For evolutionary psychiatrists, psychologists and others Interested In sociophysiologjcal integration

ASCAP

Volume 11, No. 03 (Cumulative #124) March 1998

"Syphilis of the brain has one etiology, the spirochete. Yet you see... [a] variety of manifestations of... In the old days when we had a lot of paretics and when I was first in psychiatry, we had catatonic paretics, ... hebephrenlc paretics, ... paranoid paretics who had the same range of psychotic behavior as you have with schizophrenics."

Robert Heath[1]

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Across-Species Comparisons and Psychopathology (ASCAP) Society Executive Council:

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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.

The 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 research endeavors, etc.

The ASCAP Newsletter is a function

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The WWW Address for the The ASCAP Home Page is:

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*The **ASCAP** Newsletter* **is the official newsletter of the *Psychotherapy Section* of the *World Psychiatric Association***

ADDRESSED TO & FROM ...

Tentative Program for Annual ASCAP Meeting

Presidential Address: 8:00-8:30 a.m. - **Dan Wilson:**

'Toward empirical research in the clinical application of the human evolutionary sciences." (Meeting theme). (Psychiatrist, expert on bipolar disorder, originator of psychiatric epidemiology)

8:30-9:15-PaulJ. Watson:

"A behavioral ecologist's social niche change theory of unipolar depression." Watson studies the evolution of sexual and social behavior of animals and humans; mentors students in evolutionary psychology and animal behavior at the University of New Mexico and takes students each summer to Flathead Lake Biological Station, Montana, for an eight week field course in behavior. He came last year to ASCAP and HBES meeting and was inspired to complete his niche change theory, already several years in the making. This non-animal model portrays depression as a risky, albeit evolutionary adaptive response to a socially-imposed mismatch between the person's capacities and opportunities for fitness-enhancing activity. With co-author/graduate student Paul Andrews, he uses communication theory and contractarian reciprocity theories of evolutionary biology to show how the full range of depression symptomatology may have been adaptive in the human evolutionary environment and how depression may be adaptive even in modem western society.

9:15-9:35 **-Ivor Jones:**

"Response from an animal modelist." Former Professor and Chair of Tasmania Department of Psychiatry (now retired). Has published data on Sugar glider "depression" on losing social rank (Sugar gliders are a small Australian marsupial).

9:35-9:55 - **Carolyn Reichelt:**

"Response from a sociophysiol-ogy perspective". (ASCAPian from Newsletter's beginning. Co-author with Russell Gardner of a manuscript on *Sociophysiology as Basic Science of Psychiatry).*

9:55-10:10 ***-Break***

10:10-10:30 - **Penelope Knapp:**

"Response from a child psychiatrist". Professor of Child Psychiatry at U.C. Davis. Head of the Child Division for long time. Co-author with Peter Jensen, David Mrazek, and other psychiatrists, "Evolution and revolution in child psychiatry: ADHD as a disorder of adaptation. *J. Am. Acad. of Child & Adolescent Psychiatry,* 1997;36:1672-1679.

10:30-10:50 **-Ed Hagen:**

"Case of depression that addresses niche theory" (Winner of the Beck award in 1997; graduate student in evolutionary psychology under Tooby and Cosmides at U.C. Santa Barbara).

10:50-11:10**-JohnS. Price:**

"Response from a pioneer theorist on social rank theory and depression." (Second ASCAP President; Psychiatrist who originated the social hierarchy theory in 1967. Then research psychiatrist in England. Has done much clinical work. Interested in family approaches. Chairman of the World Psychiatric Association Section on Psychotherapy.)

11:10-11:30**- John K. Pearce:**

"Response of a psychiatrist clinician who is also an evolutionary psychologist". (Former ASCAP president; former family focused clinician now does much psychopharmacology.) In a landmark book, Kalman Glantz and he articulated mismatch theory for clinicians *(Exiles from Eden).*

11:30-11:50 - **Large group discussion** led by Dr. Wilson.

1:15 -2:00 p.m. - Address from **ASCAP Beck Award Winner:** essay submissions are due 15 March 1998.

2:00-2:20 - **Andrew Solomon:**

"The experience of depressive illness from a writer's perspec-

tive." New Yorker author of Anatomy of Melancholia -12 January 1998. Has plans for a book on the subject so will be interviewing various participants during the meeting. Described personal experiences with depression. Author of novel *The Stone Boat* about a concert pianist reacting to the loss of a beloved and controlling mother.

2:20-2:40 **-David Evans:**

"Writers depict experience juxtaposed to evolutionary theory." Poet, scholar and essayist captivated by evolution-ary biology and the implications in it for literature as well as the articulation by writers of various dovetailing facets of experience and behavior.

2:40-2:50 **-Group discussion.**

Led by Dr. Wilson

2:50-3:05 ***-Break***

3:05-3:25 James **Brody:**

"Fabre's Tactics of Scientific Research" Psychologist who has his own web site on the above and related topics, cur-rently organizing a seminar for July '98 on "Healing the Moral Animal: Lessons from Evolution," featuring Robert Wright, John Pearce, & Russell Gardner. HTMA is part of the 19th Cape Cod Institute, sponsored by Albert Einstein Medical College, Bronx, New York. He has 25 years clinical experience and has published on topics in operant conditioning and psychopharma-cology.

3:25-3:45 - **J. Anderson Thomson:**

The Serotonin Story". Psychia-trist, evolutionary psychologist, does forensic work and psychop-harmacology; understands and has high interest in evolutionary psychology. Will present on ancient and present functions of serotonin. Has done notable study of Lee Harvey Oswald.

3:45-4:15 - **Mark Erickson:**

"ASCAP Theme for 1998-1999." Incoming president. Psychiatrist now in Alaska. Has articulated a contradiction to Freud's Oedipus complex, seeing it as unlikely from the Westermarck effect which has people growing up together as not attracted sexually ("just not interested"). Interested in cholesterol levels and aggression.

4:15-5:00 - **Business meeting** (Dr. Wilson); at conclusion, the gavel is passed to Dr. Erickson.'

Committees:

Aaron T. Beck ASCAP Award: Chair—Thomas Joiner; also Kent Bailey, & Ivor Jones.

Nominating Committee: Chair — Kent Bailey; also Mark Erickson, & Russell Gardner, Jr.

A Distinguished Psychiatrist on Evolutionary Psychiatry

As I signed off, after 12 years of book review editor of the *Journal of Clinical Psychiatry,* in the December 1997 issue (Volume 58, pages 552-553), I did a group review of the most significant developments in psychopathol-ogy. I have listed 4 books from the field of evolutionary psycho-pathology and in a commentary I explain why I thought psychiatry should permit itself to be cross-fertilized by this new discipline.

Readers of ASCAP I believe would be interested in this. It is a rare endorsement, rarely seen in regular psychiatric journals. We are talking about 4 out of 25 of the most significant books of the last decade; and one additional evolutionary book gets an honorable mention.

Although much of what I write about temperament in the context of sub bipolar disorders is relevant to evolutionary psychiatry, I wrote my first piece from this perspective on a putative generalized anxious temperament; it will come out in *ACTA Psychiatrica Scandinav-ica* next month.

I would urge you to list the four books that I had considered among the most important in the last decade for clinicians to know about: Paul Gilbert's — *Human Nature and Suffering,* Randolph Nesse's and George Williams' — *Why We Get Sick: The New Science of Darwinian Medicine,* Anthony Stevens and John Price's—*Evolutionary Psychiatry,* and Paul MacLean's — *The Triune Brain in Evolution.* The honorable mention was for Glantz and Pearce's — *Exiles from Eden.* In addition, Isaac

Marks' — *Fears, Phobias, and Rituals,* also listed among the best 25 books, has many references to evolutionary mechanisms.

P.S.: To what you just read: you guys should come out from *ASCAP*and venture into psychiatry and psychology at large!

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"Anatomy of Melancholy"

All I think will be interested in the January 12,1998 New Yorker article "Anatomy of Melancholy" by the novelist Andrew Solomon. It is an account of his own serious depression as well as a discussion of the issue in general. He interviewed a broad range of people including Steve Hyman of NIMH and Randy Nesse.

It is interesting to read from evolutionary perspectives. Solomon's depression sounds severe. He lost his mother, his relationship of two years, and suggests he was confronted by not being as successful as he hoped, all in the time period prior to its onset.

After he recovered he researched the topic. One woman acquaintance told him that she had a terrible depression, didn't like the idea of medications, and decided to eliminate all the "stresses" in her life. She quit her job, broke up with her boyfriend, and never looked for another one. She moved out from her roommate and moved into a smaller place, stopped going to parties, dropped most of her friends, and "gave up, pretty much, on makeup and clothes. "Major niche changing. She claimed it ended her depression.

Will be curious to hear what others think when and if they read it.

James A. Thomson, Jr.
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Comments on Andrew Solomon

Regarding the New Yorker depression piece, it strikes me how the topic of the subject's lack of current obvious reproductive opportunity is not mentioned. He apparently has no way to translate all that is good in his life into inclusive fitness. He may be gay.

Anyhow, for many people it is just too shameful to even entertain the idea that somewhere in their subconscious recesses there is a powerful facility that worries like hell about reproduction, and that in spite of all their "culture" it can make them "go crazy" over problems that get in the way of this biological mandate. Or, perhaps it didn't even occur to this person, despite his impressive thoughtfulness concerning his very dark journey. How hidden from us, these ultimate explanations.

Paul J. Watson
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-pwatson/pjw_cv.htm

Letter from Andrew Solomon

Many thanks for the article on language and story-telling (February 1998 *ASCAP Newsletter).* I had come across some of these ideas in the course of my research; and I was fascinated by the matter of depression as having an evolutionary origin in social rank behavior. Unfortunately, it was not possible to write at length about everything that I had learned, and I had to concentrate the piece on matters with immediate relevance to *New Yorker* readers. I will now be expanding the article into a book, however, and I hope to pursue evolutionary questions at a much greater length.

I found your article fascinating and thought-provoking - both in what it said about depression and in what is said about story-telling. I have been flooded with correspondence since my piece was published, dozens of letters everyday, and it was a real joy to find among them such an engaging and insightful piece of work.

Andrew Solomon
andsolomon @ mindspring.com

ARTICLE:

by Linda S. Austin

Selective Advantages of Attention Deficit Hyperactivity Disorder

Attention deficit hyperactivity disorder is relatively common, affecting 3-5% of children and often persisting into adulthood. It is more common in the first-degree relatives of those with the disorder. Given its high prevalence and at least partial genetic basis, it is useful to consider whether it may have conferred some type of selective advantage in evolutionary history. The following case study suggests that this is possible.

Zoey, an adopted adolescent female of German descent, is a bright, energetic youngster who nonetheless is a cause of exasperation to members of her family. Although she is clearly intelligent and learns well, she is impulsive, easily distracted, and lacks self control. In school, she is observed to be one of the brightest members of her class and yet seems unable to apply what she has learned to everyday living situations due to her impulsivity. On group outings, she is unable to observe stated rules and darts off to explore. When reprimanded she appears genuinely remorseful, but quickly forgets her scolding and repeats the same offenses. She is casual with the property of others and has destroyed favorite belongings of members of her family. She is keenly observant of her surroundings, far more so than her peers or other members of the family. Family history reveals that a biological half-sister exhibits similar traits.

Notably, Zoey is a German Shepherd. As her adoptive mother, I have had the chance to apply diagnostic criteria of the DSM-IV and have noted many symptoms consistent with Attention Deficit Hyperactivity Disorder, such as difficulty sustaining attention, failure to listen, failure to obey instructions, easy distractibility, excessive physical activity, acts as if "driven by a motor," and talks (barks) incessantly.

Observation of Zoey suggests that in the wild a selective advantage for these traits may indeed exist. On walks, she is constantly scouting the environment with all senses: her ears are in constant motion like two moving satellite dishes, she sniffs the ground continually, and peers under cars looking for small game (cats.) In a group of dogs she is obviously the most responsive to her surroundings, while the other dogs are more focused on responding to their masters, the alpha surrogates. In the wild, Zoey's hyperalertness to her environment would make her keenly and immediately aware of potential predators. She would also be far more reactive to tiny stimuli, which could make her an especially good hunter of small animals.

One could speculate that a few distractible, hyperactive individuals might be useful for the survival of a mammalian pack or troop, or even a cluster of primitive humans. Such individuals would be excellent scouts of the environment, and might have specialized hunting skills. Such individuals might even be more inclined to wander away from the group and discover new shelter or food or water sources. Clearly, if all individuals in the group had ADHD chaos would reign; perhaps about five per cent would be the right number.

Relative to adults, the young of any mammalian species, including humans, have behavioral traits similar to ADHD, including easy distractibility, short attention span, impulsivity, heightened motor activity, and poor toleration of frustration. Further, relative to humans, many mammalian groups including primates show these behavioral characteristics even as adults. Much as ontogeny is said to recapitulate phylogeny, human behavior in the developmental years recapitulates the aspects of the behavior of earlier primate species. Perhaps ADHD could be thought of as a slowing, or even block of normal maturational processes with regard to attention and impulsivity. Supporting this, many though not all **ADHD** children gradually outgrow their symptoms, particularly the motor components, at varying rates of speed. *c8*

ARTICLE:

by Michael Davies

Understanding the EEA -A Book Review of Rick Potts'Humanity's Descent: The Consequences of Ecological Instability

A true understanding of the Era of Evolutionary Adaptation (EEA) is essential if the core idea of the ASCAP mission statement "the basic plans of behavior that have evolved over millions of years", is to be explored successfully. In his book, *Humanity's Descent: The Consequences of Ecological Instability,* Potts conclusively demonstrates that the fundamental characteristic of the EEA was climatic variability. With this knowledge, the study of the EEA is now firmly established as a scientific discipline.

The almost universally accepted account of humankind's ancestral environment is the savanna hypothesis. The argument runs that human evolution is explained as an adaptation to a cooler, dryer Africa in which grassland replaced forest. An arboreal ape evolved to cope with an open terrestrial subsistence.

This one-way directional forcing is the cause of bipedalism, tool-use, growth in brain size and, eventually, big-game hunting. The conclusion of this process over several million years is humankind. This hypothesis, which owes much to Darwin, has been orthodoxy for generations.

Evolutionary theorists have started from the assumptions of the savanna hypothesis. In addition, humans were presumed to have evolved in a largely static savanna habitat with an essentially fixed social framework, experiencing a gathering and hunting lifestyle that altered little over the millennia.

The problem, which remains unsolved, is how to explain present-day human characteristics in light of this posited evolutionary past. The fundamental difficulty is that this presumed static world provides no obvious reason for the increase in brain size. The necessary behaviour patterns for successful savanna living would have evolved directly by natural selection. Accordingly, humankind would not have needed a large brain to have selected deliberately the correct actions. The expensive overhead cost of the brain would have been a heavy burden and a serious handicap in competition with other species.

One credible attempt, which comes in various guises, to explain the evolution of intelligence is an "arms race". Greater intellect was selected for because of the Machiavellian, social competition between humans in the same or competing groups. Unfortunately, this arms race hypothesis is undermined by the relatively small brains of all other primates. In no other case (and in no other animal) did an arms race in reasoning ability occur. For example, chimpanzees, living in relatively large social units, did not experience any equivalent growth in brain size as a result of internal or external social competition.

The price of a brain is, in any event, much too exorbitant to permit such extravagant competition. Some other reason is required to account for a manifestly functional organ, which, in humankind, consumes some twenty percent of energy used. Intra-species rivalry in ornamental plumage or decoration, for example, is very much more economical.

Another, seemingly tenable explanation of intelligence is based upon a hypothesized absolute increase in the number of human social contacts during the EEA. A larger number of contacts would, of necessity, demand improved intellectual abilities. However, the supporting evidence is not forthcoming. The social contacts of human gatherers and hunters, as recorded by anthropologists, were not materially different in number from those of chimpanzees. Social species (dogs) are not more intelligent per se than solitary ones

(cats), either for reasons of social competition or number of companions.

Potts' paradigm-breaking contribution to the debate is to show that human evolution did not occur in a static environment. On the contrary, humans evolved in, and were adapted to, a constantly changing habitat. An essential premise of the savanna hypothesis (a static environment) is contradicted by the facts. Accordingly, the savanna hypothesis *perse* is refuted. Arms race or social contact number hypotheses are rendered redundant.

Darwin's original savanna idea is consistent with an influential strand of Darwinian orthodoxy. Significant evolutionary change is deemed to require a long-term (over a great many generations) environmental push in only one direction, otherwise selective pressures would soon be reversed. However, Potts argues that the idea of directional environmental forcing is being construed too narrowly. The concept does not necessarily entail, and cannot be equated to, unchanging habitats.

Species can evolve to cope with variable environments which alter significantly in terms of thousands or hundreds of years. Fitness, in this context, is summarized by Potts as the "survival of the generalist", being a product of "variability selection". The generalist overcomes the challenges of ecological instability by being able to succeed in contrasting terrains.

The starting point for Potts' enquiry is the uniqueness of humankind. What was special about Africa during the Pleistocene which favoured the evolution of large-brained, bipedal primates (homi-nids)? How did this environment account for the singularity of humankind?

The explanation, according to Potts, starts with the world's climate. The amount of the sun's radiation that falls upon the earth is not constant but fluctuates in three independent rhythms of 100,000 years, 41,000 years, and 23,000 years respectively. These regular oscillations sometimes reinforce and, at other times, offset each other.

The longest cycle is due to the gravitational effects of the larger outer planets. Over a period of 100,000 years, the earth's orbit gradually shifts from a more circular to a more elliptical orbit and back again.

The 41,000 year fluctuation derives from the earth's tilted axis of rotation with regard to the sun. The tilt systematically alters over a 41,000 year period, significantly affecting the sun's radiation at the poles.

The shortest cycle is due to the earth's wobble around its axis of rotation, a phenomenon known as precession. The effect is to alter the timings of the seasons respective to the earth's position in its solar orbit. For example, some 11,000 years ago, the winter in the Northern Hemisphere occurred when the earth was furthest from the sun. Now, the earth is nearest the sun during the Northern winter, mitigating, to a degree, its severity.

The Serbian mathematician, Milankovitch, demonstrated that these three cycles (100,000 years, 41,000 years and 23,000 years respectively) supplied the initial push to the earth's climatic variability.

About 55 million years before present (m BP), the earth's climate was relatively uniform with sub-tropical temperatures extending nearly to the poles. Then, 50m BP, the earth's surface began to cool. Between 40m and 35m BP, ice was forming at the South Pole, becoming virtually permanent from 15m BP. During the past three million years, Northern Hemisphere glaciers have advanced and receded repeatedly.

In general, the earth has become drier and cooler over the last fifty million years. Habitats fractured into distinct zones. Savannas spread. Nevertheless, Potts stresses that emphasis upon this directional change misses the essential point. During this period of cooling, fluctuations in the

amount of the sun's radiation striking the earth led to ever more marked periodicity in the world's climate.

The climatic oscillations steadily intensified because the geography of the world's continents was changing. Tectonic plate movement propelled Africa against Asia, eliminating the Tethys Sea, which had, hitherto, linked the Atlantic and Indian Oceans. The South Asian continent collided with Asia forcing up the Himalayas.

The altering geography of the world had pervasive climatic consequences. Weather patterns were rendered more extreme and chaotic, for example the summer heating of the Tibetan plateau generated monsoons. Volcanic action intensified, itself disturbing habitats and climate in significant, often random ways.

Crucially, feedback mechanisms began to amplify the climatic swings. Powerful polar currents separated the ice caps from warmer tropical waters. Colder weather led to sometimes permanent snow and ice, which reflected back the sun's radiation, lowering temperatures even further.

The critical stage of Potts' argument is to show that hominid evolution, and that of many other species, coincided with, and reflected, these climatic fluctuations. Potts demonstrates, for instance, that the evidence for increasing climatic fluctuation during the past six million or so years of hominid evolution is overwhelming. Moreover, key evolutionary events (the appearance and extinction of hominid and other species) are linked with ever more severe climatic oscillations. On the other hand, eras in which hominid evolution, and the evolution of other species, decreased, were marked by less climatic variability.

For the preceding reasons, Potts argues that the savanna hypothesis is mistaken. Thus, bipedalism was not an adjustment to a savanna lifestyle, but, rather, the adaptation of arboreal primates to climatic variability. The first biped (the progenitor of the australopiths) is now dated to more than four million years ago and was, in effect, an upright chimpanzee. Its upper body remained that of an arboreal ape. Bipedalism was an adaptation to arboreal uncertainty, not the savanna.

Australopiths and earlier bipeds, Potts explains, could cope with arboreal habitats that had become segregated and variable. The most recent research supports Potts: "Yet our evidence suggests that the earliest bipedal hominid known to date lived at least part of the time in wooded areas".[1] Bipedalism was a more efficient means of locomotion between more widely scattered, arboreal food sources.

The amplitude of climatic oscillation jumped sharply between three million and two million years ago. At that time, some bipedal apes abandoned an arboreal existence in favour of a terrestrial subsistence.

Stone tools are associated with some of these hominids. Potts makes the point that the stone tools of Homo erectus were a more flexible adjustment to rougher diets than the specialized teeth of the Australopithecus robustus. The first stone tools can be regarded, he claims, as external, more adaptable teeth. Incidentally, unlike chimpanzee tools, hominid implements were manufactured with another tool (a hammer stone).

The design of the first stone tools remained unchanged for a million years. Nevertheless, hominid evolution did not stand still. Potts demonstrates that, from 2.6m BP to 1.9m BP, natural selection resulted in more sophisticated patterns of behaviour.

First, early in this period, stones were picked up, made into tools and possibly only used at that location. Then, later, tools were carried up to six miles. The hominids' imagination could match tool and use without the need for physical presence. Finally, after 600,000 years or so, stores of tools, constructed from more easily worked materials, were left at strategic locations throughout the home range. The hominids' concept of the future had become more sophisticated.

During the last 700,000 years, climatic fluctuations, lasting over periods which were sometimes no more than a few hundred years, became even more extreme. Potts makes a powerful connection between this instability and the appearance of humankind.

Potts' argument gains enormously from the detailed descriptions of African (mostly East African) habitats over the past few million years. The across species comparisons are fascinating. His account piles fact upon fact. This review can only sketch the arguments and give a flavour of the depth of learning.

Nevertheless, Potts is aware that his account is not wholly convincing and fears his proposals "will be quickly judged". The evidence proffered is largely circumstantial. Reassuringly, his case can be significantly strengthened. First, Potts offers no fully persuasive reason in terms of Darwinian theory as to how climatic variability would favour the evolution of social learning. However, Boyd and Richerson's theoretical work on the evolution by natural selection of culture supplies the missing justification and will immeasurably bolster Potts' case.[2-3] Second, no specific evidence, apart from observations concerning flexibility of behaviour, culture and migration, is put forward to demonstrate that humans have any capacity for dealing with climatic variability. Present-day social science certainly does not recognize this faculty. However, this omission in Potts' work can also be remedied.

The theory of the scale describes humankind's potential to cope with extreme environments.[4,5] The scale attribute is a potent proof of Potts' fundamental contention concerning the influence of ecological instability upon human evolution. In our book, co-written with Kathryn Davies, *Humankind the Gatherer-hunter** key aspects of human history, especially social change, are demonstrated to be applications of the scale (a capacity to cope with climatic variability).

The implications of Potts' work for scientists are far-reaching. The deduction of behavioural plans or patterns from the contemplation of a small band of gatherers and hunters moving across an unchanging savanna will no longer suffice. Much more emphasis needs to be placed upon the complexity of the EEA, both in terms of habitat and variation through time. The sophistication of human behaviour is a direct consequence of climatic variability. Humankind is a generalist, adapted to both abundance and scarcity.

Potts has made a profound discovery, but the scientific importance appears, in some ways, of less moment to him than the spiritual and moral implications. The links, Potts asserts, between humankind and nature are broken, and Potts seeks for ways to mend the breach. For that reason, the book, although rigorously argued, is not entirely the academic monograph that some readers might have anticipated.

The new understanding of the relationship between humankind and nature (climatic variability) is presented as pivotal, fundamentally altering, in undetermined ways, the whole environmental debate. Potts sees a world in environmental crisis. Additionally, Potts propounds a sociological theory. His targets are Ardrey and Morris. Humankind's behaviour, Potts argues, is flexible and can not restricted to stereotypes, as exemplified by Ardrey's and Dart's bloodthirsty hunter.

For our part, we wish Potts had written two or three books. The spiritual and scientific sides sit, for us, uncomfortably together. As Hume observed, 'is' and 'ought' are logically distinct. One does not follow from the other. Potts' insight into the role of climatic variability in human evolution apparently provokes in him powerful emotions concerning our place in nature. To others, the same realization, although exciting, is no more than the elegant solution of certain technical problems concerning human social change.

Potts' social thought is consistent with contemporary opinion. However, his targets, Ardrey and Morris, have had little influence upon present-day social theorists. In the event, Potts' interpretations

may tend to confirm the belief of social scientists that human behaviour is largely a consequence of culture, detached from its evolutionary origins. The "basic plans" of the ASCAP mission statement, which are the result of our evolutionary history, are not acknowledged by Potts.

Nevertheless, the specific patterns of human behaviour which cope with climatic variability are essential to substantiate Potts' case. These patterns need not be, and, in fact, are not, wholly flexible. Human reactions to specific environments are, to some extent, prescribed. Moreover, many other human behaviours are basic plans in the ASCAP sense, of which social living in relatively small, day-to-day units is a prime example.

Potts' sociological investigations are traditional in approach. His questions are in the form "What is human nature?" or "What is culture?", seeking human nature's or culture's essential characteristics. For sound methodological reasons, this form of reasoning by definition is unproductive in science. The ensuing descriptions do not lead to testable hypotheses.[6]

None of this detracts from the central scientific thesis of climatic variability expounded in Potts' book, nor the great importance of his work, which is a permanent contribution to human knowledge. Humanity's Descent is absolutely essential reading for anyone who believes that human evolution and the EEA are relevant to human behaviour.

[Humanity's Descent: The Consequences of Ecological Instability, (1996, ISBN: 0-380-71523-6, paperback, price US$ 14.00) is published by Avon Books, New York. Readers outside the USA can buy the book on the Internet.] *c8*

Climate Variability WebSite -http://www.ncdc.noaa.gov/pw/cg/varLdoc.html

Including links to: **Atmospheric Circulation** **Solar Variability** **Ocean Circulation**

"Understanding natural climate variability is essential for understanding man-made climate change. To understand the true significance of...temperature change, we must distinguish between natural weather cycles (such as the changing seasons), transitory climate variations (such as a temporary drought), and long-term climatic change."

"The earth's climate varies naturally for many reasons. Put simply, a "climate variation" is a change in the average weather for a particular time of year; for example, winters becoming warmer. Such variations can affect a small region or the entire planet. Their causes range from completely unpredictable events like volcanic eruptions (which have mainly local effects) to more regular phenomena such as "El Nino" (a warming of the surface waters of the tropical Pacific that occurs every three to five years, temporarily affecting weather world-wide)."

"Natural climate variability hinders the detection of any man-made warming trend. While the state of the climate clearly involves much more than just global temperature, changes in global temperatures do indicate the scale of different climatic events, both natural and man-made."

"The range of natural year-to-year temperature variations is quite similar to the size of the warming that appears to have occurred over the past century (0.3-0.6 C). Moreover, the 16th to 18th centuries appear to have been unusually cold, and the climate may still be recovering from that time. So scientists cannot yet claim to have found an unambiguous temperature-related "greenhouse signal".

"If the models are right, however the projected warming of 1.5-4.5 C over the coming century would be larger than any natural climate variation since the dawn of human civilisation." - *"Natural climate variability vs. man-made climate change"* - Information Unit on Climate Change, UNEP.

ARTICLE:

by Dave Evans

Darwin and the Dirt Mover

> *"Have you learned great lessons from those who reject you, and brace themselves against you? or who treat you with contempt, or dispute the passage with you?"*
>
> Walt Whitman

It was early in November and for the 3rd consecutive Monday at 8:00 a.m., I was calling the man who bought my satellite dish. Morning is the best time to call because my voice is strongest and lowest then.

"Good morning, Dave," he said. With each call his voice had become slightly more polite and congenial. By now he was sounding almost like a friend.

"Are you gonna be able to take care of my yard today?" I said. The two times before I had said "this week"; today it was "today."

"Oh, for sure," he said. "I just got my front loader back, and so I'll get it done today."

I didn't ask him what the front loader had to do with it, but I said "good, you'll do it today, then." It was both a question and an assertion.

"It will be done," he said, and we hung up.

Here's the story behind the phone calls:

About a month before, my wife and I had moved to a different house a block up the street from a house we'd lived in for nine and a half years. This new place included an eight-foot-in-diameter, steel satellite dish in the back yard. We didn't want it; to us it was an eye sore that blocked the view out our huge bay window. On the first day in our new house we had to cut down a pine tree that had been planted to block out the satellite dish. We wanted as clear a view as possible.

Though the satellite dish had been an expensive, top-of-the line model, I knew it was antiquated; the new ones are much smaller and much cheaper. My impulse was to try to find someone to come and take it for nothing, with as minimal disturbance to the yard as possible. But if I could make a little money on it, I might as well. So I called the man who had sold and installed it, thinking he might buy it back. He wasn't interested in these old ones anymore, but he said I might be able to get a few hundred for it, since that's what he had gotten recently for the same kind of used satellite. (I wondered, when he told me this, where he had found the used dish if he wasn't in the business of buying them back, but I didn't ask him.) He said I might be able to sell it if I advertised it "with de-scrambler," a devise which allows the user to get many more channels than the so-called "free" one hundred. He also said it would probably take four men to lift it out of the yard.

The next day I advertised the dish in the paper and on the radio, "with de-scrambler." I was not optimistic about selling the thing, and it was already late October and I was anxious to get rid of it before the snow came. I didn't like imagining a scene of four men slipping and sliding out of my snowy yard with a huge satellite dish balanced on their shoulders.

A few days later, on Thursday or Friday, a woman called and asked what I wanted for the dish. I said $100.00, and she told me her husband would come out and look at it after work. That same afternoon another man called. I told him about the man who was coming at about 5:30, but he said he wanted to look at it right now. I said fine. A tall, self-assured-looking man knocked on my door about 20 minutes later. I took him out to the back yard, and after he looked at the dish a few minutes he said he'd take it. I told him I wasn't sure how I felt about the guy who was supposed to come in an hour or so, but he

told me, "First come, first served." I couldn't argue with that. After all, there was no guarantee that the first man would show up, and his wife hadn't asked me to hold it for them.

I was concerned about the steel post the satellite was attached to. When the man told me he had his own dirt-moving business, I asked him if he could take the steel post too, knowing that he could probably find another one fairly cheap. He said he'd do me a "favor" and take out the post too, that he could approach it easily from the driveway and snatch it out with his little tractor.

He gave me a 50 dollar bill, and said he'd be here on Sunday to pay me the other fifty and pick up his satellite. He mentioned his name but I didn't think to write it down.

An hour later the other man showed up and I was embarrassed to have to tell him that the dish had already been sold.

"No problem," he said. He knew there had been no promises.

I waited all day Sunday for the dirt mover. In the late afternoon, when it was clear that he wasn't coming, I started to get angry. I remembered the man's comment on doing me a favor by taking out the post. Here I was, selling him a dish that had cost its owner nearly $3,000 about 10 years ago, for a mere $100, and he was doing me a "favor" by taking out the post. I began to dislike the man, and I was mad at myself for not taking down his name and number so I could call him. My wife and I had to stay home all day when we might have taken a trip out of town, our habit on most week-ends.

So Sunday was gone. Then Monday and Tuesday. On Wednesday I called several construction companies listed in the yellow pages, but none of the secretaries knew of a dirt-moving company run by the guy I described to them. Then on Wednes-day night my wife and I went to an auction in the evening to see if we might pick up a table for our new house. I met a man there whom I had known for about 15 years. Like the no-show dirt mover, he owns his own business, a construction company, and lives in the country. This man is six-four, about sixty, an ex-college basketball star who still holds his own in pick-up games in the university gym several times a week. He's outgoing, friendly, independent, and a successful business man.

"Roger," I said, "you couldn't use a satellite dish, could you? I've got one in my backyard I don't want."

"Maybe so," he said. "What/re you asking for it?"

And then I told him the story of the man who paid me half for the dish and didn't show up on the day he said he'd show up, four days ago. I told him that it sounded to me like the man just wasn't interested. And so if he wanted the dish, just to come get it; I wouldn't charge him anything. He said he'd be coming that night to take a look.

He did come and he was interested, and said he'd be there the next day to get it.

He was there when I got home from classes. He was by himself, and had just unloosened the dish and rolled it out of the yard with his Paul Bunyan hands onto his flatbed trailer behind his pickup. He'd be around on the weekend with his son to take out the pole.

I was relieved. And the new view out the window was great, even with a pole sticking about three feet out of the ground. But my wife was skeptical. That night she said, 'The other guy'll be back."

"I don't care," I said. "Let him come back. He didn't let me know he wasn't coming last Sunday, so I assumed he didn't want the damn thing."

"What'll you tell him?" she said.

"That I gave it to a friend since I figured he wasn't interested. If he wants his 50 bucks back, he can have it."

Already, I was softening. Before that night I hadn't even considered a refund. I was thinking that, since he didn't show up for his dish, I gave it to a friend who can use it. And more: I'd tell him that, in fact, the man who came right after he left may have given me the hundred bucks for it, or someone else may have wanted to buy it.

The next day, Friday, when I came home from working out at the gym, my wife, looking urgent—I knew something was up—told me the satellite post was gone, but it hadn't been taken by my friend Roger but by the first guy, the dirt mover. He had knocked on the door and asked my wife where the dish was, and when she told him I'd given it to somebody else, he said, "We made a deal."

"He wants his satellite dish," my wife said. And so she was right, as she often is in such matters.

I went outside and saw the huge, three-foot-deep hole in the yard, and the nasty gouges and tracks left by a tractor—the equivalent, maybe, of a male tiger's urine and claw marks on a tree left to announce his presence to other males in the same territory. This human male had also left his name and number. I was angry, and also worried about being sued or shot. And what would I tell Roger, who had taken the dish and was, possibly right then, as far as I knew, setting the dish up in his own yard in the country? Or was it already up, on a new post? Was he sitting in his favorite recliner in his living room, enjoying some of his hundred free channels?

And so, embarrassed, agitated, and angry, I called Roger and told him that the worst had happened: the man had come for his dish. If I didn't give it to him — who knows? — he might sue me. Roger told me to send him out, no problem. When he asked me the name of the man and I told him. Oh sure, he said, he knew of him: he's a "druggie" who was caught selling drugs a few years back, and for his sentence he went around "crying to the school kids" about saying no to drugs. I was glad to hear that; it gave me a little more credibility. How could you trust a guy like that?

"He's plenty arrogant," I said.

After I got off the phone I called the dirt mover and told him to come over and pay me and I'd tell him where the satellite dish was.

Twenty minutes later he showed up at the door and gave me another 50 dollar bill and I gave him the directions to my friend's house. Then I told him that he'd left some fairly large gashes in the yard, and asked him when he'd be able to take care of them. He said he'd get it done by the weekend, no problem, all he had to do was put a pile of dirt in the back of his pickup and stop by. Then he told me that the reason he hadn't shown up on Sunday was that he thought the lawn would be wet (I didn't remember any rain) and he thought his tractor would have gouged up the yard even more. I didn't say anything about his not calling me. We were both civil, standing there face to face on my front porch, and I was very angry and I suspect he had some anger too, because I had almost given the dish away. I didn't want to start anything. If I erupted and told him what I felt, the yard probably wouldn't get fixed. He left, and I assumed that he'd be back in a couple of days with some dirt.

The weekend came and went and the man didn't show up. That's when the phone calls started: three successive Mondays, three successive promises, and the hole, the gashes, and the tracks were still there, under several November snowfalls.

Now that my little war with the dirt mover is over, I've been doing some thinking about human nature, particularly that stubborn, relentless habit of wanting to get even when we feel someone has wronged us.

During the several angry weeks of waiting for my dirt, sometimes even in the middle of the night when I should have been sleeping, various scenarios of confrontation occurred to me. Here are some of them, not in any special order:

SCENARIO **NUMBER ONE:** Call the man and let him know that if he didn't bring the dirt by the

following weekend, I'd be contacting my lawyer (I really don't "have" a lawyer) or taking him to small-claims court. Since he had a drug record, such a threat, I felt, would get his attention. And yet there was the legal cost involved, and the hassle of legal logistics that I didn't want to have to put up with. I also thought that he, owning his own company, probably has a lot more money than I have. But if I had the money, at one point I was angry enough to consult a lawyer.

SCENARIO NUMBER TWO: Send him copies of pictures I had taken of the hole, the gouges, and tracks (I actually had taken pictures) along with a nasty letter threatening to go to my lawyer or to take him to small-claims court.

SCENARIO NUMBER THREE: Write him a letter and tell him how despicable I thought he was for not keeping his appointment that first Sunday, or calling me. He obviously had my number if I didn't have his. I'd tell him that "decent" people (like me, by implication, of course) always call and let you know if they can't keep an appointment.

SCENARIO NUMBER FOUR: Call him and tell him not to bother with the yard, to stay away; that I could fix it myself, and that I didn't need to rely on somebody who obviously doesn't give a damn about obligations and responsibilities. At one time my anger reached such a peak that I considered, only half seriously, putting up a sign in my yard announcing in huge letters:

IS ANYTHING IN THIS YARD WORTH YOUR LIFE?

SCENARIO NUMBER FIVE: Call him and apologize (ironically) for assuming he wasn't coming back for the satellite—after all, I'd had to wait only a mere six days; I could have shown a little more patience—and then tell him that I really would appreciate it if he'd fix my yard anyway, since he had said he would.

But as the weeks went by, my anger became complicated by feelings of ambivalence. I began to realize, and my wife agreed, that the dirt mover had his own argument too. Was he the only one at fault in this war? Wasn't I wrong to give the satellite dish away, even if it didn't seem as if he wanted it? As he had told my wife, we had made a deal, and he kept his end of it. How could I fault him for that?

None of the scenarios came true, of course, and I concluded, finally, that the scars left in my yard were the dirt mover's way of reminding me that I had wronged him. In fact, the more I thought about it the more I hoped that he wouldn't come back with the dirt. If he did, he would be one up on me. In other words, he would be getting even with me by showing me that he could rise above enmity and commit an act of forgiveness. I've always appreciated Jonathan Swift's dictum:

> *"A brave man thinks no one his Superior who does him an Injury, for he has it then in his power to make himself superior to the other, by forgiving him."*

Like me, my detractor may also have felt some ambivalence. On the one hand, I'm sure he figured he had held up his end of the deal; and yet, on the other hand, he couldn't overlook the damaged yard, and he may have felt more or less obligated to fix it. That could explain why he at least sounded sincere on the phone whenever I called him. Maybe he was sincere when I was talking to him, and then after he hung up had second thoughts.

Or he may not have felt any ambivalence. His friendly tone and promises to restore my yard may have been a game of cat and mouse: he could get even by pretending that he was going to fix my yard, the way a cat pretends to let the mouse live for awhile before it closes in for the kill. I did have the feeling, after the third call, that I could call the man every Monday morning at eight a.m. for the next ten years; it didn't make any difference. He'd answer the phone sounding like a concerned friend and agree to do the work—no problem—I'd hang up expecting him to do it; he wouldn't show up; I'd call him again the next Monday, and the game would go on and on until... until I gave up and suffered the humbling realization of defeat.

If I go along with the Darwinian paradigm which assumes that all of us are born selfish, and that essentially everything we do—selfishly or altruistically—is calculated to get our genes into future generations, I might explain my feelings of ambivalence toward the dirt mover in this way: I needed to be pleasant to him so that he would feel obligated to restore my yard; and at the same time I needed to show him that I was in the right, that I could get even with him for being (in my eyes) an arrogant and irresponsible jerk. Were brotherly love and the capacity for forgiveness more "natural" than selfishness, then why would religions, which admonish us to relinquish our ego, have to exist in the first place?

Another strategy I tried in the satellite war, a strategy that recent Darwinians spend a lot of time observing and discussing, is deception. "Deceit reigns," said Gracian, a 17th century Jesuit priest.". .. things are judged from without, and are seldom what they seem."[2]

Not only did I try to deceive the dirt mover into thinking he was obligated to restore my yard (even though I had almost given his dish away). I also insisted that he come to my house and pay me the other 50 dollars before I'd tell him where the satellite dish was, because I knew that if I told him the address before I got the other 50 dollars, I may not get the money. And on the dirt mover's side of the coin: after he paid me and got the directions to the satellite dish, he deceived me into thinking (at least for a couple of weeks) that he would be coming back to fill the hole and gashes in my yard, when in fact he had no intention of doing so. He may have thought that as long as he kept me believing his lie, eventually I would just give up. He probably thought that if he'd hung up on me, or declined immediately, he risked a law suit or some other retribution.

According to some recent Darwinians, deception of others is only part of the story of how we try to get what we want in order to syndicate our genes; we also deceive ourselves, the better to deceive others. In other words, if certain facts and motives were not concealed by self-deception, we would always be sitting ducks for our competitors, since we could more easily, in the words of Robert Trivers, "betray — by the subtle signs of self-knowledge — the deception being practiced."[3] Throughout the conflict I rationalized that this man was not to be trusted. I assumed that I was the righteous one, until I began to realize that he had a valid argument. Even then, I felt that I was the more responsible and civil. After all, didn't he get busted for selling drugs?! never have been busted for selling drugs.

The ease with which I believed like a true believer in my own sense of Tightness and justice, even after I realized the dirt man was not an evil person, is partly what makes me defer to the Darwinians. My observations of humans and animals, along with my reading of biology, literature, and philosophy over many decades convince me that Richard Dawkins was right when he wrote:

> " *We are survival machines — robot vehicles blindly programmed to preserve the selfish molecules known as genes. Let us <u>teach</u> generosity and altruism, because we are born selfish."* [4]

Compassion and altruism, then, are never free. I've noticed that altruists tend to get their rewards: self esteem; public recognition and official honors; reciprocity from those they help.

Since words are so much cheaper than actions, it would be easy to say that I showed compassion for the dirt mover the day I stopped calling him and insisting that he restore my yard. I could even hype my alleged compassion a few notches by claiming that, in fact, I forgave him. I could go about announcing this to people, and thereby gain their admiration and envy while increasing my self esteem and status. But that's exactly what I would be doing: announcing my compassion and capacity for forgiveness and selflessness so as to gain admiration, envy, self esteem, and status.

At the same time I may also (according to Swift's

dictum) feel superior to the dirt mover by forgiving him. The truth is that I didn't like him from the first glimpse. About three inches taller than I am at 5' 11", he was fairly rugged looking, an outdoor type, and seemed, though soft spoken, utterly self-assured and nonchalant. I've always envied men over six feet anyway, and especially the rough and ready, unselfconscious ones. So the dirt mover may have been an unwitting releaser of feelings I've had for some men in the past, like my college football coach—men who, it seems to me, have not much else going for them but their self assurance and nonchalance. They often remind me of Aesop's wolf who, after he agrees to pay the crane a fee for taking a stuck bone out of his throat, refuses to pay after the job is done, saying that her reward is having been able to draw her head out of a wolf's mouth without being harmed.

How can we know who our friends are unless we know who our enemies are? "Love your enemy," the Bible says. I have puzzled over this saying for years. I wonder if it might be interpreted this way: "Appreciate your enemies for what they can teach you."

What did I learn from the dirt mover? At least two things. One, that Franz Kafka was right: the only true sin is impatience. And the other: That resentment can diminish considerably when we are able to recognize a bias toward others, and thus empathize with them. Empathy is a useful trait because it discourages resentment and aggression, and encourages tolerance and forgiveness; and forgiveness, of course, is just as comforting for the forgiver as for the forgiven. Even though I won't be inviting the dirt mover to dinner anytime soon, I no longer hate him. I see that he had his reasons for acting as he did.

My little cold war with the dirt mover has confirmed my belief that self interest, in the words of Robert Wright, is "the overriding criterion of our design"[5] We are all for ourselves in a world full of others all for themselves. Evidently, natural selection has designed us to believe—unconsciously if not consciously—that we are far better and far more deserving than anyone else. *"Thou hypocrite,"* Jesus admonished, *"first cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye."*

It's not easy to admit that our acts of kindness and compassion are ultimately self-serving. How could soldiers lay their lives on the line without believing that their sacrifice is for a cause that's larger than they are as individuals? How could political or religious leaders get their work done without the same belief?

Should the hard evidence of our innate selfishness cause us to be hopelessly cynical? Certainly anyone familiar with the basics of recent Darwinian thinking has to be extremely skeptical of human motivations. But facts are facts. I remember a little saying on the desk of a biology professor in college: "Don't bother me with facts; my mind is made up."

And yet the tolerance that can result from acknowledging our selfishness is surely behind Confucius' rule, which is also found in the Bible: "Do not do to others what you would not have them do to you." As soon as I could imagine myself in the dirt mover's shoes, and admit to myself that he was no more of a hypocrite or ingrate than I was, I began to treat him with respect. It seems to me that when we understand that we are born with an unremitting bias toward our own Tightness, then we also understand that kindness and tolerance—toward ourselves as well as others—are not only more urgent than ever in a selfish world, but, paradoxically, more readily achievable. *c8*

Please E-mail any contributions to ascap@utmb.edu,
or mail hard copy and 3.5" HD diskette to:
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WordPerfect, Microsoft Word or ASCII format preferred. Diskettes will be returned to you. Thank you.

ARTICLE:

by John S. Price

Gurdjieff and the Triune Mind/Brain

In the remote village of Candolim, north of Panjim which is the capital city of Goa, we met a remarkable man doing a remarkable job. Jerome Vaney is a 64 year old Englishman who is an ardent disciple of Georges I. Gurdjieff (hereafter called G) and he has been practising and teaching G's method here for the past twenty years. After talking to him for a short while, it became clear that G's theory is based partly on a triune model of the mind/brain, and my purpose in writing is mainly to compare and contrast his model with our use of MacLean's triune brain model. But first I would like to give a brief sketch of G and the development of his ideas.

G was born in Turkestan in 1866, the eldest son of a minstrel/shepherd from Asia Minor. The first twenty years of his adult life were spent in a spiritual quest around the East, looking for ancient knowledge that might indicate the purpose of human life (he drew a lot from Sufism). Then he settled in Turkestan where he attracted students, and also worked as a magician, hypnotist and psychotherapist. He then moved to Moscow, and on a visit to St Petersberg in 1916, he met P.D. Ouspensky through whom he attracted a large following from aristocratic and intellectual circles.

In spite of his humble origins, G was presented to the Tsar, and it is thought he was considered as a counterweight to balance the infamous Rasputin's power over the Tsarina. G married Madame Ostrowski, a lady-in-waiting to the Tsarina.

The Russian revolution drove G and some of his pupils down to the Caucasus, from where he moved to Constantinople and later to Fontainebleau in France, where he ran a residential teaching centre for many years. He died there in 1949. G had a low opinion of ordinary human life. He regarded life as petty, trivial, mechanical and most humans as "asleep":

> *"All the people you see, all the people you know, all the people you may get to know, are machines, actual machines working solely under the power of external influences ... But there is a possibility of ceasing to be a machine. It is of this we must think... it is necessary first of all to know the machine. A machine, a real machine, does not know itself and cannot know itself. Then a machine knows itself it is then no longer a machine, at least, not such a machine as it was before. It already begins to be responsible for its actions.* [1, p. 19]

He taught that one could rise above this machine-like state and develop a new self which not only enhanced this life but which was in some sense immortal. The first step in achieving this goal was total surrender to a teacher, i.e., himself:

> *"The whole thing is in being ready to sacrifice one's freedom,"* said G. *"A man consciously and unconsciously struggles for freedom as he imagines it and this, more than anything else, prevents him from attaining real freedom. But a man who is capable of attaining anything comes sooner or later to the conclusion that his freedom is illusion and he agrees to sacrifice this illusion. He voluntarily becomes a slave. He does what he is told, says what he is told, and thinks what he is told. He is not afraid of losing anything because he knows that he has nothing. And in this way he acquires everything. Everything in him that was real in his understanding, in his sympathies, tastes, and desires, all comes back to him accompanied by new things which he did not have and could not have had before, together with a feeling of unity and*

will within him. But to arrive at this point, a man must pass through the hard way of slavery and obedience. And if he wants results he must obey not only outwardly but inwardly. This requires a great determination, and determination requires a great understanding of the fact that there is no other way, that a man can do nothing himself, but at the same time, something hastobedone. [1, p. 365]

Then many years of "work" were required - a combination of mental and physical exercises. He regarded the mind as consisting of at least three parts, which operate relatively independently:

"... a *modem man represents three different men in a single individual; the first of whom thinks in complete isolation from the other parts, the second merely feels, and the third acts only automatically, according to established or accidental reflexes of his organic functions... they not only never help each other, but are, on the contrary, automatically compelled to frustrate the plans and intentions of each other; moreover, each of them, by dominating the other in moments of intensive action, appears to be the master of the situation, in this way falsely assuming the responsibility of the real "I.* [2, p. 138]

This compartmentalised view of the mind seems to be something he acquired during his travels in the East. He again used the Eastern comparison of man with a carriage, horse, driver and master:

"Man is a complex organisation," he said, *" consisting of four parts which maybe connected or unconnected, or badly connected. The carriage is connected with the horse by shafts, the horse is connected to the driver by reins, and the driver is connected with the master by the master's voice. But the driver must hear and understand the master's voice. He must know how to drive and the horse must be trained to obey the reins. As to the relation between the horse and the carnage, the horse must be properly harnessed. Then there are three connections between the four sections of this complex organisation. If something is lacking in one of the connections, the organisation cannot act as a single whole. The connections are therefore no less important than the actual "bodies". Working on himself man works simultaneously on the "bodies" and on the "connections". But it is different work."*

"Work on oneself must begin with the driver. The driver is the mind. In order to be able to hear the master's voice, the driver, first of all, must not be asleep, that is, he must wake up. Then it may prove that the master speaks a language that the driver does not understand. The driver must learn this language. When he has learned it, he will understand the master. But concurrently with this he must learn to drive the horse, to harness it to the carriage, to feed and groom it, and to keep the carriage in order -because what would be the use of his understanding the master if he is not in a position to do anything? The master tells him to go yonder. But he is unable to move, because the horse has not been fed, it is not harnessed, and he does not know where the reins are."

The horse is our emotions. The carriage is the body. The mind must learn to control the emotions. The emotions always pull the body after them. This is the order in which work on oneself must proceed. But observe again that work on the "bodies", that is, on the driver, the horse, and the carriage, is one thing. And work on the "connections" -that is, on the "driver's understanding" which unites him to the master; on the "reins", which connect him with the horse; and on the "shafts"and the "harness", which connect the horse with the carriage - is quite another thing."

"It sometimes happens that the bodies are quite good and in order, but that the "connections" are not working. What then is the use of the whole organisation? Just as in the case of underdeveloped bodies, the whole organisation is inevitably controlled from below, that is, not by the will of the master, but by accident."[1, pp. 91-92]

G is not entirely consistent with his three level theory of mind/brain. He often spoke of man as a "three-brained species" and he also used the analogy of a house with three stories. But above the thinking mind is another structure called the Self or Will. Normal people do not possess this, but it can be created in himself and his pupils by "the work". In the horse and cart analogy, it is represented by the master, who gives directions to the driver, who controls the horse, who pulls the cart. The pupil first lacks Will. Then he takes the teacher to provide his will. Finally he is able to develop his own Will, and only then can he dispense with a teacher.

Also, at the lower level, there are several components. Beside the movement centre (which is involved in physical work and dancing) there is the instinctive centre and the sex centre. G was not interested in mood change, and his model contains no equivalent of our lower level escalating and de-escalating strategies.

Control of the movement/instinctive centre by the thinking centre.

G had his Russian aristocrats labouring in the fields from dawn to dusk, and he did this partly to teach them that by willpower they could overcome pain and fatigue - they became confident that the mind is master of the body. G shares this technique with many self-improvement schools, and there are similarities to Christian practices of prayer, fasting and mortification of the flesh.

After the evening meal the pupils were instructed in exercises and dances, which further reinforced the control of mind over body. Moreover, the pupils were taught to observe themselves at all times, so that they were aware of the movements and postures they were engaged in. This was facilitated by the "stop exercise" in which G would shout "stop" and everyone had to hold their expression and position until he told them to carry on.

Modification of the thinking centre by the movement centre.

Another purpose of the dances was to improve the thoughts, on the lines of "If you walk tall, you feel tall." This idea too is shared with other self-improvement practices such as the Alexander Technique.

Control of the feeling centre by the thinking centre.

One of the problems of human life and of therapy is that the thinking mind has no direct control over the emotions. One cannot will oneself to feel less sad or less angry. If the thinking centre is going to control the feeling centre, it has to be more devious.

In G's system, there is no specific teaching on this topic, but there is no doubt that G often deliberately induced negative emo'tions in his pupils. He insulted them and made impossible demands. His actions induced both anger and depressed emotion in the pupils. They were then told that the insult had been for their own good, to help them with "the work", and they were advised to "remember themselves" which was a form of introspection designed to develop the will and the self.

I think in doing this he was using what are now called "reframing" methods. That is, he helped the pupils to see events in a different light, so that an event which had elicited anger no longer did so. The perception of "an unfair insult from G" became "personal attention from G designed to improve me". In generalising this reframing, the pupils came to regard all adversity as an opportunity for self-development. It even involved a redefinition of good and evil:

"Number four man's [the Gurdjieff pupil's] aim is to evolve, to become something other than he at present is, and this aim takes precedence of everything else. What helps him to reach his aim he calls good and what obstructs his efforts to reach it he looks upon as evil." [3, p. 79]

There is a similarity here with Christian reframing of pain and persecution as being blessed ("blessed are those who are persecuted in my name") and also more Christlike, in sharing Christ's own suffering. And when something terrible happens, it is reframed in terms of being tested by God, and the worse the happening, the higher opinion God has of the victim, and therefore the more severe the test This reframing, both G's and the Christian one, depends upon the acceptance of a higher level of interpretation of events - in G's case, that "the work" is more important than everyday rewards and punishments. One of the functions of G as teacher is to validate this higher level of interpretation.

One cannot help note in passing that such a higher level of interpretation is not available to the psychiatrist, however much we help the patient to reframe his experience in terms of his existing level of interpretation. Is it possible to achieve a higher level of interpretation without a major juggling of the patient's ethical and belief system? Is this, perhaps, one of the things psychoanalysis achieved? These are genuine questions, for me at least; reading about Gurdjieff has brought to the surface questions which have bothered me for a long time, but which I have not been able to formulate so clearly in my mind before. In particular, can the agnostic psychiatrist work with a Man of God, in order to make such higher level reframing available to the patient - or would one just enter a confused state of hypocrisy by encouraging a patient to use a belief system which one did not oneself share?

The triune mind/brain in Plato.

Gurdjieff got his triune mind/brain model from the East, but a very similar model is described in Plato's Republic. Chapter 13 of Comford's translation is entitled *"The Three Parts of the Sour* and he writes (page 132) *"Are we using the same part of ourselves in all these three experiences, or a different part in each? Do we gain knowledge with one part, feel anger with another, and with yet a third desire the pleasures of food, sex, and so on? Or is the whole soul at work in every impulse and in all these forms of behaviour?" Clearly Plato was struck, as was G, by the relative independence of thinking, feeling and instinctual action. Perhaps since the main theme of The Republic is political structure, Plato uses the analogy of three different organs of the state (Chapter 33, page 306): "...our division of the soul into three parts, corresponding to the three orders in the state. Each part seems to me to have its own form of pleasure and its particular desire; and any one of the three may govern the soul."* [4]

Also like G, Plato was interested in the connections between the three parts (page 138): There is the witness of Homer in that line I quoted before: 'He smote his breast and spoke chiding his heart.' The poet is plainly thinking of the two elements as distinct, when he makes the one which has chosen the better course after reflection rebuke the other for its unreasoning passion."

Other similarities:

To many of his pupils, G was offering a form of residential psychotherapy, not unlike the integrative psychotherapy of Ferdo Knobloch.:[5]

" *There could be no doubt that working together in groups was a great help to self-study, fora man has much greater difficulty in detecting his own weaknesses than in seeing the weaknesses of others. By working in a group he often makes the unpleasant discovery that the very faults which he sees and dislikes in his fellow-workers exist also in himself.* [3, p. 101]

This resonates with Ferdo's comment that the most effective therapeutic influence is interaction with other patients. G was emphatic that the one of

the first steps in "the work" was to discard one's old personality, and this is similar to David Rosen's concept of "egocide".[6] Before you start constructing the new self, you have to get rid of the old self, with all its false assumptions, unrealistic goals, vain posturings and invalid sources of self-esteem. G distinguished between self-pride and pride of self -- self-pride should be abandoned to make way for pride of self.

Conclusion:

G was both a psychotherapist and a cult leader. He was one of the first gurus to offer the "wisdom of the East" to the Western world. He offered his pupils "salvation" of a sort, but the condition for salvation was hard work rather than faith. In this he resembles L. Ron Hubbard and his sect of Scientology. Also like Hubbard, he offered a slight hope of immortality in the form of reincarnation, in that he told his pupils that the development of a highly developed self might render that self independent of the corruption of the body at death, and that one possible form that immortality might take was rebirth into another person. It was possible to create an immortal soul through "the work". His idea of the triune brain/mind resembles Plato's, and is consistent with MacLean's. It is surprising how many thinkers have echoed La Rochefoucauld's aphorism that "the heart has its reasons that the reason knows nothing of". It is important to ask what is the information used by the three brains in coming to decisions, and in what way they influence each other. I have a suspicion that we are only just beginning to deal with these questions. *c8*

Gurdjieff Home Page & WebSite - http://www.gurdjieff.org

This site is updated quarterly as a service to the worldwide Gurdjieff community to provide information that relates to Mr. Gurdjieff and his teaching. Any information or opinions expressed herein do not necessarily reflect the views of the editors.

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Some New Features:

Commentary on Meetings with Remarkable Men:

Commentary by Terry Winter Owens first issued by University Books in their *Mystic Arts Book News* Number 82 [1965]: *" It is an adventure of the mind—growing, being formed, setting out after inner knowledge, discovering it and putting it to the test of practice. Thus it is an adventure in two worlds, and it will be the reader's delight and enrichment to discern where one world ends and the other begins."*

Gurdjieffs Philosophy of Nature:

An earlier version of this extended essay was first published in English in: *Gurdjieff: Essays and Reflections on the Man and His Teaching.* Nicolescu offers a preliminary but bold and rigorous examination of a clear relationship between Gurdjieff's cosmological mythos and current evidence for leading theories in

ABSTRACTS & EXTRACTS..

Jensen PJ, Mrazek MD, Knapp PK, Steinberg L, Pfeffer, C, Schowalter J, & Shapiro T: Evolution and revolution in child psychiatry: ADHD as a disorder of adaptation. ***Journal of the American Academy of Child and Adoles-cent Psychiatry*****,1997;36(12):1672-1679.**

Abstract: Current knowledge about early plasticity and children's responsiveness to environmental modifications as well as the atheoretical nature of current nosological systems necessitate alternative models to explain the phenomena of childhood behavioral and emotional disturbances. Evolutionary biology provides one such framework. It organizes data from the behavioral and cognitive sciences and parallels similar efforts in other areas of medicine and biology. Through an evolutionary biological lens, some mental disorders are better viewed as an adaptive response to early pathogenic environments and/or reflect the optimization of brain function to some environments at the cost of poorer response to the demands of other environments. As an example, the authors examine attention-deficit/hyperactivity disorder (ADHD) in relation to evolutionary theories of psychology and biology and clarify the potentially adaptive nature of characteristics of inattention, impulsivity, and motoric hyperac-tivity, depending on the nature of child's environments. Reframing ADHD characteristics according to evolutionary theory has important treatment implications for clinicians and offers researchers opportunities for novel scientific discoveries.

Gannon PJ, Holloway RL, Broadfield DC, & Braun AR: Asymmetry of chimpanzee planum temporale: Humanlike patter of Wernicke's brain language area homolog. ***Science,*** **1998;279:220-222.**

Abstract: The anatomic pattern and left hemisphere size predominance of the planum temporale, a language area of the human brain, are also present in chimpanzees *(Pan troglodytes).* The left planum temporale was significantly larger in 94% (17 of 18) of chimpanzee brains examined. It is widely accepted that the planum temporale is a key component of Wernicke's receptive language area, which is also implicated in human communication-related disorders such as schizophrenia and in normal variations such as musical talent. However, anatomic hemispheric asymmetry of this cerebrocortical site is clearly not unique to humans, as is currently thought. The evolutionary origin of human language may have been founded on this basal anatomic substrate, which was already lateralized to the left hemisphere in the common ancestor of chimpanzees and humans 8 million years ago.

DeGiacomo P: The Pragmatic Elementary Model (PEM), as a tool to develop the creativity in medical, psychological, and managerial fields. ***Leadership Medica,*** **1994;X(2):4-12.**

Abstract: In the 1 st part of the article the concept of mind is presented according to the relational approach and the relationship between mind and creativity is described. Some aspects are then reported about the features of the creative thought, how the discoveries occur, the traditional way to develop creativity. In the 3rd part of the article, the technique is described which we propose for the development of creativity. It is based on an interactive model (Elementary Pragmatic Model) based on 16 relational styles.

Pierri G, Margari F, Santoni RA, & DeGiacomo P: Short Interactive Psychotherapies and single interventions. ***Leadership Medica,*** **1994;X(2):13-16.**

Abstract: The Short Interactive Psychotherapy arises from the assumption that the mind develops in the relationship and therapy exploits the modes of relations between the individuals. Numerous

examples of interactive interventions are discussed. These interventions were developed in one or very few sessions with depressed, psychotic, anorectic, obsessive patients, with a double hysteric personality, and so on. The authors wish that the Short Interactive Psychotherapy and single sessions could become a second indispensable tool besides the use of drugs in the clinical practice of the psychiatrist and physician.

Tramontin T: In Brief. *Scientific American,* January 1998;p. 30.

Extract: In studying areas of the brain used for singing in white-crowned sparrows, it was found that hormonal changes and longer days controlled the development of these areas. Tramontin found that the bird's social behavior was equally important. Male birds that lived with females had 15-20% bigger song areas than bachelors or male birds living in groups.

(Extracted by B. Sutton M.D.)

Blackwell P, Jennions M, & Passmore N: Synchronized courtship in fiddler crabs. *Nature,* 1998;391:31-32.

Extract: Synchronized mating displays used by males to attract females were thought to be limited to light flashes or sound. This study shows that a synchronized visual signal of a conventional body movement (waving the single enlarged claw) is also used in courtship. The gravid female fiddler crab *(Uca annulipes)* visits the burrows of several males. She visits one male from several male clusters before she mates. Males attract females by waving their claw. Video recordings show that males wave at almost the same time when a female is <10 cm away. Females prefer the one who waves first and so males compete to be first. The synchrony may happen accidentally in the the attempt by males to wave first.

(Extracted by B. Sutton M.D.)

Ellis L: Neodarwinian theories of violent criminality and antisocial behavior: Photographic evidence from nonhuman animals and a review of the literature. *Aggressive and Violent Behavior,* 1998;3(1):61 -110.

Abstract: In this article, photographic evidence is presented that humans are not alone in the commission of crime, except in the rather trivial sense that crimes can only be committed by "adult" humans living in societies where written criminal statutes exist. Accompanying this evidence are descriptions of six recently proposed evolutionary theories of violent criminality and persistent antisocial behavior (e.g., chronic deceit and cruelty toward others). These theories venture far from Cesare Lombroso's famous 19th century proposal regarding criminal atavism that has been used to amuse introductory students of criminology for years. Two categories of evolutionary theories are described. The first category pertain to specific crimes: rape (or sexual assault), spousal (and romantic trinable) assault/ murder, and child abuse and neglect. The second category of theories target criminal and antisocial behavior more broadly. These are the charter (or cad) theory, the r/K selection theory, and the coincidental status striving theory. All six theories have in common the assumption that just as in other social animals, natural selection has acted on human populations over numerous generations in ways that frequently give a reproductive advantage to individuals who victimize others under certain conditions. While these theories are still too new to have been empirically scrutinized in all respects, the available evidence is sufficiently supportive to warrant their being given further research attention. Several hypotheses derived from the six theories are identified for future exploration.

AS CITED BY .....

Cover page

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[2] Boyd R. & Richerson PJ: Culture and Human Evolution. In: Rasmussen D. T. (editor): *The Origin and Evolution of Humans and Humanness.* Boston, Masschusetts: Jones & Bartlett, 1993, pages 124-126.

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Gurdjieff and the Triune Mind/Brain - page 16

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[6] Rosen DH: *Transforming Depression: Fgoside, Symbolic Death, and New Life. A Jungian Approach Using the Creative Arts*

DOUBLE HAPPINESS: TWO LIVES IN CHINA is a book of journal entries that chronicle a year in China. **("Double Happiness"** is a phrase that refers to a happy relationship between two persons.) The authors are David Allan Evans and Jan Evans, husband and wife, who taught at Nanjing University in 1992-1993, when David was a Fulbright Scholar in American Literature. The two authors write about their impressions of China - the people and their culture and attitudes, university life, the food and entertainment, the varied landscape of country and city. The book is also about a health crisis experienced by David, and subsequent anxiety and depression, and how - with the help of Jan and with daily recording of his moods and thoughts -- he tried to cope.

DOUBLE HAPPINESS was published by the University of South Dakota Press, which recently was discontinued; so books (cost: $15.00) are available from the following address:

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