For evolutionary psychiatrists, psychologists and others interested in sociophysiological integration

ASCAP

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"All people should be elitists — and keep it to themselves." Jonathan Franzen[1]

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ASCAP Society Mission Statement:

The ASCAP Society represents a group of people who view forms of psychopathology in the context of evolutionary biology and who wish to mobilize the resources of various disciplines and individuals potentially involved so as to enhance the further investigation and study of the conceptual and research questions involved.

This scientific society is concerned with the basic plans of behavior that have evolved over millions of years and that have resulted in psychopathologi-cally related states. We are interested in the integration of various methods of study ranging from cellular processes to individuals in groups.

ASCAP Newsletter Aims:

- ♦A free exchange of letters, notes, articles, essays or ideas in brief format.
- ♦Elaboration of others' ideas.
- ♦Keeping up with productions, events, and other news.
- ♦Proposals for new initiatives, joint

The ASCAP Newsletter is a function of the ASCAP Society.

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ADDRESSED TO & FROM

1998 ASCAP Society Meeting Theme

President Daniel Wilson has notified me the 1998 theme is: **"Toward Empirical Research in The Clinical Application of the Human Evolutionary Sciences".** The meeting will take place July 8,1998, in Davis, California, on the day preceding the Human Behavior and Evolution Society Meeting. Mark your calendars and begin your plans for attendance. Historian Roger Smith has described human sciences as those disciplines concerned with people's interests, community, sense of self-identity and purpose.[1] This certainly encompasses the many clinical and basic science disciplines of ASCAP readers.

President Wilson's own contributions on evolutionary epidemiology in recent newsletters model how population evidence helps us place our theories in a real world. Responding to his challenge, I will myself argue that much major data relevant to these issues already exist that bear on the continuity of animals to people as well as anatomical and behavioral contrasts between humans and other animals. I believe we require new ways of organizing the information. So put your thinking caps on and consider how you might contribute to what promises to be an exciting meeting.

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DEPRESSION & SUICIDE

Paul.Bernhardt@rn.cc.utah.edu **wrote:**

Something that doesn't make sense to me, assuming I have good information... If women are more likely to be depressed, how come men are more likely to suicide? I think that the higher level of suicide in men contradicts women being more likely to be depressed, indeed it is suggestive that men are more likely to be depressed.

Olav Nyttingnes wrote:

It may be possible to combine these to findings in a single explanation, and that is somewhat more elegant, isn't it?

According to the ranking-theory of depression (Gilbert, Price, Sloman, Gardner etc.), depression may be the result of an de-escalating emotional response. In order not to take risks by fighting or competing for more resources than you can hold, this response may have inhibition, devaluation, and incapacita-tion as its adaptive component.

Depression: Because men are thought to have more fitness to gain by taking risks, this response will be somewhat less easily triggered in males.

Suicide: Because men are thought *to* have more fitness to gain by taking risks, inhibition of violent ideas, means, and drastic measures may be less in males than in females.

Olav Nyttingnes
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THOMSONS ANSWER TO KALMAN GLANTZ

Kalman Glantz elegantly summarizes the intent of my ten plus commandments of an evolutionary forensic psychiatry. He writes that I want us to understand that we too might have offended, but for the accidents of embryology and the grace of parents who did not abuse and neglect us. The thrust of my argument is that the commandments temper our vulnerability to distance ourselves from offenders, subtly and flagrantly, with dehumanizing counter transference responses.

My regret is that he was unable to attend the June meeting and hear the presentation. My hope is that he would not have felt that I delight in shocking the bourgeoisie and have obvious talent as a writer of lurid headlines. He acknowledges that the commandments are not incorrect, but says they are just overstated for effect. Not so. The commandments are almost direct quotations from the sources cited, primarily Daly and Wilson's *Homicide* and Wrangham and Peterson's *Demonic Males.*

Those sources support the commandments with more detailed evidence than either time or space permitted me.

Dr. Glantz takes particular exception to the commandment that "rapists are just like the rest of us " 'Commandment V. Battering, sexual assau' rape are evolved mechanisms of the male mind. The primary aim, even in rape, is not fertilization, but control of the woman and ultimate fertilization later.) He says it is comrauicted by Commandment Ten which deals with the neurologic impairment caused by childhood neglect and abuse and their contribution to triggering adult violence. He acknowledges that males have the potential for violence and that they will rape under some circumstances: war, social upheaval, extreme inequality, etc. But he wants to insist that violent and sexual offenders are generally not ordinary males; there is something wrong with them. Dr. Glantz is distancing himself from these men in a way the commandments are designed to combat.

With regards to sexual violence towards women, I stand by that commandment. It is well supported in Wrangham and Peterson's book, *Demonic Males.* Neglect, abuse, and its consequent neurologic damage, and war, social upheaval, and extreme inequality may make males more vulnerable to batter and sexually assault, but they are not required.

The evidence is overwhelming and cited in my article. To give some further examples, there is Joseph Kennedy Jr.'s rape of Gloria Swanson (Nigel Hamilton, *JFK: Reckless Youth,* page 65), and in the past ten years more than 400 professional and college athletes have been publicly reported for violent crimes against women. Few have been suc cessfully prosecuted. (Jeff Benedict, *Public Heroes, Private Felons),* As Robert Lipsyte of the New York - Times notes, often
in packs like wolves on a deer, college a_____ to athletes bring down a woman as they would sack a quarterback, play with her, physically hurt her, and then toss her away. Should she complain, the college or pro team pays for a lawyer whose standard ploy is to contrast the popularity and value of the defendant with the contemptible star-chasing sexuality of the victim *(New York Times,* October 19,1997).

As a psychiatrist at a student health service of a large state university, I can attest to the dismaying rate of date rape, not only by athletes, but by neuro-logically intact sons of some of the finest families of the South. I believe that few men, if they honestly look at their lives, will be spared a wince from a memory of being sexually coercive with a woman.

Dr. Glantz asks, is this what we want to do with evolutionary psychology? My answer is, Yes. Evolutionary psychology should be concerned with what "is", not what "ought to be". (Lewis Petrinovich, Darwinian Thoughts About Moral Oughts, plenary address, HBES, June 1997.) That certainly seems to be the spirit of his and John Pearce's excellent book, *Exiles From Eden,* which I have found invaluable.

We should know our enemy. Acknowledging that revenge killing is natural has not made murder legal. Civilized societies have appropriated from victims and their kin the enactment of blood revenge through the retributive component of the justice system. Acknowledging that sexual coercion is an evolved mechanism of the male mind deepens our appreciation of the propensity, the problem, and the labor required to contain it.

Unsparing honesty about the truth of human nature should be the cornerstone of an evolutionary psychology. It animates Dr. Glantz's work and my attempt to outline principles for an evolutionary forensic psychiatry.

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AFRICAN EXODUS

Peter Frost wrote:

In post-Paleolithic times, optimal conditions have been limited to the southernmost fringes of the arctic tundra zone. In Paleolithic Europe, however, the carrying capacity of the low-latitude tundras was quite high and human population densities

correspondingly high. Thus, sexual selection of women may have been unusually intense among the modern humans who colonized the tundra plains of Paleolithic Europe.

Mike Waller responded:

I have in hand a summary of work done by Daniel Freeman and his wife Nina comparing the behaviours of Caucasian babies with those of Chinese and Navaho babies when placed in different positions. The results showed that the Caucasian (and, apparently, Afro-Caribbean) babies struggle to get out of positions they do not like (e.g. a cloth placed lightly over their noses), whereas the Chinese and Navaho "were characteristically more compliant and less irritable than the Caucasians".

Is it unreasonable to see in this a mirror reflection of group attitudes to deviant behaviour?, i.e., Caucasians produce more demanding babies than do the Chinese because traditionally Caucasians have been more prepared to accept behaviour of this kind. (You could say that this is still reflected in the human rights vs social control debate between the West and China.) If this is a deeply rooted difference, could it too have an effect on polymorphism with Caucasian groups being more willing (though still not very willing) to accept differences in appearance and differences in behaviour? Or at least allow their deviant young to exist long enough to then drift off to do their own thing in a multi-opportunity environment?

I have to say that like most everything else in evolutionary theory, I look at this topic through the prism of organisation theory. In that discipline the question of whether or not a sub-unit should be subject to tight discipline or allowed considerable autonomy is a function of how certain the task to be performed is. If, correctly, you know just what it is that the subordinate ought to be doing, don't give him the scope to do anything else. If you don't know (i.e., if you are trading in a volatile and highly differentiated market), then you must give the sub-unit considerable freedom of action. If I can be forgiven some gross simplifications, if you look at world history from this perspective, you could take the view that for several millennia the control model paid the best dividends with China achieving high civilisation very early.

Recently, the *ASCAP Newsletter*[1] carried a marvellous series of articles which amongst many other things explained how social control was so important to the early Chinese because their irrigation systems demanded tight regulation of who took what water from where. Come the renaissance and the industrial revolution, the more decentralised, individual-centric approach of the West scored much more highly and both the Chinese and the native Americans found themselves on the wrong end of (then) advanced technology.

Recently, the BBC showed a new Horizon programme entitled "Out of Asia?". Early on, it seemed to suggest that Chris Stringer, et. al., had hammered some Australian parvenus who had come up with a 100,000 year plus date for the arrival of man in Australia. However, towards the end they came back with some very strong stuff about the tool making capabilities of *homo erectus* and the possibility that *homo erectus* was the source of modem humans, at least in what we would call Australia and the Far East. The final observations from Chris Stringer most certainly were not supportive, but nor were they a complete no-no. Any comments?"

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Please E-mail any contributions to ascap@utmb.edu, or mail hard copy and 3.5" HD diskette to: Russell Gardner, Jr., c/o Frank Carrel, Department of Psychiatry & Behavioral Sciences, University of Texas Medical Branch, Galveston, Texas 77555-0428, USA. WordPerfect, Microsoft Word or ASCII format preferred. Diskettes will be returned to you. Thank you.

ARTICLE:

by Michael K. Davies

Involuntary Strategies: A Response to Tim Miller

Tim Miller's article *Involuntary Strategies*[1] raises fundamental issues concerning the validity and scope of scientific inquiry with regard to humankind. He states that "psychology, evolutionary and omen/vise, actually explains rather little, and offers rather little promise".[1] Readers are invited "to search patiently and diligently for the flaw in" his reasoning.

The arguments in Tim Miller's article against psychology's (and psychiatry's) potential _____ explain human behaviour derive from three sources. First, no satisfactory account (definition) can be given of human consciousness. Second, self-reports on the contents of consciousness "are, ultimately, incomprehensible",[1] primarily because the contents of consciousness (reportedly called 'qualia' in Chambers', *The Conscious Mind)* can be "only defined by example".[1]

In other words, qualia, which are, apparently, essential in the task of defining consciousness, can only be known through subjective, personal experience. How can an internal, individual experience be observed by anyone? Third, the application of the rules of causation to events in the mind leads to insoluble paradoxes. For example, the notion of involuntary strategies depends for its meaning on that of voluntary action ("conscious control"), about which "we haven't a clue".[1] Moreover, Tim Miller asserts "Free choice is logically impossible".[1] A free choice must have no determining cause. In which case, science, which explains how A causes B, can have no application to these uncaused actions.

Surprisingly, perhaps, all three arguments can be conceded without affecting the scientific status, or potential, of psychology. Each one can be shown to be irrelevant to the validity of, or progress in, psychology. However, science cannot be characterized by the notion 'how A causes B'. The clarification of these issues reveals much about the formal structure of science and the working of the scientific method.

Advances in biology were not helped by arguments similar to those expressed by Tim Miller with regard to psychology. The attempt to define the 'life force' was wholly unproductive. Life, like consciousness, is "almost impossible to define. Certainly no adequate, concise definition exists".[1] Is a virus alive when frozen as a crystalline structure? At what precise point did life begin? and so on.

Biology is also vulnerable to Tim Miller's other points. Researchers have examined the language capacities of chimpanzees. How can this be possible if the chimpanzees' answers "are, ultimately, incomprehensible"?[1] After all, some consciousness has to be conceded to the higher primates.

The application of the laws of causation to biology ("Or as philosophers like to say, an event is either 'caused' or 'uncaused")[1] creates equally insoluble paradoxes. If biological events are wholly caused (determined) by preceding events, how can organisms have the potential (be 'free') to respond to their current environment, as demanded by the theory of evolution by natural selection? However, if biological events "are uncaused, how and why do they occur at all?"[1]

Three conclusions follow from the preceding paragraphs. First, science cannot be, and is not, concerned with defining things by their essential characteristics, because definitions of this kind are not open to empirical investigation. Second, intrinsically unobservable phenomena, for example the nature of an individual's consciousness, have no place in science. Third, scientific laws cannot be

expressed in a form which asserts causation, for example 'A causes B'. The reasons for these conclusions lie in the nature of scientific explanations and the scientific method.

Science is an activity that describes the patterns, regularities or relationships (the words are equivalent) found in the world of experience. A scientific explanation is true, if, and only if, its description corresponds to the facts. Scientific theories are subject to a critical, formal constraint: a scientific theory has to predict only one coherent set of patterns, regularities or relationships in the facts. A scientific theory cannot be consistent with all the possible outcomes. If investigation reveals a different set of patterns to those predicted, then that particular theory is refuted.

Karl Popper's achievement was to elucidate the formal structure of science and clarify the working of the scientific method.[2] Popper showed that science progresses by formulating hypotheses which are educated guesses as to the patterns in the empirical phenomena being investigated. The fundamental criterion is that a hypothesis must be refutable. In other words, a theory has to predict that a particular set of facts either must, or cannot, be found together. The prediction must also be capable of refutation by independent researchers.

The most comprehensive scientific description (explanation) reveals how all the empirically observed features are, in fact, different aspects of the same phenomenon. Accordingly, these features must be found together. For example, Newton's theory of gravity explains falling apples, the moon's orbit (whose fall to earth, as Newton realized in his orchard, is offset by its orbital velocity), the tides and that rivers do not flow uphill.

ASCAP's mission statement contains the scientific hypothesis that humankind, and other species, can be explained (revealed to be various aspects of) "the basic plans [patterns] of behavior that have evolved over millions of years". This assertion can be tested against the evidence.

The hypotheses of involuntary strategies (Involuntary Subordinate Strategy,[3] failsafe[4] and standby[5]) are detailed applications of the general principle enshrined in *ASCAP's* mission statement. Each one of these theories describes the patterns of behaviour that would occur if the relevant involuntary strategy theory were true.

Accordingly, the hypotheses can be tested by independent investigation. If the facts are inconsistent with those predicted by any one of the theories, then that theory is refuted and must be amended or abandoned. The process of inventing new hypotheses then starts again. However, to repeat the key point, the golden rule for a scientific hypothesis is that the prediction must entail its own unique patterns in the facts.

Specific patterns of behaviour (syndromes) are predicted by involuntary strategy theories. For example, a syndrome may incapacitate individuals who are committed to an undertaking which exceeds their abilities ('failsafe').[4] In a failsafe, the symptoms are predicted to mimic, in many cases, a recognized illness. Thus, the individual's inactiv-ity is rendered socially acceptable to relatives, friends and colleagues.

The syndrome is called involuntary to express the notion that the sufferer is not knowingly mimicking, malingering or faking an illness. The patient genuinely, but wrongly, believes the illness to be real. While the personal, subjective nature of the patient's consciousness (qualia) cannot be known, the belief ('I am really ill') can be ascertained. At this point, the question is purely evidential (do I believe this person is telling the truth?). The facts of the case can be established, and independently checked, by other researchers.

Definitions of consciousness are, therefore, completely irrelevant. The only significant observation is that the individuals are self-aware, although mistaken as to the origin of their syndrome.

Likewise, questions of causation present no difficulties. Science investigates what has hap-

pened. Whether the past (the individual's life history) could have been different does not feature in the inquiry. We do not know whether a rerun of the history of the universe would be the same or different from the first occasion, Consequently, no empirical evidence is available to decide whether human actions were either determined by their causes or were "uncaused" and, therefore, "free".

If the idea of involuntary strategies has merit, then a part, albeit small, of the human situation has been explained by the hypothesis in *ASCAP's* mission statement. A little of the mystery concerning humankind[6] has been removed. In this scientific context, human behaviour is not necessarily "ultimately and permanently mysterious".[1] The concern must be that this realisation in no way diminishes Tim Miller's happiness. *c8*

Poe at the PC

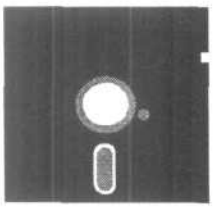
Author Unknown - submitted by James Brody, JBrody@ MediaOne.com

SUPPOSE EDGAR ALLAN POE HAD USED A WINDOWS COMPUTER:

Once upon a midnight dreary,
Fingers cramped and vision bleary,
System manuals piled high and wasted paper on the floor,
Longing for the warmth of bed sheets, Still I sat there, doing spreadsheets:
Haying reached the bottom line, I took a floppy from the drawer.
Typing with a steady hand. I then invoked the SAVE command and waited for the disk to store,
Only this and nothing more.

Deep into the monitor peering,
Long I sat there wond'ring, fearing,
Doubting, while the disk kept churning, turning yet to churn some more.
"Save!" I said, "You cursed mother! Save my data from before!"
One thing did the phosphors answer, only this and nothing more,
Just, "Abort, Retry, Ignore?"

Was this some occult illusion?
Some maniacal intrusion?
These were choices undesired, ones I'd never faced before.
Carefully, I weighed the choices as the disk made impish noises.
The cursor flashed, insistent, waiting, baiting me to type some more.
Clearly I must press a key, choosing one and nothing more,
From "Choose Abort, Retry, Ignore?"



With my fingers pale and trembling
Slowly toward the keyboard bending,
Longing for a happy ending, hoping all would be restored,
Praying for some guarantee Timidly I pressed a key.
But on the screen there still persisted words appearing as before.
Ghastly grim they blinked and taunted, haunted, as my patience wore,
Saying "Abort, Retry, Ignore?"

I tried to catch the chips off-guard -
I pressed again, but twice as hard.
I pleaded with the cursed machine: I begged and cried and then I swore.
Now in desperation, trying random combinations,
Still there came the incantation, just as senseless as before.
Cursor blinking, angrily winking, blinking nonsense as before.
Reading, "Abort, Retry, Ignore?

There I sat, distraught, exhausted,
By my own machine accosted
Getting up I turned away and paced across the office floor.
And then I saw dreadful sight: a lightning bolt cut through the night.
A gasp of horror overtook me, shook me to my core.
The lightning zapped my previous data, lost and gone forevermore.
Not even, "Abort, Retry, Ignore?"

To this day I do not know
The place to which lost data goes.
What demonic nether world is wrought where data will be stored,
Beyond the reach of mortal souls, beyond the ether, into black holes?
But sure as there's C, Pascal, Lotus, Ashton-Tate and more,
You will one day be left to wander, lost on some Plutonian shore,
Pleading, "Abort, Retry, Ignore?"

ARTICLE:

by David Evans

A Writer Brainstorms on Sociophysiology

I like the word *"brainstorming.* It will give me some room in this essay. Sociophysiology is one of the most exciting ideas I've heard of in some time. And you know something? I've wondered myself (what got me thinking about all this was probably Wilson's *Sociobiology,* which I found in a used book store in Iowa City, Iowa in the early 80's) if there couldn't be a way (through an organization or whatever — to work toward the melding of art/ literature/humanities on the one hand, and biology (used in a broad sense here) on the other hand.

The ideas such as those coming out of ASCAP and HBES, as far as I'm concerned, have not only altered our way of looking at human nature; they have begun to shape a new, more convincing definition of human nature. But more than that: many believe that these ideas need to be disseminated to a much larger audience, and in a way that is clear, convincing, and useful. And not just because they are good ideas based on facts and empirical research, but because we need them in order to make a more enlightened, more informed, more ethical society.

I am not a disinterested, undesigning observer here. As a writer, a teacher of literature and writing, as a long-time Darwinian (I probably would have majored in biology in college but lacked the math background, and got sidetracked into literature, both as a reader and later as a writer), I've been interested for a long time in what I have seen described as sociophysiology.

We know that the humanities, whose roof I work under, have never been particularly friendly to Darwinian ideas. It took me a long time to understand why this is so; I finally figured it out: what Darwin and his followers in this century have to say about human nature, basically, is not something these people — most of them, anyway — want to hear. They tend to cling to the SSSM, which works for them (as Tooby and Cosmides say) because of its "wide-spread moral appeal." For many years I've felt that these people, peeping at the world from behind this moral shield, see only half of that world. The other half is inaccessible to them because they simply refuse to believe that it exists. (I've often wondered if, for a lot of people, the solid, irrefutable fact of their own animal nature doesn't just downright threaten their self-esteem). I remember a little sign on the desk of my first college biology teacher — the best teacher I ever had in college. It read:

> *"Don't bother me with facts.*
> *My mind is made up."*

Dr. Froiland was a teacher who had the gift of metaphor; he could make difficult things fairly simple for his students — through metaphor, analogy, and story. He wasn't just a teacher. He was an artist — in other words, he had truths to tell along with strong convictions about those truths. He believed that biology was the most important thing in the universe, and nobody could convince him otherwise. To Dr. Froiland, evolution was a story. Of course, facts and statistics and theories and hypotheses and results and conclusions are all part of the story. But there is much more to it than that. The teller and the telling are also part of any story! The "evolutionary epic" is exactly that, an epic, a long, wonderful story that has great ideas and lessons for all of us, scientists and non-scientists alike.

Now here's a long footnote. A curious thing happened the other night, when Jan and I went with friends to see an outdoor performance of *Macbeth* in Sioux Falls. MacBeth had just been crowned after he had killed Duncan, and, although he looked like a man whose status had suddenly risen — and

of course it had — he was already getting paranoid and irritable about Banquo, who had been a fellow thane and military colleague. He has Banquo killed because he feels he is a threat (the witches had predicted it) And then, when Fleance, Banquo's son, escapes murder, and MacBeth is informed, he immediately says:

> " *Then comes my fit again. I had else been perfect, whole as the marble, founded as the rock, as broad and general as the casing air. But now I am cabined, cribbed, confined, bound in to saucy doubts and fears."*

I sat there in the bleachers, thinking to myself: That guy from Stratford-on-Avon, with only a grammar school education, knew a hell of a lot about primate behavior! And that was five centuries ago, long before Darwin and very long before the late 1900's — now — when discerning persons like you and Frans de Waal and John Price and others are showing through empirical studies the agitated state ("doubts and fears") of any alpha male, and the connections between mood and status.

Shakespeare's description and dramatization were not only powerful and convincing for a great character in a great play, but, universally, through MacBeth he looks forward to Richard Nixon and Mao Zedong in our century. But that confluence of science and art that we're talking about, which has been there for hundreds of years in stories and poetry and art, may as well not exist as far as most humanists and literary critics (not to mention sociologists) are concerned.

To work toward bridging the gap between those two ways of understanding human behavior, Wilson's sociobiology will not be enough, has not been enough (though it has helped), because most people simply don't have the capacity to grasp the scientific side, especially if it's presented only in a scientific way, it seems to me. Even the groundlings understood Shakespeare.

That's one powerful reason that I think it's high time for the confluence to begin to happen more explicitly and consciously. The connections are there. We need to find them; we need to explore. One important use of literature and art in the ASCAP enterprise, it seems to me, is that literature can make scientific ideas clear, and therefore more accessible.

I have always appreciated Matthew Arnold's notions in his argument with Thomas Huxley a little over a century ago, in his essay, "Literature and Science." Arnold was way of ahead of his time. Because he was a highly intelligent, honest man and scholar who knew, like my professor, Dr. Froiland, that facts are facts, he had to defer to Darwin's "hairy quadruped" proposition. But he wanted to take it a step further; he wanted to relate the proposition (the facts) to what he called "the sense which we have in us of conduct... [and] "to the sense which we have in us for beauty." (I assume that by "conduct" Arnold was talking about such things as ethics and morality.)

Near the end of his classic essay he asks:

> *"But how, finally, are poetry and eloquence to exercise the power of relating the modern results of natural science to man's instinct for conduct, his instinct for beauty?'*

He wasn't sure how this could happen, but believed it would happen. The point as I see it, is that there's a need for getting the knowledge and findings out to the public.

And so, only 25 years after *The Origin* came out, a literary artist and scholar of the first rank, Matthew Arnold, was talking about the melding of art/humanities and the natural sciences, using words such as "conduct," and "beauty." What has happened between Arnold's essay and right now, I don't know. What I do know is that the melding has not yet happened, though I've seen glimpses of it at times.

In an essay called *Animal Behavior and Morality,* Niko Tinbergen argues that, "of all sublimated

activities, scientific research would seem to offer the best opportunities for deflecting and sublimating our aggression. And then he says that:

> " *The whole population should be made to feel that it participates in the struggle [against behavior problems in society*]*."*
>
> *"This is why scientists will always have the duty to inform their fellowmen of what they are doing, of the relevance and the importance of their work. And this is not only a duty, it can give intense satisfaction."*

Early in the essay he had said that "a *scientific understanding of our behavior, leading to its control, may well be the most urgent task that faces mankind today."* Right on! The essay, essentially, is about (in his own words) "man's ignorance of his own behavior."

Tinbergen ends his essay (from *Science,* June 28, 1968) by referring to "the danger of mankind destroying his own species," and then says:

> *"If we are to succumb, and even if this were to be ultimately due to our own stupidity, we could still, so to speak, redeem our species. We could at least go down with some dignity, by using our brain for one of its supreme tasks, by exploring to the end."*

There are some points I would lean on from Arnold and Tinbergen for a mission statement. One of them is the notion of "conduct" and "beauty" (Arnold) and another is "exploring" (Tinbergen). I believe that these points have plenty to do with what we are talking about. In any case, I'm taken by their ideas. These are two men from different disciplines, separated by a century, very much aware of the melding newly required.

Let me say a few things about metaphor and story. Metaphor, as we know, is not just for literary people. Scientists use it too, because it's a way of finding continuity, a way of showing the related-ness of things, and a way of describing, of teaching. I've always appreciated Darwin's description of an elongated insect: "It resembles a stick overgrown by a creeping moss." Yes, that's perfect!

And then there's Pedro Calderon de la Barca, a playwright and poet born in Spain in 1600. He described a bluebird by saying it's "like a flower of feathers or a winged branch." Yes, that's perfect too! Two metaphors, two observers — a scientist, a poet. Of course with science there can supposedly be no connotation, but this is not so. The metaphors of Darwin, for instance, have large connotations; they resonate: the tangled bank; the tree of life.

I appreciated the "giving in" vs. "giving way" metaphors from past issues of *The ASCAP Newsletter.*

I remember a poem called *The Cancer Cells* by Richard Eberhart, in which he describes cancer cells as a "virulent, laughing gang." That's powerful stuff. Perhaps he got his metaphor by looking through the same microscope a biologist uses.

Wilson referred to the "poetic species" in his *Biophilia,* a book that tries to bridge the gap between biology and art/poetry, metaphor is really a matter of "how we think." I believe that is true. (Perhaps someday a researcher will find a spot or system in the brain where metaphors are actually produced!) We all have a story to tell. Robert Penn Warren, the southern poet and novelist, was once asked why he liked to read stories.

His response was something like: I like to see how my own story fits into the other ones. That makes sense too, doesn't it? I need the LeDoux book on the brain. A quote from it, *"memories of our past, expectations of the future, the present social situation and the physical environment'* makes lots of sense. I take it is something like the idea of being able to have some control, even if it's only of things like our desk, our household, our

checkbook, and so on. So we can assert and reassert ourselves through metaphor. And I think that writers and artists do that all the time when they create. " *What you hear coming out of a man's horn,"* said Louis Armstrong, *"that's what he is."*

Recently I've been thinking about an anthology of literary works — personal essays, poems, short stories, excerpts from memoirs — that in some way parallel or reflect the findings of evolutionary psychology (using the word in a broad sense). And along with these works, some essays and articles which enumerate and discuss recent findings on depression, anxiety, status seeking, sexual differentiation, deceit, self-deceit, and so on: all the big categories of natural selection as it has worked on human behavior.

My idea is that there could be a nice correlation here — some of the works written, say, with Darwin consciously in mind — the kind of thing I tried to do with my essay on my relationship with a dirt mover — and some of them, perhaps most, written even before Darwin and his big (and dangerous?) idea. I have been aware of these correlations for a long time; in fact, I bring them into my classrooms, along with a lot of Zen and Asian literature. I can't imagine a more succinct "definition" of depression, for instance, than Robert Frost's "You can come down from everything to nothing." ("The Pauper Witch of Grafton") Or, in the same poem, about the singular power a woman can wield over a man who needs her:

> " *Up where the trees grow short, the mosses tall, I made him gather me wet snowberries On slippery rocks beside a waterfall. I made him do it for me in the dark. And he liked everything I made him do."*

(Remember de Waal's comments on female bonobos?) Or, consider this passage from an essay by Edward Hoagland, whom John Updike called Americas' best contemporary essayist:

> *"And yet the pleasure of love-making derives from two people repeatedly trying to position themselves as opportunely as they can for insemination to occur. They can murmur nothings in the meantime, or vary the approach by trying to climb headfirst inside each other for a prenatal interlude. But the final sensation is basically just such as will best serve to help us replicate ourselves."*

That is exactly the kind of writing I mean when I talk about the melding of the artistic and the scientific. And there's a wonderful story by an early 20th century British writer named A.E. Coppard called *The Green Drake.* It is one of the finest dramatizations of deceit you'll ever see in literature.

It's all there. And it doesn't matter if the intent was Darwinian or not — Darwin is present, behind the words. I appreciate all this not just because it's terrific writing, but because these authors know what they're talking about on the subject of human nature. One of the main questions I ask my students in literature classes is: *"What does the story or poem say about being a human being?"* And, *"Is this true?"* And I ask them to try to connect it to their own experiences.

It seems to me that, if you are teaching literature or anything with the purpose of illuminating and dramatizing (and even understanding human behavior), then you'd better use works that are based on good observation. Again, that's why the scientific knowledge of human nature can actually enhance the artistic. It makes no sense to me to separate them as if they came from different universes. (I wonder if the impulse behind both science and art isn't basically similar in that both the artist and the scientist needs to know what it's like to be a human being living in the universe.)

These works of literature, aside from being just works of literature, amount to powerful evidence ahd powerful proof of the findings that are coming out of your field. " *The human heart in conflict with itself,*

is the way William Faulkner defined literature in his Nobel Prize speech. Reminds me of Wilson's: *"love joins hate; aggression, fear; expansiveness, withdrawal..*." Literary criticism is beginning to be informed by these ideas. I read an article by Robin Fox recently, about sexual selection displayed in the great classics; and there's a big tome of a book by an English professor named Joseph Carroll called *Evolution and Literary Theory,* which came out a few years ago.

How any writer or artist can create these days without being influenced in some way by Darwinian thinking, is beyond me. I know I can't.

Why are there no Darwinians in Congress? No environmentalists? Again, the gap is wide, isn't it? Why don't cops in cities take seminars put on by evolutionary psychologists? Why don't ethics panels include, automatically, somebody from evolutionary psychology? These panels have their philosophers and politicians and sociologists and school superintendents and mayors; where are the people who make an attempt, as a way of life, to really understand how human beings think and moralize? And Tinbergen's phrasing is as convincing as any I have seen: *all this based on "a scientific understanding of our behavior, leading to its control. . ."*

Richard Milner, in his *Encylopedia of Evolution,* under the heading, *Biophilia,* says that *"perhaps all naturalists are attracted to study the earth's creatures as a celebration of their own aliveness." I like that, and also what Darwin said about animals being "our companions in amusement... work and suffering... [and that we] may all be one — we may all be netted together."*

Here is a quote from Frans de Waal in Peacemaking Among Primates: " *We need to identify both the themes and the variations of the gigantic fugue of which we are a part."*

Joseph Carroll from his *Evolution and Literary* Theory suggests that: "The subject matter of literature is human experience." This from his chapter, *Literature as a Form of Knowledge (Carroll Theory)* argues (elsewhere in an essay called "Evolution and Literary Theory") "that the study of literature should be included within the larger field of evolutionary theory." Referring to M. Arnold's essay I've mentioned and quoted from, he ends his essay in this way:

> " *The knowledge we derive from literature itself is a highly developed body of intuitive qualitative judgment about human experience, and this knowledge can serve as an important point of empirical reference in assessing the adequacy of speculative propositions about human psychology and human culture. In turn, as the critic assimilates new scientific information, he or she necessarily engages in a constant process of revising and developing his or her theoretical constructs, and new theoretical constructs should enable the critic to understand literature itself in ways it has never been understood before."*

As far as uniting literature and art on the one hand and the scientific study of human nature on the other: make a call for ideas in art and literature that in some way is related to what has been discovered about human nature by evolutionary psychologists or biologists. These works or ideas could be direct and explicit in their attempt to understand and illuminate human behavior; or they might be works or ideas that are implicitly or unintentionally but accurately related to the scientific studies.

In this regard, I'd like to see more poems, short stories, dramas, and personal essays directly address Darwinian ideas. Why not a whole new genre of "Darwinian literature"? I don't mean naturalism, as it came out in stories by Crane and others near the beginning of the century. I mean actual works that bridge both the scientific/ empirical and the artistic.

The matter of ethics is a large one, of course, but one interesting thread that I picked up is suggested by Donald Campbell by way of Robert Wright. This has to do with the "moral sentiments". What Campbell argues is that the religions of the ancient urban civilizations — independently developed in China, India," [etc.] — "reliably produced the familiar elements of religions: the curbing of 'many aspects of human nature,' including 'selfishness, pride, greed,.. covetousness,.. lust, wrath." He believes this was needed for "optimal social coordination." (I'm quoting from Wright's *The Moral Animal).*

I find Campbell's theory fascinating, and my essay on the dirt mover, partly, at least, came out of such ideas. I would think that the thinking here envisioned might well be interested in such matters, since they have a direct bearing on ethics. (I see that the Fox and Tiger book, *The Imperial Animal,* has recently been updated in a new edition. That book had a great effect on me when I read it years ago. I think it's a classic.) There's a lot of Zen, too, that can be related to evolutionary thinking. And Lao Tzu, Chaung Tzu, Basho, and haiku in general, martial arts, and so on.

One of my favorite quotes is from Anton Chekkov: *"Man will be better when he finds out what he is like." c8*

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Multiple Resource Types

The following sites provide searching or browsing of more than one type of service (World Wide Web, Gopher, Discussion Groups, etc).

World Wide Web by Subject or Keyword (Search Engines)

World Wide Web Sites by Geographic Location (CERN)

Directories of E-mail Addresses (• White Pages Services • ESP - Email Search Program • Four 11: The Internet White Pages »Yahoo! People Search)

File Transfer Protocol (FTP) Sites and Archives Gopher,

HYTELNET, and Telnet Servers Listservs, Usenet, and

Discussion Groups Search tools for mailing lists and

Usenet news groups. Wide Area Information Servers

(WAIS) Comparisons and Reviews of Search Tools

ARTICLE:

by Timothy Perper, David Paxson, & Hiram Caton

LADYDIs CHARISMA (from E-Mail)

Two points about Lady Di and the interest her death has generated:

Point one is that we can't talk about charisma without ultimately talking about the Sacred in Durkheim's sense, and the second point is sex. I'll skip the first in favor of the second. I do not mean merely that Lady Diana was attractive physically, but that she was the "mother" of a future king of England, a mixture of symbolic and real power that is by itself staggering. In this, she incarnated --I mean that word quite literally -- the power to reproduce the monarchy. That she was rejected by her husband is an "offense against that power and against the power of "women" to reproduce the future.

She publicly admitted an "adulterous" affair. For that alone, she became an icon, not of purity, chastity, faithfulness and other (dreadfully boring) virtues, such as are embodied by female saints of Roman Catholicism, but of a new era of history. (I am carefully avoiding the phrase "new age.") In her, one saw not faithful Griselda, but a self-propelled icon of femininity of a drastically new sort.

Now, I am well aware that some readers will instantly object to what seems to be old-fashioned boring neo-feminism. Well, if you do, you will lose everything crucial to the Lady Di phenomenon. Thus, one "might" say that she is being sanctified because of her charity to the poor. Nope. Lady Bountifuls have existed in England for generations, and in fact that title and name are English. Instead, Lady Di was (once again) a "woman" and a "sexual" woman. Her sanctity inheres in femaleness (note that I did NOT say "femininity"), not because she was a film star with lots of sexy men all around her, but because, bulimia, affairs, astral advisors, and all, she crystallized a new vision into herself.

And therefore she becomes the icon of the end of this century. Once, an adulterous titled woman of the English nobility would have been hauled through the courts and the House of Lords in a scurrilous and nasty divorce trial ~ those days are gone. Do you understand that? Those days are gone. The mother of the king of England had an adulterous affair. And the reaction of the world was to say "Good for you!" Her death, so virulently close to the punishments promised by moralists and churchmen to adulterous women, evoked not horror but intense mourning and grief - in a word, love.

When, virtually simultaneously, Mother Teresa died the world saw the passing of another icon of female-ness: the chaste, charitable, self-sacrificing "virginal" woman of the church. The old passeth away, the new comes. The king is dead; long live - what?. Not the King, not this jerk who abandoned her, but something else. That is what the world is trying to understand, and, by understanding, create.

One can object that Lady Diana was the invention of the media. It makes no difference if her iconic properties emerged from her or were adopted, like makeup, for the television cameras. Her actual life, from bearing the future king of England to her affairs, incarnated a new form, vision, and way. Still uncertain, it is taking even more body from her as people ponder and feel about what she meant. And no matter how one might try to dismiss her, one cannot dismiss the mother of kings. In a word, she was a nexus: a point into which immense powers and realities flowed, and from which they flow outward into a now irrevocably changed world.

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Is Prince Harry not of Charles, but of James Hewitt?

This assertion is part of the new Kitty Kelly book.

Apparently the speculation has some merit, in that the timing fits and that Harry looks quite a bit like Hewitt at the same age. It could possibly be that Charles and Diana were fairly sure of this situation. Hmm ... will there be a call for blood tests? Anyway, this Royal soap opera gets all the more intriguing. Though all of this seems tawdry to some I am sure, it is no mystery to me why the family problems of the Royals is of interest to most everyone. They are the symbolic celebrities on which we can project and state our opinions and judgements about the family stresses that face us all. In my opinion, the public reaction to all of these events has great significance for Evolutionary Psychology. There is a role that celebrities play for a culture Maybe this is a relatively new phenomena of 50 years or so related to the advances in mass media. However, the role maybe an ancient one, that may have been played by the Alpha couples or families in tribal societies.

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Problems that personal prestige creates for a science of culture.

In turning the flank of talk about the impact of personal differences on the prestige of Windsor, monarchists huff that what's important is the institution, not individuals. However, monarchy is based on prestige. Popular consent as well as dynastic struggles revolve around loyalties to persons. But personalization diverts attention from the "real issues." Public life bogs down in personal tastes and the fate of a community turns on the whim of one individual. Rationalists do not like monarchy because they conceive society to be comprised of institutional processes independent of individual idiosyncrasy. Alas, attempts to implement a rational, issue-oriented government have cast up factions and parties grouped around personality cults: Washington and Jefferson, Robespierre and Napoleon, Lenin and Mao. The attempt to free public life from personal loyalties and enmities has not succeeded. It seems that "real issues" can not be divorced from their personification.

The same trend occurs in rationalist culture. "Ideas" invariably lead to persons, to enmities and triumphs, to the great man and his entourage. The great man's ideas are usually represented in a life history of heroic quest, travail, jeopardy, and triumph. This is so irrespective of subject. The aftermath of truth's triumph is a story of orthodoxy vs heresy. New heroes claiming the legacy further the quest and smite the erring. Personality cults flourish in evolutionary biology. Ernst Mayr's *One Long Argument: Charles Darwin and the Genesis of Modern Evolutionary Thought* opens with lavish praise [*"A brilliant mind, great intellectual boldness, philosophical theoretician, and experimental-ist-the world has so far seen such a combination only once, and it was in the man Charles Darwin",* page 11]. Mayr credits the god with about five conceptual innovations in which Darwin was beaten to the punch or made no contribution at all. The whole of modern biology turns out in Mayr's hagiography to confirm the god's sacred doctrine (" *130years of unsuccessful refutations have resulted in an immense strengthening of Darwinism ... the basic principles are more firmly established then ever"* page 164).

The organization of knowledge replicates the organization of religion, business, the arts. Authority, veneration, shrines and relics, policed orthodoxy, hierarchies, differentials of wealth, reward structures, stealth and deception, and action agendas seem ingredient to the quest for truth. Lady Di's charisma is such an extraordinarily large dose that it needs contextualizing to make it manageable. I'm suggesting that the quality that distinguishes her, authority and prestige, is part of the fabric of life. By underscoring charisma in the organization of knowledge, my preamble is meant to caution against the spirit of system. We do not have a science of culture and the goods are not likely to arrive soon because the conceptual apparatus of science insists on dealing with particulars as instances of a universal whereas human action is ineluctably particular. *c8*

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ARTICLE:

by Russell Gardner, Jr.

Abstract & Extract on Manualized Psychotherapy

The October issue of the *Archives of General Psychiatry* published two point-counter-point "News and Views" articles. A research psychologist from the Yale Division of Substance Abuse (K.M. Carroll) proposed a method she felt would increase the research standards of clinical drug trials in psychopharmacology: standardizing the psychotherapy the patients receive. Assuring standardization would be treatment by a "manual-ization" of this component of treatment (the treater follows a treatment manual closely).

The response to her proposal by Don Klein, rebuts the idea of manualized treatment for accomplishing the greater standardization. This exhibits an interesting issue for the study of psychotherapy - this very human process that is the subject of much discussion in these pages. Indeed, since *The ASCAP Newsletter* is slated to become the newsletter of the Psychotherapy Section of the World Psychiatric Association, research methodology takes on special meaning.

Implicit and explicit metaphors also deserve scrutiny: the first author assumes "noise" goes on between two people in an exchange involving drug prescriptions — something less important than the drug. This may possess methodological truth, but it belies the power of human relationships for good or ill. Communication between people can be trivalized because it exists so much, is pervasive in our worlds. Even an extraordinary nuanced complexity takes on ordinariness, like caviar might, if it were a staple of one's diet. Moreover, the core action of the drug almost always exists in the social-communicational worlds of the patients. For example, when intoxicated with alcohol, a person feels more gregarious, more dominating, or less anxious with other people.

When depressed, the patient feels of little worth (this refers to other people). When suffering from persecutory delusions, the patient feels others are after him or her with harmful intent. When drugs reverse these states, the drugs alter the social and communicational facets of the person's world. Drugs are sociophysiological instruments.

In the same metaphor vein as Dr. Carroll, Dr. Klein and co-author explicitly refer to a possible "active" ingredient of psychotherapy, meaning that the human interaction is like a drug. I am reminded in this context of Dr. James Hodge, a family doctor before going into psychiatry, who suggested from his work with somaticizing patients that doctors can be seen as like drugs.[1] You can dose them (number of minutes per session) and time them (frequency of sessions). He even wryly noted that they sometimes come pickled in alcohol! *c8*

Carroll, K.M.: Manual-guided psychosocial treatment. Archives of General Psychiatry, 1997;54:923-928.

Abstract: The conduct of randomized clinical trials to evaluate the efficacy of pharmacotherapies for mental disorders is guided by research standards (at a high level of rigor) that governs most design elements, including randomization of subjects, use of placebo controls, formulation and dosage of the therapeutic agent, and monitoring of serum levels. In contrast, no such widely accepted guidelines are recognized for standardization of an essential, if unacknowledged, element of all such studies: the concomitant provision of at least a minimal form of psychosocial treatment.

Standardized provision of psychosocial treatments in pharmacotherapy trials will foster replicability of findings and address several common problems

(e.g., attrition, medication non-compliance, reduction of error variance, and ethical issues associated with placebo controls). Careful selection and standardization of the psychosocial context in which medications are delivered will improve the validity, precision, and power of pharmacotherapy efficacy research, and should be considered a virtual requirement in research design.

Klein O.F. Smith L.B.: Commentary: A psychotherapeutic context for clinical trials is promising but manualization is not. *Archives of General Psychiatry,* 1997;54:929-930.

Extract:... Much of the literature consists of theoretical rather than empirical justification of manuals. [Research] suggests that manual adherence is not a characteristic of superior therapists....

Many therapists argue that manualization impedes clinical flexibility and increases training costs. There may be other disadvantages.... [In a study], there was a statistically significant decrease in the expression of optimism and support, less time was spent assessing feelings, and the therapy had a more authoritarian tone. A follow-up study found that the therapists who adhered most strictly to the guidelines of the manual were the most likely to express hostility during therapy sessions....

[Another study showed that] Symptomatic improvement was negatively correlated with ratings of manual adherence.... [R]igidity may be the deleterious element.

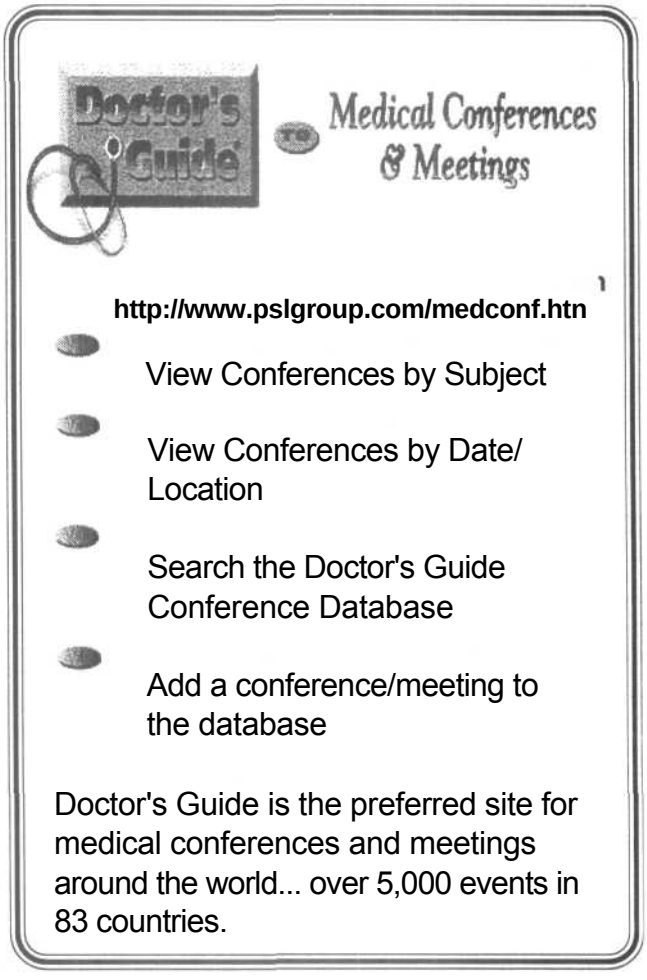
Research has not established the outcome superiority of manualized over non-manualized forms....

Jacobson and colleagues recently did a large dismantling study of the complex cognitive treatment of depression. The manualized cognitive therapy was not superior to its behavioral activation treatment. Drastic simplification of this treatment did not diminish its efficacy. Thus, it is unlikely that deviation from a manualized framework, in nones-sential detail, has a significant impact, and it is not clear what the essential details are.

It is debatable whether there are "active ingredients" that are specific to various psychotherapies....

We agree that the development of... psychothera-peutic contexts for psychopharmacology research is likely to decrease dropout rates, promote compliance, and facilitate follow-up. Furthermore it seems ethically and empirically preferable to provide active treatment of subjects given placebo. However, mandating the manualized guidelines is premature and may be counterproductive for establishing such psychotherapeutic contexts. Less expensive innovations are more likely to be accepted than expensive ones....

Less expensive, anti-demoralizing psychotherapeutic contexts should be introduced while awaiting definitive findings. Each research center could make an initial appraisal by estimating in comparable trials, whether their attrition rate, compliance, and effect sizes have improved. *c8*



ARTICLE:

by John S. Price

JOB'S BATTLE with GOD

In my Tucson paper,[1]1 suggested that one cause of depression might be blocked higher level (voluntary, conscious, rational) de-escalation (see the Table on page 11 of last October's *ASCAP).* Sometimes we have to back off and give way. This is particularly true if we are in conflict with the major secular or spiritual powers. This means we have to put up with not getting our own way, and also with unfairness. But sometimes we rebel, and our rebellion inevitably fails, and then in many of us (who are so pre-disposed) an episode of lower-level de-escalation is triggered (which we have called an "Involuntary Subordinate Strategy" (ISS)). If intense or prolonged, the ISS is recognised as depression.

I can think of two literary models for this situation. One is Satan, as portrayed by Milton in Paradise Lost. Satan rebelled against God, lost, took a lot of punishment, and then moved sideways (rather than directly against God) to get his own back by sabotaging God's plans for Man. There is no evidence that Satan underwent lower-level de-escalation (ISS leading to depression).

The other model is Job. Job did not submit to God and accept His unfairness. The cause of the unfairness is not important - in the Book of Job, the Devil is represented as tempting God to test Job out by giving him unfair and undeserved negative experiences. It is the lot of Man to accept the brickbats of life - the slings and arrows of outrageous fortune - and if he does not do so with philosophical resignation (or with religious ecstasy) he finds himself fighting an unwinnable battle -struggling to achieve an unachievable goal, kicking against the bricks, beating his head against a brick wall, wilfully escalating into failure and humiliation -and in this situation his ISS is likely to be triggered. Here is how Job expresses his sense of being in an agonistic encounter with God:

> *The arrows of the Almighty find their mark in me, And their poison soaks into my spirit; God's onslaughts wear me away.* **(Job** 6:4)
>
> */ was at ease, but he set on me and mauled me, seized me by the neck and worried me. He set me up as his target; his arrows rained upon me from every side; Pitiless, he cut deep into my vitals, he spilt my gall on the ground. He made breach after breach in my defences; he fell upon me like a fighting man.* **(Job 16:12-14)**

He feels trapped, his escape is blocked and he is virtually in a state of Arrested Flight.:[2]

> *He has walled in my path so that I cannot break away and he has hedged in the road before me.* **(Job 19:8)**

In spite of his ISS, for a long time Job remained arrogant. He even wanted to take God to court!!! His friends were unable to comfort him. He remained depressed and trapped, but whining with self-justification.

> */ will maintain the rightness of my cause I will never give up. So long as I live, I will not change.* **(Job 27:6)**
>
> *Let me but call a witness in my defence! Let the Almighty state his case against me! If my accuser had written out his indictment, I would not keep silence and remain indoors. No! I would flaunt it on my shoulder and wear it like a crown on my head; I would plead the whole record of my life and present that in court as my defence.* **(Job 31:35-37)**

Finally, Elihu the prophet got through to him, and persuaded him that he and God were not in the same league. God then spoke to him personally (which must have been a great face-saver). Job finally makes a voluntary submission:

> *I know that thou canst do all things and that no purpose is beyond thee. But I have spoken of great things which I have not understood, things too wonderful for me to know. I knew of thee then only by report, but now I see thee with my own eye. Therefore I melt away; I repent in dust and ashes.* (Job 42:2-6)

Then his ISS is no longer necessary, his depression remits and good times come his way.

Jack Kahn comments:[3]

Job, being Job, realises that his discovery that the acknowledgement that he has not the key to wisdom is, in itself, the key to wisdom which had eluded him. He has reached a new level of humility which is going to make him greater than ever before.

Job is an example of higher level de-escalation blocked by stubborn pride. His expectation (or goal) had been to be treated fairly. It was an unrealistic goal. Life is not fair. His goal was not achieved. He became depressed, but even the abatement of pride that comes with depression was not sufficient to induce him to yield to God.

Finally, Elihu manages to get him to achieve a cognitive restructuring in which he can accept God's unfairness at the highest brain level. Then he recovers. In our "shivering model", he has finally been induced to turn on the central heating and so he stops shivering. I recommend Jack Kahn's book to anyone who is interested in pathography.

Comment:

What if one were Job's 4th friend, or if one were called in as a professional person for a consultation about his case? Some people would want to give him ECT or an antidepressant drug. Would that make him more or less arrogant? Could cognitive therapy improve on Elihu in helping him to accept Fate? Of course, submission is only one option, and although to fight God might seem an unwise course of action to advise, there is a clue from our evolutionary approach.

Convert individual conflict into group conflict:

We believe that the ISS and depression evolved as part of agonistic behaviour - a primitive (reptilian) component of the submissive component of agonistic behaviour. Agonistic behaviour is basically a dyadic process, a locking of horns - an eyeball-to-eyeball confrontation. Admittedly, in higher animals allies are important in deciding who wins, but the basic structure of agonistic behaviour is dyadic. Between-group conflict is an entirely different kind of behaviour. It is less ritualised, it has different rules and, in particular, there is no place for the individual ISS in inter-group conflict. There is, of course, the demoralisation of the defeated group, but this is a different thing from individual depression.

What the therapist might do in Job's case is to reframe the problem as inter-group conflict. To put it at its most banal, we might advise Job to join a victim support group. Job is not the only one to whom God has been unfair. But in the Book of Job, those who try to comfort him have not shared his sufferings - they are comforting from outside his situation. If he got together with others whom God had wronged, and made it a group problem: whether to take God on, or to go and find a better God, or in some other way to sink their own individual indignation into the common pool of resentment; then the rules governing dyadic agonistic behaviour would no longer apply, and the ISS would be irrelevant and might then remit.

We have learned this lesson bitterly in this country [UK] in the trade union movement. There is no hope for the individual employee who takes on an unfair management, but joined together in a union the working man can fight effectively for his rights, and if he loses the fight, he does not suffer individual defeat, but shares it with his comrades.

I have estimated that I must have treated about 6,000 cases of depression in my professional lifetime, but I cannot recall a single case in which the complaint was the unfairness of God. However, rebellion against the dispositions of God or Fate underlie many cases which do not on the surface have an agonistic component. Often there is just grief to be seen. Grief is usually associated with limbic de-escalation (the emotion of sadness). I suspect for a loss to trigger lower-level de-escalation (depressed mood), there must be escalation either at the middle, limbic level (anger) or at the higher, neocortical level; e.g., wanting to take God to court over it all. Life is unfair, and it is much unfairer in tyrannies and those countries which do not enjoy our democracy and welfare services.

Life is too short (or too long), there is too much pain, incapacity and disease. There is too much uncertainty and not enough point to it all. We deserve a better deal. But we do not know to whom to apply with our objections. There is no court with the requisite level of jurisdiction. These philosophical complaints do not seem to lead directly to depression, unless they are accompanied by specific insults such as death or other forms of loss. One is reminded of the fact that people do not have a natural fear of real dangers like cars and light sockets, but waste their time and energy in being afraid of harmless spiders and snakes. Evolution has not yet caught up with modern man's search for meaning.

In this country we are accustomed to seeing on television groups of people who have suffered some appalling tragedy. There are parents whose children have been killed by drunken drivers, virtuous wives whose husbands have walked out after years of marriage, would-be university students whose careers have been ruined because of the School System's failure to diagnose their dyslexia, fathers who have been falsely accused by Social Services of seducing their daughters. These people are all escalating at the middle level (they are very angry) and de-escalating at the lower level (they are depressed). Many of them seem to get relief from joining with other people similarly afflicted, and hopefully television helps them to do this. If I were asked to advise the surviving victims of some natural disaster, I would suggest that they form a pressure group to prevent the arrival of counsellors on the scene, hoping that the group solidarity thus formed would convert their individual rage into group rage and they could take it out on the armies of know-it-all do-gooders who apparently nowadays descend on any scene of widespread tragedy and insist on sharing the grief.

The discerning *ASCAP*ian will see in the above the shape of our Editor's concept of ATP (allies, thought and planning). Allies are important both to assist thought and planning, and to form a group to rescue the victim from individual conflict: different allies may be needed for these two functions. C*i

THE JANE GOODALL INSTITUTE - for Wildlife Research, Education, and Conservation

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The Jane Goodall Institute for Wildlife Research, Education, and Conservation was established in 1977. The Institute is committed to wildlife research, sharing knowledge through education, and conservation of the habitats that sustain life on earth. We are dedicated to researching and publicizing the unique status and special needs of chimpanzees, now an endangered species, to ensure both their long-term preservation in the wild and their physical and psychological well-being in captive settings.

ABSTRACTS & EXTRACTS...

Editor's Note: Two abstracts in this section feature ASCAP Society members, Brant Wenegrat and Randolph M. Nesse.

Johnson-Laird P.N.: Mental modules on the mind. Review of *How the Mind Works* by S. Pinker (Norton, 1997). A/afure1997;389:557-558.

Extract: Here is a test devised by Peter Wason... I put four cards in front of you, bearing respectively: 'A', 'B', '2' and '3'. Each card has a number on one side and a letter on the other side. You have to choose which cards to turn over to determine whether the following rule is true or false about these cards: if a card has 'A' on one side, it has a '2' on the other side.

Like Darwin, most cognitive scientists believe that the brain is a result of evolution. [But] you can reject evolutionary psychology without rejecting neo-Darwinism.

The evolutionary psychologists... argue that mental modules are adaptations to the lives of our forebears. Thus, Leda Cosmides... proposed an innate module for reasoning about cheating, because social exchanges were important to the hunter-gatherers of the Pleistocene epoch.

Which card did you select in the four-card test? Most people correctly chose the 'A' card.... Few realize the need to choose the '3' card; yet if it has an 'A' on the other side, then the rule is false. Cosmides replaced the letters and numbers with a problem about a potential cheater, and then, as she predicted, most people made the correct choice.

[But] Perhaps your mind normally reasons about what is true, not what is false. So, any manipulation that helps you to consider false instances of the rule, including reminders about cheating, should prove your performance. Half a dozen studies have corroborated this explanation without depending on a check for cheaters.

Evolutionary psychologists could argue that truth was more important than falsity in the evolution of communication. Indeed, it probably was, but it does not follow that an innate module evolved for reasoning about the truth. The bias may be a result of experience or a by-product of some other adaptation.

Williams, J. & Goodall, J.: The influence of dominance rank on the reproductive success of female chimpanzees. *Science,* 1997;277:828-831.

Abstract: Female chimpanzees often forage alone and do not display obvious linear dominance hierarchies; consequently, it has been suggested that dominance is not of great importance to them. However, with the use of data from a 35 year field study of chimpanzees, high-ranking females were shown to have significantly higher infant survival, faster maturing daughters, and more rapid production of young. Given the foraging behavior of chimpanzees, high rank probably influences reproductive success by helping females establish and maintain access to good foraging areas rather than by sparing them stress from aggression.

Wenegrat, B.; Abrams, L; Castillo-Yee, E. & Romine, I.J.: Social norm compliance as a signaling system. I. Studies of fitness-related attributions consequent on everyday norm violations. *Ethology and Sociobiology,* 1996;17:403-416.

Abstract: People attend to cues that convey information about social norms and they try to comply with the norms that they believe are in force. Dispositions to comply with social norms are universal, suggesting that adherence to such norms

is selectively advantageous. Possibly, compliance with social norms, however arbitrary that these may be, serves a signaling function and is used to control attributions affecting fitness. To begin to test this hypothesis, we performed several experiments in which subjects watched videotapes of models violating the everyday social norms and then rated those models on dimensions that would be relevant to the models' fitness, if subjects and models were socially interacting. In some experiments, violations of minor social norms significantly altered such ratings. Even subjects who failed to cite norm violations when given the opportunity nonetheless gave lower ratings to models as the result of norm violations. A manipulation that increased the salience of such norms increased the adverse effects of norms violations. The results are consistent with the hypothesis that norm compliance serves an important signaling function.

Nesse, R.M. & Berridge, K.C.: Psychoactive drug use in evolutionary perspective. *Science,* 1997;278:63-66.

Abstract: Pure psychoactive drugs and direct routes of administration are evolutionary novel features of our environment. They are inherently pathogenic because they bypass adaptive information processing systems and act directly on ancient brain mechanisms that control emotion and behavior. Drugs that induce positive emotions give a false signal of a fitness benefit. This signal hijacks incentive mechanisms of "liking" and "wanting", and can result in continued use of drugs that no longer bring pleasure. Drugs that block negative emotions can impair useful defenses, although there are several reasons why their use is often safe nonetheless. A deeper understanding of the evolutionary origins and functions of the emotions and their neural mechanisms is needed as a basis for decisions about the use of psychoactive drugs.

Phillips, M.L.; Young, A.W.; Senior, C; Bram-mer, M.; Andrews, C; Calder, A.J.; Bullmore, E.T.; Perrett, D.I.; Rowland, D.; Williams, S.C.R.; Gray, J.A. & David, A.S.: A specific neural substrate for perceiving facial expressions of disgust. *Nature,* 1997;389:495-498.

Abstract: Recognition of facial expressions is critical to our appreciation of the social and physical environment, with separate emotions having distinct facial expression. Perception of fearful facial expressions has been extensively studied, appearing to depend on the amygdala. Disgust -literally "bad taste" - is another important emotion with a distinct evolutionary history, and is conveyed by a characteristic facial expression. We have used functional magnetic resonance imaging (fMRI) to examine the neural substrate for perceiving disgust expressions. Normal volunteers were presented with faces showing mild or strong disgust or fear. Cerebral activation in response to these stimuli was contrasted with that for neutral faces. Results for fear generally confirmed previous positron emission tomography findings of amygdala involvement. Both strong and mild expressions of disgust activated anterior insular cortex but not the amygdala; strong disgust also activated structures linked to a limbic cortico-striatal-thalamic circuit. The anterior insula is known to be involved in responses to offensive tastes. The neural response to facial expressions of disgust in others in thus closely related to the appraisal of distasteful stimuli.

Koob, G.F. & Le Moal, M.: Drug abuse: He-donic homeostatic dysregulation. *Science,* 1997;278:52-58.

Abstract: Understanding the neurobiological mechanisms of addiction requires an integration of basic neuroscience with social psychology, experimental psychology, and psychiatry. Addiction is presented as a cycle of spiralling dysregulation of brain reward systems that progressively increases, resulting in compulsive drug use and a loss of control over drug-taking. Sensitization and counteradaptation are hypothesized to contribute to this hedonic homeostatic dysregulation, and the neurobiological mechanisms involved, such as the

mesolimbic dopamine system, opioid peptidergic systems, and brain and hormonal stress systems, are beginning to be characterized. This framework provides a realistic approach to identifying the neurobiological factors that produce vulnerability to addiction and to relapse in individuals with a history of addiction.

Nestler, E.J. & Aghajanian, G.K.: Molecular and cellular basis of addiction. *Science,* 1997;278:58-63.

Abstract: Drug addiction results from adaptations in specific brain neurons caused by repeated exposure to a drug of abuse. These adaptations combine to produce the complex behaviors that define an addicted state. Progress is being made in identifying such time-dependent, drug-induced adaptations and relating them to specific behavioral features of addiction. Current research needs to understand the types of adaptations that underlie the particularly long-lived aspects of addiction, such as drug craving and relapse, and to identify specific genes that contribute to individual differences in vulnerability to addiction. Understanding the molecular and cellular basis of addictive states will lead to major changes in how addiction is viewed and ultimately treated.

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