too long!) In mask experiments, the same gestalt was shown to babies by Spitz [8] as Kaila did in 1932 (9). Spitz assumed that the visual releaser in the IRM for the smiling response for the babies was the eye-nose constellation. But the babies of Spitz saw the upper part of a complete doll of adult size with head, trunk and arms - a head-legs-schema as well.

I conclude that the head-legs-schema repesents an inherited equivalent to the "baby schema" of Lorenz [10] and its indispensable counterpart. Both schemas, I suggest, organize the systemic cooperation of the instinctive patterns of mother and child behavior.

A comment about Lorenz' stimulus drawings [10]: They are all in profile! But only the frontal view of mask or face can elicit the smiling response in babies. For the early mother-child relationship only the frontal view makes seise ethologically.

However, though for my neomammalian brain it seemed clear enough that the head-legs schema is an innate mother schema, my paleomammalian brain protested by telling me that these drawings represented amiable children. Finally I began to wonder if there were two different schemas at all! Perhaps there was only one schema, one visual gestalt, with the

function to release mutual basic trust within the mother-child relationship. This schema I wish to call "mother-baby-schema." Indeed I found some evidence for this in human behavior (not discussed here).

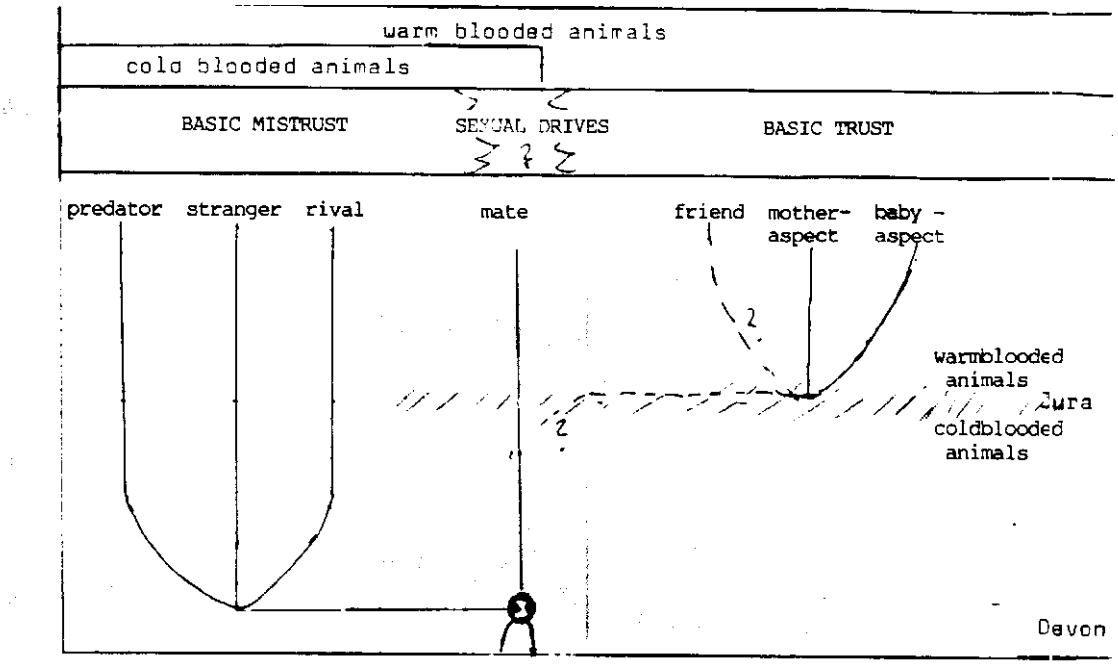
And now, being in the trend of making hypotheses, the next daring idea arose, influenced by my reptilian brain: presumably far back in evolution there was only one schema at all: the "frontal animal schema," an IRM valid for all animals with head, trunk and legs. I assume that this IRM had to develop interdependently with the development of these characteristics and had to be available for the young from birth on. In the run of evolution this schema - modified by specific signals - became a releaser for particular kinds of species-specific social behavior. I think this idea fulfills the demand of simplicity and economy. (Of course, there has to be the lateral animal schema as well as drawn by Lorenz.)

Conclusion: First in premammalian time, other animals were mostly strangers, rivals or predators. The mood released by the frontal animal schema at this stage of evolution I wish to call "basic mistrust" (in contrast to the concept of "basic trust" in psychoanalysis). There is only one exception: in mating behavior the basic mistrust has to be subdued. A schema of basic trust became necessary only when warmbloodedness and the birth of living offspring developed in the Jurassic period. In this the following points seem important:

1. The offspring had to display a "baby" appearance to release mother behavior and to prevent rival behavior on her part and on the part of other members of the kin.
2. Interdependently therewith the visual gestalt of the baby schema had to become part of the IRM releasing mother behavior.
3. The young needed a mother schema to release child behavior.
4. The older meaning of basic mistrust has to be subdued in the intrauterine period and to be freed when the young is old enough to be separate from the mother (with humans, consider the "eight months fear.")
5. The baby schema appearance and the head-legs drawings fade away in 4 year old children. This is the same time when, in breast-feeding cultures, the next baby will be born.

(There are some interesting implications for the development of human relations and cocnition which cannot be developed here.)

Figure 2: FRONTAL ANIMAL SHEME



Next issue features Christopher Badcock's "The Evolutionary Dimension of the Oral Phase" as well as more on depression and social rank hierarchy from John Price (remember the Price-Reichelt exchange) joined on this occasion by Lubo Kanov challenging John's use of the term, homeostasis.

1. Jonas D, Klein D: Man-Child: A Study of the Infantilization of Man. II: McGraw Hill Co, 1970, p.251

2. ASCAP philosophy and goal. High scieitific importance rests on comparing animal behaviors across-species to understand better human behavior, knowing as we do so that evolutionary factors mast be considered for understanding properly such behaviors. To accomplish these comparisons, very different new ways of viewing psychological and behavioral phenomena are required. This in turn explains why we need new words to define and illustrate new dimensions of comparisons across species, We expect that work in natural history biology combined with cellular-molecular biologic research will emerge as a comprehensive biologic basic science of psychiatry. Indeed, this must happen If we are to explain psychiatric illnesses as deviations from normal processes, something not possible now. Compare to pathogenesis in diseases of internal medicine.

Some neologisms that hopefully will help implement these goals are those of:

a) Michael R. A. Chance: "hedonic" and "agonic" refer to the tone of groupings of conspecifics (members of a same species) i.e., relaxed and fun-loving versus tense and competitive. First initiated With CJ Jolly in 1970, this term is referenced fully in ASCAP #1, Footnote 1.

b) John S. Price: "anathetic" and "catathetic" describe conspecific comminications. Catathetic messages 'pit-down' whereas anathetic signals "build-up' the resource holding potential (R) of target individuals,

c) Russell Gardner, Jr.: 'psalic" is a 2 way acronym: Propensity States Antedating Language In Communication and programmed Spacings And Linkages In Conspecifics. This describes commuicatlonal states conjecturely seen with psychiatric disorder and normality (human and non-human), ie, alpha psalic seen in manics, high profile leaders and dominant non-human animals. light psalics are named alpha (A), alpha-reciprocal (AR), in-gioip omega (IGO), out-group omega (0G0), spacing (Sp), sexual (S), nurturant (N), aid nurturant-recipient (NR). (All of the above new or renewed terms are initiated or elaborated in Chance, MRA (Ed! Social Fabrics of the Mind, 1988, published by Lawrence Erlbaum Associates, Hove, in the US at 365 Broadway, Hillsdale, NJ 07642.)

d. Paul Gilbert: Social Attention Holding Power/Potential (SAHP) focuses upon the non-aggressive facets of leadership when this is deployed in the hedonic mode. See ASCAP v.2, #I and his new book: Human Nature and Suffering. Move, East Sussex: Lawrence Erlbaum, 1989.

3. lagan J: THOMAS WILLIAM SALMON LECTURE: The Role of Biology In Childhood Fearfulness. The American College of Psychiatrists - 26th Annual Meeting, Monterey, California, 4 Feb 1989

4. Badcock C: odipus In Evolution: Three Essays on the the Mey Theory of Sex. Oxford: Blackwell, forthcoming.

5. Mearne ?: Reflections: Questions about language. I-Horses. The New Yorker August 18, 1986, pp33-57.

6. Originally presented at the Evolutionary Psychology and Psychiatry Conference, University of Michigan, Ann Arbor, Michigan, October, 1988.

7. Harlow HK, Harlow HF: Affection in Primates. Discover Jan.1966.

8. Spitz RA (1965): The First Year of Life. NY: International University Press

9. Kaila E: Die Reaktionen des Sanglings auf das menschliche Gesicht. Annales Universitatis Aboensis. 1932;13:8VII.

I0. Lorenz I: Ganzheit and Teil in der tierischen and menschlichen Verhaltensforschung. Bines methodologische Erorterung. Stadium Generale 1950:3:9.