

ASCAP NEWSLETTER

Across-Species Comparisons And Psychiatry Newsletter

Volume 3, No. 4, 15 April 1990

"Research programs are important in science because they are the entities that scientists evaluate when deciding which problems to pursue .. Scientists prefer to commit their careers to a progressing research program rather than to one that is stagnating or degenerating." Hull¹

(c/o Russell Gardner, 1.200 Graves Building (D29), University of Texas Medical Branch, Galveston, TX 77550)²

For the philosophy guiding this newsletter, predicated upon combinations of top-down and bottom-up analyses, see footnote on p11³.

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.

Features: As promised, a summary of the Boston planning meeting on a across-national study of subordination and depression gets reported.

Also featured find a letter J Price published first in the Brit Med J.

Finally CR Badcock provides us with an essay summarizing points made in his new book, Oedipus in Evolution.

Announcements of New York Planning Meeting and a Competition!:

1) Thanks to Lubo Kanov, we expect to meet on Tue. May 15. 1990 from 1 to 4:30 pm at The Executive Board Room. Cabrini Medical Center. 222 E 19th St. New York (this conference room is on the 1st floor). Dr Kanov from Bulgaria and also psychiatrically trained in the USA plans to be with us for part of the session. The agenda includes instrumentation and overall strategy for the as yet unnamed across-national study of subordination and depression.

*** Competition Announcement ***

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2) Please participate in our competition about naming the across-national comparisons of subordination and depression study! As you will see below, the Boston planning group agreed that existing terms designating the project and the group are unsatisfactory. So the group stipulated that this April's ASCAP issue (this one) should include an announcement of a competition for the name. The Boston planning group plus JS Price and P Gilbert will decide on the prize winning entry. The prize will be a free year's subscription (1991) to the ASCAP Newsletter.

Criteria for best title will include the following emphases: across-cultural comparisons, collaboration, depression, ethology, international focus, and a meaningful acronym.

Letter (to Steve Heisel) 3 dec, 1989

..Today I read the november issue of the ASCAP newsletter and my attention was caught by your plans for a multinational project together with R Gardner, D Wilson and K Glantz.

If you wish you can add another non-English speaking country to your list! I am most interested in participating in such a project. Although I have not studied depression so far, we have videotaped and are analyzing the interaction of acting-out, aggressive children and very withdrawn, inhibited children of

appr. 6 years old in a clinical assessment situation (dyadic interaction with the clinician). Furthermore, we have videotaped and are analyzing social interactions in pre-school with a focus on the same two extremes (acting-out versus withdrawn, inhibited children). This has everything to do with submission, yielding and defeat. We are comparing normal children with children who ended up in special education.

I am not able to come to the States in March or May, but would appreciate it very much if you guys keep me posted and count me in if in any way possible.

With best wishes,
FX Plooiij, Ouderkerk, Netherlands

Indeed your data "has everything to do with submission, yielding and defeat." We send you ASCAP issues involved with the study. The Boston planning group was encouraged by your interest and plans to count you in.

Letters: December 4, 1989

Thank you so much for issues of ASCAP. It was a real intellectual pleasure to read them all together, to know at once many points of view on the question I'm interested in. ASCAP is the best journal I ever read because of its unofficial way of thinking and talking about interesting scientific problems. I was happy to see your answer to that critic who thinks that only Nobel Prize winners can have an integrative view. Maybe many good scientific ideas were buried only because people were afraid "to play a bit" with them. As for across-disciplinary nature of subject matter, it's the only possible way for real understanding of such polylevel process as psychiatry. Of course, it is much easier to look along one level than through 5 or 6 of them, but I think, only overlap of

these levels will give us a picture of most significant features of the process and will help to understand the basis of normal and pathologic functioning.

It was very interesting to read the data about G-proteins, as for several years . . . I tried to realize some experimental ideas of measuring GTP-system metabolism during emotional states but had not enough technical opportunities for it.

I'm sending you the summary of my results, and will be glad to know your opinion.

Now I'm going [back] to Leningrad [after spending time in Budapest]....

Merry Christmas and Happy New Year to you and all the readers and authors of ASCAP.

12 February 1990

Excuse me I'm late with subscription to ASCAP...It is really a very interesting journal and reading it gives me great intellectual pleasure. It's a pity but there are some problems with our post, so I receive ASCAP later than other readers. The last ASCAP for me was the November issue, so my notes are about it.

I suppose that the multinational project you plan can give very interesting results. Intercultural research is informative not only because it gives the opportunity to distinguish fundamental factors, which don't depend on cultural and historical background, but as well to ascertain those features which are the result of specific hierarchical structure and social relationship in the concrete society.

I think the data can include the subject's view on the dynamics of his social rank during..life, because maybe its change or the expectation of change is one of the most serious reasons for the initial emotional disbalance which has a tendency for positive feed-back and constructs the syndrome.

If the comparison with Russian cul-

Cure will be interesting for you I'll be glad to participate in this work.

I do hope to read a new ASCAP soon.

Best wishes.

I Zhdanova, Institute of Physiology, Leningrad, USSR

Thank you for your manuscript which will enter the May issue. Your interest in the multinational study helps give impetus to the planning group.

To supplement your point about positive feedback effects, I quote from a letter written by Steve Crossan, Madison, Wisconsin, to C&EN. May 11, 1987, p3. (I think that C&EN is a Chemical and Engineering Newsletter): ...For the past year, I have been studying the manic depression that runs in my family, interviewing patients in hospitals and community care programs in order to understand the thought process involved. As a chemical engineer, I found that the brain is a complex system that apparently controls moods and energy levels with biochemical analogs to the electro-mechanical devices that we, but not doctors and geneticists, are quite familiar with.

Those predisposed to manic depression seem to have a proportional controller without the limit switches that keep the majority's moods within a narrow range. As we know, such a controller may work well for years until a complex set of internal and external variables result in a self-reinforcing upward or down spiral. An elevated mood in response to an idea or opportunity leads to the classic symptoms of mania. In the same way, a lack of opportunities or a reduction in options may trigger a downward spiral into clinical depression.

In the course of this work I was surprised to run into a number of successful people who had many of the same traits as the patients, including momentary elation and racing thoughts and occasional mild depressions, but who had never had a major episode or been diagnosed as anything but overly bright and creative. Most mention that one or both parents are or were the same way, or that an odd relative or two had had mental health problems. Could they be the 30% who have the gene but not the disorder? Perhaps the doctors and geneticists will investigate while I keep my moods under conscious control and continue to look for an opening for an overly bright and creative M.S. chemical engineer.

Letters (continued): Feb 7, 1990

..Tell the [psychoanalysts] to read Sulloway's Freud, Biologist of the Mind and then present what we are doing as a return to the true, biological roots of the subject, but this time with credible biological theory. You could also draw their attention to passages in late works like those I quote in the conclusion to my new book by way of indicating that at the end of his life, Freud's thoughts were turning more and more to evolutionary and biological considerations. The fact that hardly any one has taken this up until now is not an unusual event in the history of science, which is distinctly non-linear in many respects.

..All best wishes with the new improved Newsletter and many thanks once again.

CR Badcock, London, England

Letters (continued): 14-2-90

~~..I'm in the process of folding up my practise and preparing to move to Cape Town, South Africa. There I'll be involved with the Cape of Good Hope Center for Jungian Studies. If conditions remain reasonably stable, I should be there for 3-5 years ..~~

With regard to collaboration on the defeat-depression study I doubt if I'll be in a position to do anything for at least six months. However, one of my colleagues who is in charge of the cross-cultural psychiatric unit attached to Cape Town University Hospital, has expressed interest in a cross-cultural research project. So I will certainly mention the defeat-depression study to him when I meet him May 1990. Until then I can't offer very much except to say that I'm all for it.

Also I was glad to read how you fended off the 'temptation' to attempt a comprehensive statement on the fundamentals of evolutionary psychology. Much as we'd all love to

have them, it's early yet and I have the feeling that such a conceptual framework now would block the creative process in others. I have the image of 'the cauldron of plenty' from Celtic mythology into which we all throw ideas etc, from which we all can draw our fill, never knowing quite how various contributions will combine together. While this may sound like an image of a chaotic process, it's not. Chaos theorists would have something to contribute on this point I imagine. Anyway, congrats on keeping an open forum.

PJ Tummon, Zumikon, Switzerland

As you see from this issue, the plans for the study are going deliberately and we are heeding Leon Sloman's advice "to walk before we run." There will be time for involvement from you and your colleague in Cape Town (which interestingly is a place that Dr Sloman - a prime mover in this project - visits periodically!) Should we let your colleague know of ASCAP so that via this means, he could learn of the endeavor, decide on whether he is interested, and indeed participate in the planning if he is?

Letters (continued): 25 February 1990

A letter from Australia! today mentioned the debate that is going on in your ASCAP Newsletter. I had thought that I had sent a check for a subscription, but after reviewing my records, apparently I did not. I would like to have any back issues that discuss the HBES meeting ...

JH Fetzer, Dept Phil, UMin, Duluth

** Feature **

Boston Planning Meeting on defeat-depression. This conference involved eight participants - half of them the "Boston Band." A lively exciting

discussion included non-stop talk but workmanlike progression for over three hours. This report provides three facets of the results:

A) the consensus conclusions.

B) RG wrote for the group an abstract (1 Apr deadline) submitted for the Human Behavior and Evolutionary Society (HBES) meeting at UCLA.

C) a more discursive summary of the planning group's discussion as it has evolved to this point. This is a draft of the group's minutes.

Location. McLean Hospital, Boston, MA. Present: R Gardner (chair), Leon Sloman, Kalman Glantz, Dan Wilson, Steve Heisel, John Pearce, and Seymour Itzkoff. Sue Gardner listened and noted items on which there was agreement. Date and Time: 25 Mar 90, 8:30 am to noon. DW furnished coffee and pastry for which the Boston planning group or "the founding board of directors" was grateful, as well as for the congenial location.

A) Conclusions: 1. The first thing agreed upon by the group was that the name of "Across-national comparisons and psychiatry" (ANCAP) would not do! However, a study would be interesting asking whether self-perception along a submission/self-assertion (dominance) dimension correlates with the psychiatric diagnosis and/or the dimension of depression.

2. Interest in such a study stems from an across-species hypothesis that neural mechanisms exist in common for depression in humans on the one hand and very low ranking across species on the other.

3. We will meet in NYC during the week of the Amer Psychiat Assoc meeting Tue 1:30 to 4:30 pm, 15 May 1990, in order to accomodate Paul Gilbert's being in NY to give a presentation. He and RG are busy on Wed, 16 May. Thu didn't work for Boston group members.

4. The third meeting of the group will take place at the HBES meeting, LA, Aug 16-19, 1990. Care will be

taken to not take planning group persons from either scientific or social events, thus, early morning, dinner time, or free evening, and not dates before or after the HBES meeting.

5. The next issue of ASCAP (4/15/90) will feature the minutes (3/25/90) with expectation of corrective feedback (see below for summary).

6. This ASCAP issue should also include announcement of a competition for the name of the study and the organization of its participants. (The rules are detailed on page 1.)

7. RG is instructed to compose an abstract for the HBES meeting with the Boston participants as co-authors: he was instructed to highlight the questions asked. Hopefully, this will recruit interested parties from HBES to participate.

8. The group agreed with Leon Sloman that we should "walk before we run:" that is, before extending ourselves too grandly, we should first carry out careful planning as well as pilot work (using the instrumentation eventually agreed on) in our own settings. Indeed, present participants represent international settings already (USA and Canada) -- but FX Plooij from the Netherlands has communicated with S Heisel about his interest (see letter above). I Zhdanova and PJ Tummon have also indicated interest (also see this issue); other international correspondents are a part of the ASCAP enterprise and may wish involvement.

B) Abstract: The above authors (with interested parties from abroad who could not be there - JS Price, P Gilbert & FX Plooij) have begun planning a study of human groups that would investigate whether subordinate self-perception along a submission /self-assertion dimension would correlate with the psychiatric diagnosis and/or self-report of depression measured on another dimension. This study stems from an across-species hypothesis that neural (and other body) mechanisms exist in common for depression (in humans) on the one hand and very low ranking (in many species) on the other. Con-

gruent findings across-cultures would attest to the postulated correlation being more basic than non-congruence would.

Data-sources ultimately will include multiple nationalities and different languages. In its first meeting (3/25/90) at McLean Hospital in Boston, the group determined general goals which included submission of an abstract to HBES to publicize the goals of the research and to recruit interested participants. The group is working on the development or adaptation of instruments, methods of conducting and integrating pilot work in our local settings, and the overall organization of how larger scale data collection and analysis might work. We hope at HBES to present the results of the first two planning meetings.

C) Summary: Other items from the Boston Meeting:

The meeting began with an introduction by RG of the history that featured Price, Sloman and his own writing on affective illness. Price and Sloman have published the hypothesis that depression represents a deeply conserved yielding subroutine, but data is needed that bears critically on the hypothesis; indeed, information for or against the hypothesis would be interesting.

Introductions and self-descriptions around the table became intermixed with substantive issues. Dan Wilson, who works with bipolar patients, emphasized psychiatric epidemiology. Kalman Glantz suggested the hypothesis may need further refining because defeated persons are often not depressed. Leon Sloman noted that depression is the inability to provide yielding behavior; the person lacks a termination response. Steve Heisel put it more generally that there is a lack of adequate regulation. John Pearce felt that family therapy needs links to empiric science, that it should embrace biology more, and that there needs to be a focus upon the CNS localization of affective change. LS noted contributions of MacLean and Akiskol that focus on the reptilian brain. RG mentioned Weiss *et al*'s model of depres-

sion that correlated with reduced norepinephrine in a brain structure, the locus coeruleus, and that includes anxiety (stressed rats are tense when held in the hand). Another rat model for depression (Henn, Petty) and recent PET scan data focuses on the medial orbital frontal lobe. RG also noted Dressler's work on stymied but upwardly mobile blacks being more depressed and hypertensive in both Brazil and USA - presented at the Amer Psychosomatic Soc (APS) in Boston, 23 Mar 90. Also at APS Henry summarized his well known work on social rank hierarchical stress and hypertension in rodents.

However, Seymour Itzkoff highlighted the contrast between animals and humans - the "balloon brain" has made a difference. He is skeptical of the defeat-depression hypothesis. This position seemed welcome for the research effort. Variance in conviction about the hypothesis within the group means that the effort may be more on "strong inference" - ringing in truth with disproof of alternate hypotheses rather than trying to "prove the theory."

Nevertheless, LS has written a letter to ASCAP (to be printed in the May issue) responding to SI in ASCAP Vol 3, #2. In connection with human evolution, SH noted that humans may have shifted perhaps from K selection to r selection in just a few millennia. SH, struck recently with the great devastation of mental illness, asked "Is mental illness a way of harnessing the balloon brain?" Human effects on infectious diseases have changed human biology (via context - public health, immunization as well as through antibiotics). Mental illness disrupts the gregariousness of humans. With respect to the present plan, SH stated his interest in having a part in a simple reliable cross-cultural study. DW strongly emphasized the importance of this, of

gathering only a few data points that as unambiguously as possible relate to the same variables in many human settings; simplicity seems highly desirable. This statement elicited group agreement.

SI has seen two colleagues become severely afflicted with bipolar illness, one died from suicide; in his mind no question exists but that biology figured in this. Moreover, families of patients with bipolar illness, obsessive compulsive disorder (OCD) and autism are brighter than usual family members. DW pointed out that there is a 33% overlap in OCD and bipolar families.

The group agreed that it should avoid "political" issues that could deviate our audiences and our colleagues from the discovery of new knowledge. A naturalistic observation of our fellow humans is that moral and political conclusions can quickly organize the way that people receive information. After this, information stops being used in an integrative manner. The Boston group is not interested in raising questions about race, intelligence etc. Rather than examining for such sources of variance, the strategy is similar to that of Eibes-Eiblefeldt and Ekman (in research on emotional expression) in looking for communalities across cultures. LS noted that we have interest in whether various cultures demonstrate similar agonistic interactions with respect to depression.

LS has published on psychomotor retardation as a part of depression. Attractiveness (a social attribute) is negatively correlated with depression. He has been interested in gait (in an ethologically derived view of depression). Slower rate of speech has also been a correlate. The group commented on the impressive ethological observations by Tyge Schelde's research group on persons with major depression that shows a lack of social behaviors with depression and

increases in socialization as the person recovers.

Concerning measurement instruments, SH pointed out that trait-state differentiations need to be made. RG noted that the very act of measurement may be foreign for some cultures. Even something as simple as a mark indicating an estimate of feeling on a line representing a continuum (analog scale) might be familiar enough to those educated in western culture but not to everyone. JP pointed out that instead of a continuum along a line drawn on paper designating quantities along a stick might be used; such might be more culture-free. The group noted that in the eventual arrangements, a local investigator perhaps collaborating with the central planning group, would probably be helped by an ethnographer knowledgeable about the culture in question. Such potential sticking points continued to recur. How related to anthropologists will the project need to be? SI noted that for the beginnings we may be satisfied with using Western-trained collaborators and trusting their translations.

The group emphatically agreed, however, that the simpler the instruments deployed, the better. DW pointed out the study should be a cross-sectional one-time measurement, not something measured over time. Ethological measures requiring instrumentation may be too complex, for instance, Ekman's facial rating scale of emotional expression. Also care must be used to not confuse the two dimensions in the measures used; ie, yielding, submission and defeat shouldn't be included in a depressed scale nor depression on the subordination/self-assertion dimension.

Preliminary thought has always included as subject samples both psychiatric patients with major depression and persons who are normal. However, this raises issues con-

cerning categorical diagnoses versus continuous dimensions. LS noted that we may be able to study the interaction of this interesting definitional issue in this study. RG commented on this point is of concern with a study in planning stages at UTMB on depression and apathy in the medically ill. The point is too major to duck; it cannot be escaped.

If an analog scale is used, could it ask of the self-rater how he or she feels currently, and also with respect to the interviewer, a significant other, and with respect to how the rater would "like to be."

While some comments counseled wariness of overly complex formulae provided by psychometricians, the group agreed that consultation might be helpful to identify pitfalls that we may wish to avoid.

Questions recurred demonstrating confusion between formal social rank and the mechanisms that underlie submission/self assertion states. LS noted that biological mechanisms are at issue which may be only loosely linked to societally manifest status.

Signals from the somatising patient.
by John Price⁵

In considering the somatising patient it might be helpful to take the viewpoint of evolutionary biology and regard the illness behaviour as an interpersonal signal. These patients are treated by doctors as though they were giving a signal to elicit care, the response being care in the form of diagnostic investigation. The exchange is not satisfactory to either, and the doctor is left feeling like the parent of a baby that cries for no discernible reason.

A second possibility is that somatising behaviour is basically a submissive signal, giving the message "I am sick, incapacitated, offgame, out of action." Submissive signals are widespread among vertebrates that live in groups, and they often use metaphor to get their message across--for instance, wolves expose the perineal area to a rival (in the way that cubs present it for cleaning to their mother), giving the message "I am like a female to

your male"; and human beings prostrate themselves to convey the message "I am lower than you in rank." In presenting themselves as sick the patients may be signalling low resource holding potential, giving the message, "I am no more threat to you than a sick person."

Has this view any implication for management? One way to stop someone signalling is to acknowledge that the signal has been received and will be acted on, but somatising patients tend to get their signal either invalidated with the response "There is nothing the matter with you" or reflected back in the "Are you sick?" approach of the diagnostic process. Not surprisingly they "shop around" until they get their "Roger, wilco" in the form of a diagnosis of candidiasis, myalgic encephalomyelitis, or another physical label together with a convincing treatment regimen.

It is no good telling the patient that his or her illness behaviour is a submissive signal. The reply must be in the same metaphor. I try to make it a rule that no patients leave my consulting room thinking that I think they are less sick than they think they are. As psychiatry did not exist at the time this metaphor was being evolved, I try to give as near to a physical diagnosis as I can and specifically exclude "madness," which is bound to be a fear in anyone seeing a psychiatrist for the first time. Many patients will accept "stress disorder" or "depression," particularly if hormonal or other biochemical changes are acknowledged. "Chronic respiratory alcolosis" can be useful if one is planning to prescribe a course of relaxation that includes breathing exercises.

For the general physican things are probably not so easy; the times are past when one could get away with translating the presenting symptom into Latin, and it may be difficult to find a diagnosis that is acceptable to both doctor and patient. I doubt that "somatisation disorder" is likely to fill the bill.

Why do these patients continue to emit submission signals? I suspect that they have not managed either to conquer or to make satisfactory submission to God or fate or whatever higher power they recognize. The reptilian brain⁹ receives signals indicating the need for submission, but the cortex, which is needed for the consummatory act of submission, has a rebellious streak and does not cooperate. The unpleasant symptoms of the disorder would then be due to chronic activity in the areas of the corpus striatum that subserve submissive behaviour. If that were so, it might be appropriate

to call it Lewis's syndrome after the philosopher who suggested that the function of pain is to enable man to submit to God's will.

*** Featured Essay ***

Oedipal Behavior & Parental Investment

by CR Badcock

Sometimes in the history of science apparently bizarre and unaccountable findings suddenly cease to be incomprehensible because new facts or theories provide an unexpected rationale. An example would be Galileo's observations of Saturn--a planet, as it seemed to appear, with 'ears' as Galileo graphically called them (now known to be a ring-system). These came and went, apparently inexplicably, affording much amusement to his critics and to all of those who claimed--not entirely without reason--that contemporary telescopes distorted more than they revealed. Much the same has been said of Freud's observations in general and his findings regarding the Oedipus complex, and--perhaps most bizarre of all--penis-envy in particular.

However that may be, considerations of parental investment (PI) in the human case suggest that, just as Newtonian principles ultimately explained ring-systems and made them entirely predictable (so much so that they are now known to orbit all the giant planets), so PI theory may have provided the ultimate rationale for Freud's most provocative findings. For instance, if, as I suggested in an earlier communication,¹¹ oral behavior has indeed evolved as a means of manipulation of the mother's fertility in the interests of an offspring and if, as is indeed the case, maternal sensitivity to it declines after about 2 years, continued interest in parental sexual activities on the part of an existing offspring might be seen as a new tactic serving the same overall strategy. Perhaps

Freud's 'anal-sadistic stage', which begins about age 2 and centers on parent-offspring conflict relating to excretion fits in here, e.g., by way of infants using excretory behavior to interfere with parental sexual activities.

Certainly, the next stage described by Freud, the Oedipal, or, phallic stage, may have much to do with PI, defined as anything a parent contributes which benefits an offspring's reproductive success (RS) at a cost to the remainder of the parent's RS.¹² In so far as Oedipal behavior is equated with infantile interest in parental sexual activities, the observation above may go some way to explaining it: it may simply be a means by which existing offspring monitor--and perhaps even want to interfere with--parental sexual activity which carries the perennial threat of the conception of siblings. At the very least, this insight casts an interesting light on the often-reported 'primal scene' material in psychoanalysis: real or imagined observations of parental intercourse during the subject's childhood which take on a traumatic character.

But Oedipal behavior is complex and seems to involve more than just this. Contrary to Jung's belief that there ought to be a neat reversal of the male Oedipus complex in the case of girls (the 'Electra Complex'), Freud observed that, originally, both sexes direct strong feelings of love towards the mother. If the mother is the principal agent of early PI, this makes perfect sense as an if-I-love-you-best-you-will-love-me-best-(and--hopefully-invest-in-me-best) tactic for both sexes. A clear test of this theory--and one, furthermore, which would contradict Freud's implicit assumption of the universality of Oedipal behavior--would be provided if there were a human equivalent of a possibility predicted by

Trivers in his original paper on parent-offspring conflict: one in which a parent may be selected to provide more PI than an offspring needs in order to make it dependent on the parent as a non-reproductive 'helper in the next'.¹⁴ Here it may be significant that Robert Stoller reports that so-called 'transsexuals' are both overwhelmed by lush and profuse parental care during childhood and characterized by an absence of discernible Oedipal conflict.¹⁵ Again, this way of seeing Oedipal behavior would immediately suggest an alternative to the wearisome controversies about the incest-taboo and would explain why so much ink has been so unprofitably spilt on the subject: It may simply be that Oedipal behavior is not about incest at all and makes no real sense until shifted into an altogether different biological context: that of the theory of parental investment.

The greater clarity and simplicity of the male Oedipus complex may relate to the advantages of preferential PI in males in a polygynous species like human beings. (Evidence for this comes from cultural studies (84% of all known societies are polygynous), and is reflected in sexual dimorphism, sexual bimaturism, and a relative body/testis weight ratio for men characteristic of ground-dwelling polygynous primates). Males almost always show greater variance of RS than do females, thanks to the fact that males, by definition, have vastly more sex cells than do females who, as in the human case, also usually make much greater PI in offspring conceived--an effect greatly amplified by polygyny. Consequently, an immature male, still dependent on heavy PI, might receive more of it if he showed signs of future RS evidenced in precocious sexual behavior, amorous attitudes to females of the family--i.e. . the mother and sisters--and aggressive-

ness and sexual competitiveness with males--i.e.. the father and brothers. To a very large extent, this is the behavior which Freud called the male Oedipus complex.

Classical psychoanalysis characteristically looks at things from the individual's point of view and does not assume that some have a privileged viewpoint (e.g., it is unlike socialization theory, which heavily endorses the view of the parents), and thereby resembles recent sociobiology (especially the theory of parent-offspring conflict). Socialization theory suggests that sex roles are largely imposed by the parents and the culture, but the fact of universal repression of memories of early childhood suggests that evolution has equipped adults to take a parent's, rather than a child's, view of it (since parents' ability to recall how they felt as infants would create ambivalence in their handling of their own infants). Evolutionary theory predicts that if parents discriminate in PI on a basis of offspring sex, offspring of the discriminated-against sex ought to be selected to resist. For instance, Freud found that children of both sexes insist that possession of the penis is what defines sex. Adults tend to deny this, but this one might expect if, as parents, they did indeed discriminate in PI related to offspring sex. Offspring in this situation ought to be selected to know what sex they and their siblings are independent of parental ideology, and to react accordingly. Since adult sexual dimorphism does not develop during childhood, only primary sex differences can be used by a child and, among naked primal hunter-gatherers, the presence or absence of a penis would be the most reliable indicator of sex.

Freud also found so-called 'penis-envy' in women. If males are indeed

often favored with preferential PI merely by being males (possessing a penis in the child's view), discriminated-against females ought to be motivated to compete, making penis-envy comprehensible as a tactic in parent-offspring conflict, particularly if one of its effects was to masculinize the behavior of female offspring, thereby attracting investment earmarked for males. Contrary to the erroneous view expressed in the book on which this abstract is based, penis-envy will be selected for in all females irrespective of actual allocation of PI and environmental circumstances because it is a tactic induced, not by conditions affecting resources available for investment in particular cases, but by considerations of offspring quality as evidenced by Oedipal behavior in males. Since, in a polygynous species, most males will be descended from the more successful males of previous generations who would normally have been the recipients of preferential PI in their favour, most females will be faced with resource-competition on the part of their descendants and so penis-envy will tend to become common--a fact which also explains why a corresponding envy of females cannot be selected in males, at least on this basis. Finally, psychoanalytic insights into adult female behavior shows how such preferential PI in Oedipal males is maintained: it seems that many women unconsciously see their sons as possessing the attribute they feel they have always lacked and accordingly invest in them preferentially. This closes a circle of parent-offspring interaction which, seen against the background of modern evolutionary theory, makes Freud's observations of Oedipal behavior seem as natural as Galileo's sighting of the rings of Saturn did when seen in the context of the Newtonian theory of gravitation.

1. Hull DL: Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science Chicago: U Chicago Press, 1988, p232
2. For ASCAP Vol 3 (Jan through Dec, 1990) please send \$18 (US dollars) for the 12 issues to cover copying and mailing expenses. Make checks or money orders out to "Department of Psychiatry and Behavioral Sciences, UTMB"
3. ASCAP philosophy and goal. High scientific importance rests on comparing animal behaviors across-species to understand better human behavior, knowing as we do so that evolutionary factors must 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. Both top-down and bottom-up analyses are needed. 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. MRA 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.
 - b. JS Price: "anathetic" and "catathetic" describe conspecific messages. Catathetic messages "put-down" and anathetic "build-up" the resource holding potential (R) of target individuals.
 - c. R Gardner: "psalic" is a 2 way acronym: Propensity States Antedating Language In Communication and Programmed Spacings And Linkages In Conspecifics. This describes communicational states conjecturally seen with psychiatric disorder and normality (human and non-human), ie, alpha psalic seen in manics, high profile leaders and dominant non-human animals. Eight psalics are named alpha (A), alpha-reciprocal (AR), in-group omega (IGO), out-group omega (OGO), spacing (Sp), sexual (S), nurturant (N), and nurturant-recipient (NR). These new or renewed terms are initiated or elaborated in Chance, MRA (Ed) Social Fabrics of the Mind. Hove and NJ: Lawrence Erlbaum Associates, 1988.
 - d. P 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, #1 and his book: Human Nature and Suffering. Hove and NJ: Lawrence Erlbaum, 1989.
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