April 11, 1994

Mr. Rob Marks
UCSF AIDS Health Project
Box 0884
San Francisco, CA 94143-0884

Dear Mr. Marks:

I'm truly sorry I can't be more helpful now. Here are some materials that may be of interest. One possibility might be something from "Example III -- Resilience to Personal Adversity," on pp. 24ff. in "When Illness Yields Creativity." I would be happy to speak (oops--pardon this cranky old-fashioned typewriter) with you about this.

I've added two pieces for the Harvard Mental Health Letter, although I'm not sure these are quite what you want (and the most recent one hasn't run yet). "Seeing Beyond" is along entirely different lines, but may be of interest.

I imagine that if we keep trying we can finally speak in person. Thanks so much for your interest in this work, and best of success with this project, whatever direction you may end up going.

Sincerely,

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Enclosures
CANC ILLNESS YIELD CREATIVITY?

Ruth Richards, M.D., Ph.D.
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In a certain sense, "illness can yield creativity." But there are twists to this story, and these are important indeed when patients fear that treatment will harm their creative potential.

Wordsworth, writing of the suicide of Thomas Chatterton, said, "We poets in our youth begin in gladness; But thereof comes in the end despondency and madness." Must pain, suffering, and even death be the price of creativity? A series of studies since the late 19th century does, in fact, support a creativity-psychopathology association. Solid modern research is now indicating a link with a personal or family history of bipolar mood disorders (see Richards, 1992, Jamison, 1986?, Harvard Mental Health Letter). With eminent level creativity, consider Nancy Andreasen's startling finding that 80% of a group of well-known creative writers had experienced a mood disorder. Over half were bipolar, with a strong tendency toward bipolar II disorder (with only hypomanic mood elevations), rather than with bipolar I or full-blown manic-depressive illness. The research of Kay Jamison and of Arnold Ludwig provide strong support for artistic creators. Scientists have been less well studied in general, but emerged overtly less disordered in Ludwig's work.

The picture is broader for everyday creativity, as found in the population at large, and which I, along with Dennis Kinney and others, have studied at McLean Hospital. We too found a "creative advantage," emerging here in the maximal originality of day to day accomplishment at work or leisure -- be this in business activities, childrearing, scientific work, home landscaping, or more conventional artistic expressions. Such a creative advantage was stronger for cyclothymes (some of whom might now be diagnosed bipolar II) than for manic-depressives, but also showed up in the psychiatrically normal first-degree relatives of bipolars.
Preliminary work also showed higher creativity in bipolar II than I individuals, and in "pure" depressives with, rather than without, a family history of bipolar disorder. We also found that, even among persons with marked mood swings, creativity is experienced most during better-functioning periods of mild mood elevation or even normalcy. Jamison and Andreasen have reported similar patterns for their eminent creators. Additional work with everyday samples by the Akiskals, Andreasen, Eckblad and Chapman, Jamison, and Schuldberg, among others, supports these various findings.

It is therefore not pain or great suffering that necessarily underlies a "creative advantage" to the risk for bipolar disorders, but something much more subtle. This is hopeful indeed. Plus, this advantage is potentially very widespread. Akiskal estimates that bipolar risk may manifest in pathology along a mood disordered "spectrum" in a full 4-5% of the population. It is highly unlikely that this is an accident of evolution. We have proposed that creativity is one aspect of a compensatory advantage to the genetic risk for bipolar disorder.

One may compare sickle cell anemia (although the underlying genetics may differ). The large number of heterozygous carriers of the sickle cell trait may show only a mild anemia, along with a significant compensatory advantage: resistance to malaria. Everyday creativity, viewed as a compensatory advantage to bipolar disorders, may function as a central survival capability of a behavioral type, a key to our human flexibility and ability to adapt to changing environments. Indeed, creativity, in its many diverse forms and sources (of which a mood-disordered source is only one), may fundamentally help define our humanness.

Where may the source of a "creative advantage" lie? Cognitive, affective, and motivational changes have all been reported during creative episodes; we'll focus only on the first. A preliminary issue involves distinguishing between the "abnormal" (unusual) and the "pathological" (maladaptive), and not pathologizing abnormality for its own sake, particularly if it is somehow beneficial. Indeed, we
need to focus more on how we as a society view, and can sometimes restrict, the acceptable "limits of normality." Factors that impede us may include certain evolutionary tendencies toward conformity.

Interestingly, certain oddities of thinking can be called "thought disordered" in one context but not in another. Take a "manic-type" response to an inkblot on Johnston and Holzman's Thought Disorder Index: "black, dark, darkness, lovemaking." Just how odd would this appear in a poem? What is especially interesting here is that such thought disorder, in much more muted form, has shown up in the relatives of manics, including persons who were not clinically ill.

Other "abnormal," but not necessarily "pathological," findings for persons high on various indicators of creativity include mid-range "psychoticism" in Hans Eysenck's samples, unusual perceptual experiences and beliefs found by David Schuldberg, overinclusive conceptualization in Nancy Andreasen's writers, and remarkably high scores across diverse MMPI psychopathology scales in the work of Frank Barron and associates with eminent writers and other professionals. In studies by Barron and by Schuldberg, however, creators also specifically showed high "ego strength," and Andreasen's writers, compared to manics, showed advantages in abstract and cohesive thinking. To what extent is such control the difference between disturbed mentation, and colorful and creative thought?

Consider sources of a genetic advantage linked to bipolar disorder. One speculative source (among potential overlapping others) could even directly reward such "thought disorder." Cultural evolution, we suggest, involves a division of intellectual labor, a form of "cultural brainstorming." Certain idea-generating persons -- the instigators -- may fill a necessary cognitive niche, a term used by evolutionary biologists. Their role is to speak out, wake us up, and "seed change." What they think, do, and promote, may at times get a little bit wild; not all of it may be acceptable, or even comprehensible. But that is the point! In conventional brainstorming, one first defers judgment and generates the widest possible range of
ideas. As they say, "anything goes." Then one stops, turns around and sorts out what one has got.

In "cultural brainstorming," this latter evaluative role may be played by totally different people -- by the literary critic, editor, granting agency, and so forth, including immediate superiors of all sorts. These people can independently sift, weight, select, and discard. Yet without the wide initial range to select from -- and this includes some of the more deviant margins -- the necessary intellectual diversity required for our survival might not be available.

This position very much parallels arguments for biodiversity, but in the province of information or, if you will, in the evolution of "memes" (units of cultural imitation, as defined by Richard Dawkins). We suggest an "edge-of-chaos" analogy to describe the sudden mental shifts of creative insight, the vast and holistic reconfigurations of one's understanding that can seem so remarkable. A puff of conceptual air at the right instant may lead to an avalanche of ideas -- and to whole new vistas that would not otherwise have appeared. Startling new insights may emerge in the process, but also perhaps some jarring pieces of inappropriateness, or creative "overshoot." No matter. Assuming once again that no one is ill or suffering, this may be all for the best.

We suggest that, when a society is in creative growth, there may be a greater appetite, at all levels, for new ideas, and a greater tolerance for diversity. Creative initiators may be rewarded in ways that (among other things) will increase their means and livelihoods, interpersonal appeal, and reproductive fitness. They may even be honored and imitated in their idiosyncrasy. As another part of this, pressure may decrease on a range of persons who simply diverge from the norm -- this might be quite significant for certain persons at risk for mental disorders. Daniel Wilson has even argued that some of the more overt symptoms of bipolar disorders may at times have been adaptive in the environment of evolution. By contrast, in a retrenching society, some of these well-functioning divergent persons might be called
odd, misfit, pathological, and even be outright ostracized.

Each choice to accept or reject a contribution will take place at the level of individuals. The totality, however, will give a portrait of a society. In our current confusing and endangered world, one might well wish to vote for diversity and the pattern of creative growth.

Yet to keep this rich creative range, must bipolar persons — and other individuals — endure severe suffering? Even assuming this were a reasonable choice for us to make, the evidence suggests no. It is in the intermediate affective ranges, on the average, that creative yield appears highest. Treating uncontrolled moods and associated symptoms can at once facilitate the subtle states of inspiration and control that most favor creativity. Further, our role as healers is intrinsic, not extrinsic, to this picture. We seek to ease the pain of individuals, including the two out of three depressed people who currently remain unhelped. Yet even as we educate individual patients so that they have more options, we increase the diversity of possibilities in the greater society.

However, one needs to carefully titrate treatment of mood disorders — including careful psychopharmacology — with creativity in mind. Few complain as vociferously as patients who fear that intervention will blunt their creativity. This could perhaps speak, at times, to the restorative effects of creativity itself — on empowerment, self-esteem, ability to contribute, and personal stability and mastery. Logically, one would expect creativity, as an adaptive survival capability, to have multiple healthy advantages. In several studies, individuals who wrote about severe stresses and traumas have shown fewer subsequent medical visits; Pennebaker, Kiecolt- Glaser, and Glaser additionally found indicators of improved immune function. Some of our creativity-inclined patients may have particular potential for such benefits.

Although at times "illness may yield creativity," the most sensitive treatment of creative persons will combine our expertise with patients' own healing powers, and increase the possibilities for both creativity and for health.
Mood Swings and Everyday Creativity
Ruth Richards, MD, PhD

Creative people throughout history have suggested a connection between creativity and mental illness. More than two thousand years ago, Aristotle asked why all persons "outstanding in philosophy, poetry, and the arts are melancholic..." He gave Plato and Socrates as examples. John Dryden wrote, "Great wits are sure to madness near allied/And thin partitions do their bounds divide." And according to Shakespeare, "The lunatic, the lover, and the poet/Are of imagination all compact."

Research on the psychopathology of eminent creative people dates from the late nineteenth century. Many early studies were flawed or anecdotal, but the cumulative findings are significant: a higher than average rate of mental illness among eminent artists, and perhaps also among scientists, who were less well studied.

Modern research on eminent artistic creators has shown very high rates of psychopathology. In a study of 30 well-known writers, Nancy Andreasen found that 80 percent had a history of mood disorders (as compared with 30 percent of controls). More than half of them had a bipolar disorder, and more than two-thirds of these had the type known as bipolar II, with mild (hypomanic) mood elevation, rather than the extreme elation of bipolar I, or manic-depressive illness. In Kay Jamison's study of 47 outstanding British artists and writers, 38 percent had been treated for a mood disorder—a striking figure, considering that only about one out of three people with a mood disorder seeks treatment. Eighty-nine percent had also experienced intense creative episodes with many features of hypomania.

In my research with Dennis Kinney and others, I have concentrated on the relationship of mood disorders to everyday (as opposed to exceptional) creativity. This kind of
creativity reveals itself in a wide variety of ways, and not just in the arts and sciences. Its only criteria are originality and meaningfulness to others; it is a basic survival skill that allows human beings to adapt to changing environments. It is possible that the genes for bipolar disorders are preserved by natural selection only because they also enhance everyday creativity in people who carry them.

**Lifetime Creativity Scales**

We predicted that milder mood swings, such as those that occur in cyclothymia (a mild form of bipolar disorder), would be more closely linked with everyday creativity than the more severe mood fluctuations of manic-depressive illness. To conduct our research we developed the Lifetime Creativity Scales, the first overall measures of everyday creative accomplishment, and conducted multiple validity studies on more than 500 personally interviewed subjects. Measures include quality (maximum originality) and quantity of creative endeavor. Our subjects have included a auto mechanic who invented his own tools, a homemaker who found novel ways to clothe the family, an entrepreneur who built a thriving business from bare beginnings, an innovative public school teacher, and a person who conceived and conducted dangerous resistance activities during the Second World War.

Using the maximum originality measure (which discounts for unproductive years and unfavorable conditions), we compared 17 manic-depressive patients and 16 people with cyclothymia to 11 of their psychiatrically normal relatives, 15 normal controls, and 18 controls who carried another psychiatric diagnosis but had no personal or family history of mood disorders or schizophrenia. Maximum creativity (and, to a lesser degree, extent of creativity) was higher among the 33 study subjects than among the 44 controls. As we expected, people with cyclothymia had particularly high levels of creativity. The psychiatrically normal relatives of persons with bipolar disorder were just as creative as persons with cyclothymia. The normal control subjects did not show this advantage.

Other research supports these findings. Akiskal and Akiskal found higher artistic creativity in persons with bipolar II illness and bipolar III illness (depressives who may become hypomanic when they take antidepressants) than in either bipolar I patients or “pure” depressives. David Schuldberg and others have found that creativity is linked to hypomanic traits in college students. In preliminary work, we have found higher job creativity in bipolar II than in bipolar I individuals, and higher creativity in depressives with a bipolar family history than in those without such a history. This bipolar family susceptibility may have distinguished some of the depressed eminent creators in Andreassen’s and Jamison’s studies, and even some of the creative “misanthropics” mentioned by Aristotle.

Why is creativity linked to serious mood disorders among eminent artists but associated with milder mood swings or even normality in everyday creators? One factor increasing the chance of eminence in creative persons may be the use of mood-disordered experience as material for artistic work. When creativity is already present, another factor that may contribute to achievement is a driven, obsessional attitude toward work. A sense of being different, common in persons with bipolar disorder, may also facilitate challenges to conventional thinking. Furthermore, recognition of creativity offers external validation to persons who have a fluctuating sense of self because of bipolar mood changes. Finally, bipolar disorder can increase the potential for thinking in broad terms and may induce a heightened sense of moral and social awareness.

**Heightening Creativity**

How do mood states themselves enhance creativity? “Sharpened and unusually creative thinking” is often described as a feature of hypomania, and mild mood elevation can enhance creativity in the general population as well as people with mood disorders. In laboratory experiments, mood elevation produces more original associations, overinclusive categorization, and increased creative problem solving. Jamison found that hypomania heightened the experience of creativity in bipolar patients.

A bipolar II patient showed me notes she had made on a hypomanic period years before she knew what clinical hypomania was. For three weeks she had been experiencing recurrent states that reminded her of Abraham Maslow’s description of “peak experiences.” Despite sleeping only four to six hours a night, she was “energized,” “very focused,” and “able to center.” She had “greater self-control” and “discipline,” with “a high state of interest” and sometimes “bouts of laughter.” She “needed to listen intensely to music.” Although she was “frustrated by having no artistic medium as an outlet for creative energy,” she enjoyed the state and was hoping it would last.

We asked the members of a self-help and support group for patients with mood disorders to describe their most creative moods. More than half (20 out of 36) of the bipolar subjects reported mild mood elevation. Seven reported marked mood elevation, seven a normal mood, and two depression. Eleven “pure” unipolar depressives (without a bipolar family history) showed a different pattern and were less likely to feel creative when elated.

We also made a preliminary examination of the links between mood and the characteristics of creative states that Jamison had noted in eminent creators. Some of these features, such as expansiveness, impulsiveness, and euphoria, were linked only to elevated mood. Others, such as general well-being, confidence, and enthusiasm, were independent of mood fluctuations. The results suggest a baseline state of creative well-being with an added element of spontaneous exuberance during periods of mood elevation. In her study of eminent subjects Jamison had previously found three cognitive features typical of creative experience—speed of thought, facility with new ideas, and a sense of flow or welling forth of ideas. All proved characteristic of elevated mood in our bipolar patients. Andreassen and Powers showed that the thought patterns of manic patients resembled those of creative writers, but the writers also scored high on measures of abstract and coherent thinking. Philip Holzman and his associates have described combinatory thinking (playful conflation and incongruous combinations of ideas) not only in manic patients but also (in a milder form) in their normal relatives—perhaps explanation of the enhanced everyday creativity among these relatives.

*Continued on next page...*
Most people try to preserve positive moods through strategies of mood maintenance, including mood-congruent recall, and to banish negative moods through mood repair. Isen and others have shown that, as a result, unhappy memories may be segregated from happy ones and that the unhappy ones may be less well preserved. This loss of unhappy memories can limit the rich mental interconnections that favor creativity. Furthermore, according to Isen, feeling good may reduce the willingness to take risks. We suggest that this attitude may create a negative feedback loop, limiting the increased capacity for creative thinking often produced by a positive mood. But many creative persons do not maintain moods in this way: actors, for instance, can change their emotional state completely, even between scenes, and they can elaborate any mood or feeling fearlessly in all of its ramifications.

Integration of Feelings

We have proposed that the repeated uncontrolled juxtaposition of positive and negative moods in people with bipolar disorder may result in a more complex mental organization with a richer integration of feelings. Mental connections may be made especially when depressive features appear during mania. Mania itself has sometimes been called a “flight from depression.” Thus bipolar mood elevation may defy the usual principles of mood maintenance and mood repair. Bipolar individuals know that good moods will change despite efforts to maintain them, but so will depressed moods. Therefore they may prefer more active strategies to mood maintenance or repair in the effort to control depression. In situations where non-bipolar persons often quietly limit depression through mood repair, bipolar individuals may cope through incessant activity—the flight from depression that sometimes has creative results.

Understanding that vulnerability to bipolar disorders has adaptive manifestations as well as negative ones may help researchers to track that vulnerability and eventually make genetic discoveries leading to early identification and even primary prevention. This could be helpful for the 4 to 5 percent of the population vulnerable to bipolar spectrum disorders and for many of their relatives. We may also discover that certain treatments for bipolar disorders heighten creative potential, and creative endeavor itself might help in the prevention or treatment of mood disorders.

Resilient children of parents with mood disorders often endure and thrive in a difficult environment. Could creativity rooted in an underlying liability to the same mood disorders be part of their secret? Many creators work out personal conflicts through their art. How might they have fared without these creative outlets? Alleviating bipolar illness by making use of the associated creative potential could be especially important for children at risk. They would not only be protected from a psychiatric disorder but might instead develop unusual talents and make productive contributions to society.

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Seeing Beyond: Issues of Creative Awareness and Social Responsibility

Ruth Richards
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ABSTRACT: How do we keep our eyes open to deal with the dangers threatening our world? This article looks at four types of potential blindness limiting us—as a species—from full awareness. These include difficulty seeing hazardous but slow changes, seeing heretofore unimagined dangers, seeing past our delimited reference groups to the needs of our species, and use of massive psychological defense to avoid the discomfort of awareness. Creative persons may have an edge in addressing these limitations because of their sustained cognitive-affective awareness, creative courage and resilience, and capacity for universal perspective-taking. Yet these capabilities do not guarantee the motivation for moral responsibility, nor its underlying reasoning and sustaining passion. A relational style of moral responsibility, growing out of everyday empathetic concerns, and expanding to embrace universal principles, provides the strongest framework for this, while helping to eliminate the distortions of a pseudo-morality. In the interaction of three dimensions, therefore—accurate world perception, creative processing, and moral responsibility—lies a great deal of hope.

It was two days after the cease fire and we still hadn’t heard how many Iraqis had been killed or injured. The Persian Gulf War had been declared a swift success, “surgically precise,” even “brilliant.” “Only 79 casualties,” one heard again and again; Saddam Hussein has been beaten. The President is sure to be reelected and there will be stability in the Middle East.

Seventy-nine Americans dead, not counting POWs and other categories yet uncertain. But what about the Iraqis? “The who?” someone asked, “the enemy?” Are not they the ones who brutalized innocent people? Who threatened us with terrorism? Who performed atrocities in Kuwait, and virtually destroyed that country? Did they not deserve all of this—and maybe more?

The good guys and the bad guys. One journalist explained it in the Boston Globe: “...not every future conflict will be as clear-cut...involving obvious aggression, protection of a vital resource and a villain straight out of a Saturday morning action cartoon” (Yemna, 1991, p. 27).

This villain escaped death and even maintains his regime. Not so for many of his young men, some only 15 years old, who

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waited in bunkers while bomb after bomb fell from above, never knowing if they would be the next to die. Many wanted desperately to leave, but they were prevented. Mines blocked their retreat, Republican Guards stopped them with guns. There were threats to their families at home. These men were trapped from all sides. In some families, these were the remaining men, survivors of the eight-year war between Iraq and Iran, hoping perhaps finally for a bit of peace. The invasion of Kuwait was not their idea, but it became their fate.

And the civilians have not even been mentioned.

How many Iraqis were killed? Estimates by Greenpeace (CNN, 1991) and Physicians for Social Responsibility (1991) ultimately put the total killed at 200,000 people, with 100,000 of these people killed in the air war. In other words, nearly a quarter of a million human beings were killed as a direct result of our celebrated war—and this does not even consider unfolding catastrophes due to disruption of vital services in Iraq, the millions of refugees created by the Iraqi civil war, and the conflagration of hundreds of oil wells in Kuwait (Geiger, 1991; Physicians for Social Responsibility, 1991). Yet barely a word was said—except to celebrate our victory, our minimal casualties, and the “cleanliness” of this amazing conflict.

The point here is not whether a person stood against or for the Persian Gulf War. It involves war in general. Surely, in an ideal world, we could find saner and safer ways of resolving international conflict. Why, in the present case, were we not more aware of the human toll in the Persian Gulf? What forces keep us from seeing the realities around us? And to what extent can creativity help us, both to see more clearly and to act in morally responsible ways?

We often think we are aware of our situation, but we in fact go around guided by assumptions, habits, and filtering mechanisms of which we have no conscious knowledge. The following are personal responses to the Persian Gulf War of two Boston-area creative persons and their collaborators, designed to startle and to open people’s eyes. Next are presented four major areas of potential blindness that can keep us—as a species—from full awareness. I then review four qualities of moral giftedness adapted from Gruber (1985), their degree of relationship to creativity, and their potential to help us overcome our perceptual limitations. Creativity is helpful, but not in every case; the picture is more complex than this.

**Personal Statements on War**

The first creative person is Sandra Stark, photographer and faculty member at the School of the Museum of Fine Arts and of Tufts University who, with her students, had been studying newspaper photos of the war. One morning came a chilling set of images, “the first that personalized it.” There they were, the American pilots, numbed, serious, robot-like, tortured into submission and presented to the public. (Iraqi television was subsequently bombed and became silent.) To make these images truly visible, Ms. Stark and her class created larger than life—but still human scale—copies of various photos and mounted them prominently. When people turned the corner to go down the long hall to the Photography Department, they found themselves walking toward Jeffrey Zaun, U.S. pilot, magnified, spotlighted, under interrogation, straight-backed chair beneath, a boy, isolated and vulnerable, pock-marked face, dulled eyes, empty expression. This was an “image of war,” Ms. Stark said, “that no one could avoid.”
The second individual is Sally Gilliatt, and her collaborators, Ann Yeomans, Abby Seixas, and other members of The Women’s Peace Vigil, a Concord, Massachusetts group formed in response to the Persian Gulf War. On certain weekdays, dressed in black, these women walked slowly around the grassy terrain of a prominent traffic circle in Concord Center, and could hardly be missed by drivers in the early commuter rush. These women were both older and younger, united by their grief. Sometimes a man joined them as well, or a tiny infant in a carriage shrouded in black. This group was mourning for the people of all cultures who were dying in the war. Ms. Gilliatt told me of the response they got. People slowed down, people stopped. A great many were angry. They would say, “How can you do this? Our troops are over there fighting and here you are undermining them.” But there were others who were more complimentary, who felt supported and empowered. Through the Women’s Vigil, their despair was made concrete; it became more real and powerful. “But whichever way people felt,” Ms. Gilliatt said, “they did notice us.”

For some people, the war became real only after American victims—members of one’s own reference group—were seen. Sandra Stark and her photography class built deliberately on this personal resonance. A widespread tendency to block out images of chaos, pain, destruction, and massive human suffering, was reinforced by media reports of “smart weapons,” and the myth of a “clean” and nearly victimless war. The Women’s Peace Vigil also worked actively to remind us of the totality of what war involves.

No single act will transform all of society. But when creators work toward common goals and measure results as a totality, there can be massive effects indeed (e.g., Gruber, 1989; Lifton & Falk, 1982).

Four Blindnesses

In the following I consider four major areas of potential blindness to events, along with some consequences for viewing social and global problems.

Time Frames and Contrasts

Ornstein and Ehrlich (1989) noted that, “a paranoid visitor from outer space might assume that television was deliberately trying to keep Earthlings from discovering what is really transpiring on their planet” (p. 246). The problem is, we tend to react to sudden and major changes, meanwhile overlooking steadily mounting dangers. Indeed, how often do we put aside thoughts of spreading pollution, global warming, massive resource depletion, and an expanding population, which threaten us and the life-support system of our planet, yet stop to buy a paper because of a headline about the Chief of Staff’s airplane travel budget, or the latest revelations of some Congressman’s girlfriend?

Our fascination with the sudden and sensational may be likened to how our nervous system responds to light (e.g., Guyton, 1976; Ornstein & Ehrlich, 1989). Particular cells in the visual cortex are sensitive to edges, and to dark-light changes. There is a compelling parallel as well to patterns in human emotion where, for instance, an event’s vividness (by contrast with its surrounds) and newness (not yet victim to habituation) can hold our attention (Frijda, 1988). These were useful features no doubt in our primitive environment of evolution. One should note specifically the problem of time in our mental apparatus; if it happens quickly, we tend to catch it. But, if the
scale is years, then watch out, because it just might catch us.

Ornstein and Ehrlich (1989) cited some of Time Magazine's events covered in "The Most Amazing 60 Years in History" (1923-1982), including the New York Stock Market Crash (1929), the Marshall Plan (1947), the Cuban Missile Crisis (1962), and the end of Watergate and resignation of Richard Nixon (1974). During the same time period, however, unprecedented events had occurred that were not mentioned at all. These had crept up upon us more insidiously—including a doubling of the world population, environmental deterioration at a level never before seen, and a tenfold increase in the U.S. federal budget deficit (Ornstein & Ehrlich, 1989, p. 239). Two ongoing problems, the authors noted, did at least catch the attention of Time, so "eventful" were these—the most destructive war in human history, and the appearance of nuclear weapons.

Glantz and Pearce (1989) illustrated how, down through the ages, in a vast number of ways, the human environment has changed. Meanwhile the genes have remained virtually the same. The result is a serious one. In some critical ways, we are adapted to the wrong environment.

False Boundaries of Fearfulness

We have also been "wired" by evolution to fear certain hazards and situations. These include heights, loud noises, darkness, snakes. We have not evolved "naturally" to fear auto accidents, loose electrical wires, or household fires (e.g., Bernhard & Glantz, 1991; Glantz & Pearce, 1989; Lifton & Falk, 1982; Ornstein, 1991; Ornstein & Ehrlich, 1989). All the more, we do not automatically comprehend the devastation of international warfare, the multiple and overwhelming dangers of nuclear weapons, or the consequences of widespread environmental deterioration. Some of our worst threats involve abstractions that may be difficult to grasp, and which exemplify the insidious, progressive, and poorly differentiated type of changes discussed earlier.

Ornstein and Ehrlich (1989) called for a new kind of educated evolution, a conscious evolution, using the schools, the media, and other institutions, to teach us to circumvent our perceptual limitations and distinguish what is still "natural" in our evolution from what has now become dangerous and needs to be altered.

Restricted View of Community

We have been "wired" to fear strangers from early infancy, a fear which may also be traced to the environment of evolution. From the origins of human history until the development of agriculture about 10,000 years ago, people moved in relatively small and familiar bands of hunter and gatherers who were loyal to each other and wary of outsiders (Bernhard & Glantz, 1991; Glantz & Pearce, 1989; J. K. Pearce, personal communication, 1991). Relationships were dependent on reciprocity, on mutual obligation and need; a corresponding network of personal connections resulted within this relatively limited community, one which preserved the members' identity, purpose, sense of security, and well-being. The rules did not apply to persons outside of the group.

Many traces of a small-group perspective limit us today. Our survival has become strongly dependent upon our commonalities as human beings, not on the differences between each other as individuals and as members of narrow reference groups.
We must seek to make all of humanity our band. This requires learning to work more cooperatively toward broadly defined, and often abstract, goals and notions of good. We need not abandon our individual and group identities and efforts, but instead need to supplement them with a much broader consciousness, becoming more aware, solicitous, and protective of our "species self" (e.g., Lifton & Markusen, 1990).

Psychic Numbing

When a problem is finally seen or sensed, we may voluntarily choose to erase it, or at least to banish the strong feelings it produces. Lifton and Falk (1982) called this mental silencing psychic numbing. It involves a range of psychic defenses, but basically comes down to the issue of "feeling or not feeling."

Psychological defenses can indeed have many adaptive aspects. The first response to death of a loved one is denial (Kubler-Ross, 1969). But the next steps involve a gradual coping and acceptance. Defenses may help when they limit our margins of awareness to keep problems at manageable levels.

By contrast, psychic numbing represents a peculiar antisurvival mechanism. First things get bad, then a little worse, and we, as we should, react, and then react some more. So far so good. But then events pass some sort of threshold and the fog rolls in, the reactions get cloudy, and they finally start to fade away. Once in awhile the fog clears, and then we not only see the crisis, but how little we have done, and it is terrifying.

Victims of the atom bomb dropped on Hiroshima told of how, within minutes or seconds, they ceased to feel anything at all (Lifton & Falk, 1982). Their everyday world had disintegrated; there was rubble all around them; people were dying terrible deaths. It was too immense to take in. They could just not stand it. Some had psychological reactions: "If I feel nothing, then death is not taking place;" or "I cannot be threatened by the death all around me;" or, to deal with agonizing confrontations that we can only imagine, "I am not responsible for you or your death" (p. 101).

And consider the perpetrators of this bomb back when it was still under design, the well-meaning people, distinguished scientists who gathered together at Los Alamos in a spirit of purpose for the Manhattan Project. Richard Feynman confessed that, while working on the bomb, he and others "just stopped thinking" (Lifton & Markusen, 1990).

Critical Opportunity for Moral Creativity

A resort to the destructive power of war is only one aspect of a larger picture of human beings out of synchronization with their technology, their species needs, and their world (e.g., Brown et al., 1991; Ehrlich & Birks, 1990; May 1989; Meadows, 1991; Weiner, 1990)—both through an inability to see, and an unwillingness to see. We are, however, at a transition point that holds opportunity for our "conscious evolution."

The focus has turned from four decades of cold war and massive militarization. This has left us aware of humanity's capacity to self-destruct, and has weakened our belief that science and technology will always work to our benefit (Bernstein, 1991). These self-doubts are actually encouraging. For it is at ourselves that we now need to look. As Brown et al. (1991) said, "the goal of the
cold war was to get others to change their values and behavior, but winning the battle to save the planet depends on changing our own values and behavior” (p. 4).

At the moment it is not so clear that we will win. Species have come and gone. We ourselves in the last two decades of this century could well decimate as much as one-fifth of the species on earth (Brown et al., 1991). We have shown absolutely no aptitude to preserve this world for other creatures, never mind for ourselves.

Nature's lesson in the past has been a harsh one. Many millions of years ago, at the Burgess Shale, high in the Canadian Rockies (Gould, 1989), a great many creatures evolved and then dropped from the evolutionary scheme. The chance of decimation was extremely high. One single helpless-looking little precursor of chordates—of organisms like us, with a spinal cord—about two inches long and looking like a little worm or a broad bean pod, survived, it seems, for no obvious reason. A lucky cut of the cards, a toss of the dice?

And likewise perhaps with us. We are here at this point because we have adapted somehow in the past. We are not an irreplaceable part of a great tableau; we are barely a speck in the picture.

Morality, Creativity, and Areas of Blindness

Cannot our most creative people help us—those persons with the vision to imagine possible futures and with the hope to think that alteration is possible? In a stirring report of the development of nuclear weapons, Gruber (1985) told how H.G. Wells conceived atomic war and destruction of civilization, all back in 1910.

I now consider the requirements of moral giftedness, qualities of creativity, the ability to overcome our perceptual limitations, and the relationship between these—or lack thereof. I consider whether creative persons are more able, and also more willing to see beyond our current reality and make a moral commitment to the future.

The discussion is structured around four qualities of moral giftedness, adapted from Gruber (1985): (a) cognitive-affective awareness—regarding the availability and integration of the intellectual and affective knowledge of the world needed for moral responsibility; (b) initiative—ability to translate knowledge into action; (c) species consciousness—attention to concerns of all humankind; and (d) moral reasoning and passion—an integrated cognitive-affective capacity uniting empathetic caring and universal principles.

I also make an assumption based on (a) our knowledge of the existence of individuals of exceptional moral responsibility (e.g., Gruber, 1985, 1986; Hoffman, 1972; Wallace & Gruber, 1989); (b) the potentiality in all human beings for moral behavior—as well as for more destructive modes (e.g., Kohn, 1990; Likona, 1976); and (c) the species and individual adaptiveness of caring and principled behavior (e.g., Brothers, 1989; Glantz & Pearce, 1989; Kohn, 1990; Maxwell, 1991). We all have a capacity, urge, and indeed an obligation to seek some degree of expanded moral awareness and responsibility.

One need not go further than this and assume there is a greater responsibility among highly creative people—although this position may readily be argued (e.g., Barron, 1988; Gruber, 1985; Matthew 25:14-30, Parable of the Talents). In either case, enhanced moral development among creative
people should yield an exceptionally high payoff.

Cognitive-Affective Awareness of World Problems

You start with something peripheral—the room, the smell, it’s grandmother’s house, and it always had a smell, bread or whatever. If you don’t push, that smell will lead to something else—and something else. But you do it gently, and it all starts connecting. Use the senses, the color of the room, a little chain reaction—you get into that—and (then) you speak the lines. (An actor using past experiences to summon up a particular mood; Richards, in press.)

Creative persons may experience complex and wide-ranging affectively tinged states more frequently, comfortably, and willingly than other people (Jamison, 1993; Richards, in press; Schulberg, in press). Phenomena of memory storage are first considered, and then the cognitive style of integrative complexity, along with implications for moral creativity.

Complex Affective States. Creativity of even the most joyous sort can bring with it its own form of pain with its inevitable clash between new and old and the arrival of—who knows?—whatever cognitive and affective material the process happens to bring. Barron (1988) reminded us of this “thorn to the rose.” One perspective on this struggle involves tension between conscious and nonconscious thought (Barron, 1969, 1988; Freud, 1958; Kris 1952; Kubie, 1958; May, 1975, 1989; Richards, 1981; Rothenberg, 1990; Schulberg, 1990, in press; Smith & Carlsson, 1990). The unconscious, or preconscious mind (e.g., thought just below the threshold of awareness), is often the repository of the radical new insight that is struggling for birth—and for the necessary destruction of its conscious predecessor. The unexpected appearance of primary process material of all sorts, along the way, can bring anxiety, sometimes powerful indeed, anxiety which the creator must be prepared to tolerate. The ultimate breakthrough is not without its own anxiety and guilt, along with the joy and gratification of a new vision.

Creators manage this pain while they productively continue the work, by virtue of healthy control mechanisms or ego strength (e.g., Barron, 1969; Rogers, 1961; Smith & Carlsson, 1990). Furthermore, they not only tolerate this pain and uncertainty, but put themselves, over and over, in places where it is sure to arise. Might there be an underlying difference in mental organization that can allow this?

MultiAffect Schemas in Memory: Normative Case. Typically, there is a tendency toward segregation of memories linked with positive versus negative affect through a propensity for mood congruent recall, and perhaps also from state-dependent recall (e.g., Blaney, 1986; Bower, 1981; Isen, 1984, 1985; Snyder & White, 1982). These patterns maybe further abetted by a strategy of mood-maintenance, in which a good mood tends to perpetuate itself through a chain of positive associations (e.g., Isen, 1985). Thus a person thinks, “It’s a beautiful day,” “The sky is sunny,” “Things are looking better and better,” “It’s just like last summer,” and “I remember that happy time we had at the lake...."

On the other hand, people who feel down or sad may try to “chase the blues away” through a strategy of negative mood repair (Isen, 1984, 1985). One possible consequence will be a narrower and more poorly elaborated or interconnected system of memories than would otherwise occur, and one that is less readily cued (e.g., Isen, 1985; Isen, Daubman, & Nowicki, 1987). Thus, the bad news can keep getting buried, deeper and deeper.
There is a further ironic twist. When mood is positive, there is an increase in the unusualness of word associations, the inclusiveness of categorization (Isen & Daubman, 1984; Isen, Johnson, Mertz, & Robinson, 1985), and in creative problem solving directly (Greene & Noice, 1988; Isen et al., 1987). Yet, Isen, Nygren, and Ashby (1988) have shown in laboratory situations that, as mood improves (and even when expectations of success improve), the motivation to take risks may simultaneously decrease. Why, after all, interfere with a good thing? We thus have a negative feedback loop that may work to limit the confrontation of hard realities, and the practice of creativity (see Richards, in press).

Multiaffect Schemas in Memory: Potential Creative Organization. The exceptional creator in Simonton’s (1988) chance-configuration theory is not organized in the previous way. There are complex mental networks containing large numbers of elements, multiply connected through rich associative structures. One should expect to find a vast spectrum of feeling states, and affect-coded cognitions, all with plentiful connections to each other, and to additional mental elements. Add to this the stylistic conviction that one may utilize negative material toward purposeful positive ends (Blaney, 1986) and one has a creator who, relatively speaking, has become master of these memories. One may imagine the creator’s attention moving about readily through this domain—now joyous, now despairing, now angry—whatever best suits the creator’s purposes. Imagine a playwright or a poet who lacked these tools. A creator needs to be painting with a full emotional palette.

I thus propose a process of mental organization for persons who have experienced a forced persistence and a juxtaposition of diverse mood states over time, and who have successfully coped with this input. I take as a model persons at risk for bipolar mood disorders—a group that has in fact shown enhanced creativity (e.g., Akiskal & Akiskal, 1988; Jamison, 1990; Richards & Kinney, 1990; Richards, Kinney, Lunde, Benet, & Merzel, 1988; Schuldberg, 1990). Results may apply to other groups as well, including resilient individuals in the next section (see Richards, in press).

When depression is severe and sustained, people cannot turn as readily from their moods (e.g., Blaney, 1986). The schemas (i.e., the data structures representing concepts stored in memory; see Rumelhart, 1984) involving negative affect could potentially end up at least as well-elaborated and interconnected as those connected with positive affect (e.g., Isen, 1985, 1987; Isen & Daubman, 1984); there can be an intense pull of each negative element for like others (e.g., Isen, 1985; Matthysse, 1991). For instance: “I got that one wrong,” “I can never do anything right,” “I’m hopeless....”

Cognitive therapy often suggests mood-incongruent cognitive “interrupts” to break the cycle, for instance, “Wait, it was just one problem,” “I’ve done OK in the past,” “Just the other day I....” (One might link such cognitive therapy with an externally-imposed form of ego-strength.) Such persons have more ways to access and stay in a negative affective loop, but also to get out of it (Richards, in press). Dramatic actors, for instance (see quotation at the beginning of this section), have specific strategies for doing this.

Turning to positive affect, elevated mood in a bipolar disorder actually represents a complex and changeable state—euphoric one moment, irritable the next, sometimes even despairing (Jamison, 1990). Mania, in fact, has been classically described as a “flight from depression” (Eaton & Peterson, 1969; Goodwin & Jamison, 1990). Here diverse moods and affectively-coded cognitions
could become linked in memory through mechanisms involving sequential occurrence and contiguity, and perhaps also through the illusion of causal control (the apparent efficacy of a “flight from depression”). The resulting schemas left in memory could display a complex intricacy, this time both within and between negative and positively-coded affective material. In persons with sufficient ego-strength, this could create future potential for affective as well as cognitive interrupts in affectively-coded associative sequences, that is for mood-incongruent and state-independent changes in mental direction.

In addition, where mood and its awareness are thus complex, the strategy of positive mood-maintenance can take on a more active, resilient quality, leading to greater motivation for creative solutions to problems. The certainty, if anything, is that mood can change (or may already reflect a mixture of underlying states). The individual may be less inclined to relax passively into a good mood through a strategy of positive mood-maintenance, and forget about negative possibilities, than actively to confront the total situation. By the same token, the strategy for negative mood-repair may be less one of sudden shutdown or escape than of active, and perhaps sometimes incessant, coping activity.

Neither these cognitive nor motivational phenomena will guarantee creativity. But in the presence of other strengths, they can contribute to a more open and integrated cognitive style that makes creativity more likely. One possibility is an enhancement of an “integrative complexity,” discussed later. But whether such creativity will be used toward moral ends is still a question.

**Integrative Complexity.** This is a stylistic drive for a complex integration of information (Barron, 1963a, 1963b, 1969), an aspect of cognitive style which has been associated with creativity and directly with thoughtful, open, and interactive attitudes toward certain societal and global problems (e.g., Barron & Bradley, 1990; Simonton, 1984).

Such complex thinkers will not settle for the easiest synthesis, or the ready-made solution from past experience. In the short run, at least, they turn to embrace disorder “which to them is simply the possibility of a future order whose principle of organization cannot now be told” (Barron, 1963b, p. 156). They prefer a complex differentiation and integration of new inputs. The individual “perceives the world in a multidimensional and flexible manner, simultaneously considers diverse viewpoints, and yet manages to integrate all these inputs into a single perspective” (Simonton, 1984, p. 54). A preference for complexity and high tolerance for ambiguity, among other features, characterize such people (Barron, 1969), as does the high ego strength that is needed to manage and indeed thrive from this tension and uncertainty.

The drive for complex integration stands in contrast to dogmatic and authoritarian styles. During international war, integrative complexity is decreased, while dogmatic patterns intensify (Simonton, 1988, 1989). Integrative complexity is also negatively correlated with a probuildup position for nuclear weapons, in contrast with a reductionist position (Barron & Bradley, 1990) and with the tendency to treat two points of view as polar opposites (Simonton, 1984). Significantly, a revolutionary leader who ascends to power on a “good guys, bad guys” dichotomy is not likely to stay in power unless this leader then changes into someone who appreciates the finer intricacies of leadership (Simonton, 1984).

With regard to global problems, such multiaffect integration in memory storage, or the overall style of integrative complexity,
Initiative for Morally Responsible Action

If we let ourselves experience the evil, we will be forced to do something about it. (Rollo May, The Courage to Create, 1975, p. 8)

The "perceptual courage" described by Rollo May could be weakened by helplessness and despair, but also increased by experiences of empowerment. In one study, about half of the high school seniors surveyed each year since 1978 agreed fully or largely with the statement, "I feel I can do very little to change the way the world is today" (Berman, 1991, p. 1).

Resilient Creative Persons. Who comprises the other half, those persons who feel they can change things? It must be significant that, among eminent creative people, the life trajectories of many depart from troubled personal circumstances, be these troubled childhoods, poverty, traumatic loss, physical disability, or mental illness (e.g., Andreasen, 1987; Goertzel & Goertzel, 1962; Jamison, 1990; Richards, 1981, 1990; Sandblom, 1989; Simonton, 1989). These are individuals who, in essence, have been thrown into the pool and learned to swim. They overcame or somehow compensated for their difficulties, and in so doing, transformed negative to more positive circumstances. This may have occurred, at times, in a largely unconscious or disguised manner, although never without its share of anxiety and disruption (e.g., Richards, 1981), yet at others, in very deliberate, hard-working, and fully conscious ways.

For some such persons, creativity may have offered an initial means of coping with personal adversity, and along the way, also provided a lesson in growing, thriving, and contributing in a yet broader manner (e.g., Flach, 1988, 1990; Gut, 1989; J. H. Herzberg, personal communication, 1991; Richards, 1990). Such experience could likely link negative and positive experience directly—and also directionally—with the further message that one can fight back, do things, and change things. The creative power and the personal confidence such creators would accrue could spur yet other efforts.

A deliberate use of negative material toward positive ends could become a part of one's basic cognitive style (e.g., Blaney, 1986). Even making the effort could be seen as positive—one would at least not feel helpless. And how much sweeter when this led on to some measure of success. Such creator's power could increase with each new hurdle overcome—with one result being a rich diversity of mental connections marking the trials they have endured and the paths they have taken.

Developmental Patterns of Incrementally-Formed Resilience. A rich affective integration, and a capacity to cope, might come about in a gradual and incremental way as well, and with a higher rate of success. Indeed, for each resilient person forced by extreme circumstances into a more complex form of affective organization and coping, a great many more will have fallen victim to this stress. Not all threatened people are resilient, nor are they all creative.

Some children, however, by virtue of the tiniest creative steps—maybe just a tiny
push at the right vulnerable moment—could begin on their way to a more creative orientation, including a more complex mental organization and the courage to use it. Once started, they could continue step by step, thereby minimizing the threat, while building the pleasure of mastery and surprise, and the mental record of their accomplishments. This record could hold an affective complexity that would serve them well later on.

The key point, when difficulty is faced, is the valuing of strategy of approach, rather than avoidance. One dares to have a look, despite the difficulties this may entail. Some children may already have an edge. Maybe this is a curious child, one with a high need for novelty. Maybe this is a child encouraged to be independent, and to ask questions. Maybe this child plays very freely, and is offered many resources for doing so. And maybe the child sees a parent taking risks and decided to try just a little one in turn (e.g., Albert & Runco, 1986; Kohn, 1990; Richards, 1981, 1990).

Or maybe this is a child who already has difficulties—the resilient creator in miniature. He or she might be called upon to cope with a family uprooting, a sibling’s illness, a parent’s divorce. The child may feel personally troubled, and comes to write, or draw, or play with puppets. Often it works and the child feels better—and sometimes the child even feels wonderful.

For whatever reason, this fledgling adult faces an initial small problem and takes a small creative risk. It is successful. The child rides out the uncertainty, sees the result, gets a pat on the back from a parent perhaps, and becomes aware of a tiny feeling that is savored. The message for the future: “Examine the situation—and then do something.” The strategy can work—and what is more, it feels good. This could begin the shaping of embryonic innovators who come to find the best rewards through a courageous awareness, delay, risk, and hope. Integrative complexity is one possible result. Their immediate comfort becomes less important than their stake in the future.

Thus, either through overcoming major adversity, or gaining strength more incrementally, such individuals might accrue the courage and capacity to remain aware, and to persist in creative efforts—but we can still not be sure whether their efforts will lie in the moral domain.

Species Consciousness

At issue is a modest yet far-reaching realignment of elements of the self. Whatever the capacity of an individual self for concern, caring, loyalty, and even love can now be extended in some degree to the species as a whole… (Lifton & Markusen, 1990, p. 259)

Creative people can have moments of oneness with all humanity, as may be seen in great works of art. However, creative tendencies do not always overlap with, and may sometimes even oppose, the sense of community that underlies species consciousness. Three perspectives are taken: (a) creative transcendence, (b) creative style, and (c) issues in empathy.

Creative Transcendence. We may all at times think in terms of limited issues appropriate to a small “band” of familiar individuals (Glantz & Pearce, 1989). But the creator can also operate at vastly more general levels. There may even be “feelings of awe and of oneness with the universe...” (Barron, 1969, p. 77). Maslow (1968), for instance, in his humanistic view, associated maximal creativity with a self-actualized state in which a situation or object is experienced in its entirety, with complete and selfless absorption. The object in effect becomes one with the universe; there may be mystic, aesthetic, and oceanic aspects. This is related
as well to Csikszentmihalyi’s (1990) conception of flow, involving a highly focused experience uniting personal energies toward creation of a new order. This is also consistent with the interest in abstraction, preference for theoretical and aesthetic values, and the integrative complexity found in highly creative persons (e.g., Barron, 1969, 1988).

**Creative Style.** Stylistic patterns must also be acknowledged so that they may weaken a sense of community. In some creative scientists, for instance, we may find a fierce autonomy, drive for solutions through independent action, interpersonnal distance, internal preoccupation, antisocial posture and nonconformity, resistance to group norms, introversion, and sometimes a preference for abstractions over people. Such individuals also tend to be low on social, economic, and religious values (e.g., Barron, 1969; Cattell, 1963; Roe, 1963). Kohn (1990) noted how individuals with high self-opinion may also identify less with, and thus be less motivated to help, others. A sense of “standing apart” from the mainstream (e.g., Richards & Kinney, 1990; Richards, 1990; Roe, 1963) may, on the one hand, facilitate the creative challenge of societal norms, but on the other, reinforce a desire “not to get involved.” Other factors, including a tradition of helping and social responsibility, may help opt for one outcome over the other. In one study, rescuers of Jews in Nazi Germany viewed themselves as being on the margins of society, as well as having close identification with a morally committed parent (Huston & Korte, 1976).

**Empathy.** Empathy was very likely important to survival back in the environment of evolution (Glantz & Pearce, 1989), and throughout history it has been a foundation of sophisticated social communication and a hallmark of primate evolution in general (Brothers, 1989). Empathy involves “the inner experience of sharing in and comprehending the momentary psychological state of another person” (Jordan, Surrey, & Kaplan, 1983, p. 2). At its fullest development, it is a complex process requiring a high level of psychological development and ego strength (Jordan, et al., 1983; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). Requirements include sensitivity to the differences as well as sameness of another. There are brief sequential stages, including perception of the affective cues of another, surrender to affective arousal in oneself, and a resolution period in which one recaptures the separate sense of self as well as of what has transpired (Jordan et al., 1983, 1991).

If creative persons don’t always show strong empathy, then they at least may frequently manifest relevant creativity-linked features (e.g., Arieti, 1976; Barron, 1969; Koestler, 1969), including ego-strength, the ability to “regress in the service of the ego,” psychological mindedness, emotional sensitivity, and intuition. These qualities should at least make more likely the seeing of the commonality across humanity, while minimizing paranoid visions of persons who seem “different,” such as the always-alien “enemy” (Lifton & Falk, 1982; Lifton & Markusen, 1990; Ornstein & Ehrlich, 1989; Seuss, 1984).

Empathy can indeed provide a foundation for universalist, socially conscious, and altruistic behavior (e.g., Berman, 1991; Gruber, 1989; Kohn, 1990), enhancing the ability “to experience the role of a needy other; to share a social responsibility norm; and to experience joy because the receiver will be happy” (Rosenhan, 1969, p. 152). Nonetheless, empathy does not always guarantee helping behavior, and indeed helping can occur without empathy—for example, taking place as a sole result of formal principles, or because of guilt (Kohn, 1990). In addition, empathy can be employed in frightening ways, in fashioning aggressive and
hostile behaviors, as in anticipation and exploitation of the fears of an enemy. Indeed, the professional terrorist probably has an outstanding empathetic capacity. There are therefore still pieces yet to be added to the picture for exceptional moral creativity.

Moral Reasoning and Sustaining Passion

A relational perspective beckons from beyond altruism.... Altruism—one self helping another without consideration of personal gain—is both realistic and commendable. But a model of relatedness that ripples out concentrically from our loved ones to those we know to everyone else has the potential of creating even sturdier bonds. (Alfie Kohn, The Brighter Side of Human Nature, 1990, p. 266)

Here I suggest that creative persons may not hold a particular advantage. Thus the proper intervention might release enormous potential for moral creativity. First, I look at varied motives for creating, then the characterization of moral response, and finally the development of such response.

Many Motives for Creating. There is no moral qualifying test for creativity, any more than for use of one’s “intelligence.” Motivations have all the complexity of the human being. Results range from life-saving innovations to destructive and catastrophic acts. Simonton (1988), in one study of eminent leadership and morality, found little association between these two characteristics, and in another study found a curvilinear relationship in which the most eminent leaders appeared at one of two extremes, either “saintly” or the “devil incarnate.”

Some creators are focused on personal and individual issues—which they can indeed convey in their universal aspects. Freud (1958) viewed artistic creativity as a means of wish fulfillment through fantasy to resolve unconscious conflict. Maslow (1968) and Rogers (1961) each attempted to distinguish between healthy, self-actualized creating and less healthy efforts.

Some creators find the alternative world they have entered or created preferable to the one they have left. Escape is the goal, not transformation. In the Broadway play, A Chorus Line, a dancer sings about her troubled childhood and how “Everything was beautiful at the ballet... I was pretty—at the ballet.”

There are creators who are troubled by global issues but feel this is not their area of expertise, or their particular priority. In addition, some people may have the expectation that powerful forces or others will somehow solve the problems for them—perhaps a good assumption for a child with a benign and powerful parent, but a potentially dangerous assumption for an adult.

There are other creators who remain unaware of the problems or have blocked them out, so powerless do they feel. This can be particularly serious when scientific work is viewed in isolation from its social consequences. For instance, Theodore Taylor, the weapon scientist, had seen Moscow only as enemy territory, as no more than “a set of lines at various levels of rads and... pressures and calories per square centimeter” that one had to “match” with “the bombs with those numbers,” until he made a personal visit in the mid-80s to Red Square. The experience caused him to give up his weapons work. “It was seeing those happy-looking specific people, going around.... For any human being to contemplate setting off a bomb on top of all this, these people, is insane...” (Lifton & Markusen, 1990, p. 272).}

Indeed, many creative people could be encouraged to greater social responsibility through either an awakening on the informational dimension (regarding occult and
gradual dangers), on the empathy/caring dimension (including enhanced species consciousness), the principled dimension (adding generality that may have been missing), or through empowerment to act (enhancing risk-taking and resilience in the social domain).

Criteria for Moral Awareness. More than one emphasis is possible, and the choice has important consequences. In Kohlberg’s model of moral development, the highest stage involves a conscience or principle orientation with an appeal to logical universality and consistency. Justice or fairness are central in the context of equality, reciprocity, and respect for the dignity of the individual (Gilligan, 1982; Gruber, 1985; Turiel, 1969). Gilligan (1982) challenged this principled conception of individual human rights as more characteristic of male concerns, with the focus on separation and the individual. By contrast, the typical female orientation is more concerned with the relationship and with interpersonal obligations and responsibilities of this association. In noting one research subject’s response, Gilligan (1982) said, “while Kohlberg’s subject worries about people interfering with each other’s rights, this woman worries about ‘the possibility of omission, of your not helping others when you could help them’” (p. 21).

Certainly, though, we all have our androgynous qualities, and creative persons manifest this complexity in particular, rather than staying confined to traditional male or female stereotypes and roles (Richards, 1991a, b). The fullest conception of morality will do well to integrate both emphases. Gruber (1985) noted how human rights for the individual now presuppose as well the continued existence of our species—indeed, the intricate relationship we all bear to each other—and that the highest stage of moral development has been transformed accordingly.

Kohn (1990) stressed the important relationship between justice and caring, between principles and empathy, in prosocial attitudes and behaviors, and the integration of cognitive and affective dimensions which their full joining implies. This joining, I might argue, is also consistent with small-group reciprocity in the original environment of evolution. By contrast, in the Kantian view, which has been influential since the Enlightenment, principles and the individual are primary, along with an incompatibility between desire and duty. According to Kant (in Kohn, 1990, p.257): “(If one acts) only from duty and without any inclination—then for the first time his action has genuine moral worth.”

Yet one without the other can be inadequate and even dangerous. Consider empathic caring alone. It may lead to bias, as in a beloved person receiving repeated heart transplants while anonymous others do not get a chance. With whom does one empathize? Consider resources allocated for expensive celebrations to please the public, while basic food and shelter is denied to the needy. Or gratification of national interest on global issues such as a needed step-up of efforts to limit dangerous chlorofluorocarbons in the upper atmosphere, proposed now that rapid eroding of the ozone layer has appeared in the northern as well as southern hemisphere (Dumanoski, 1992).

Helping a single friend may be a moral act, even if it lacks impartiality and universality. This is an extremely important point because many individuals behave in a highly moral manner on this immediate personal level, yet do not move beyond to more generalized participation (J. H. Herzberg, personal communication, 1991; Kohn, 1990). Reasons may involve lack of training or experience, and a belief in
personal ineffectiveness combined with inability to identify with a consensual response. Thus, by errors of omission (not commission), many opportunities may be lost. (Recall that omission of potential helping behaviors is a greater concern in a relational model of morality.) In a democracy, such silence is particularly unfortunate. Consider a family that makes major sacrifices to help a relative with medical expenses, but takes no stand on the larger issues of affordable health care. Or a family with strong feelings about war toys, or aggression on television, yet makes no statement about the actual nuclear threat that could destroy civilization.

On the other hand, impersonal application of principles without empathic caring can lead to a dangerous pseudomorality. History is replete with conflicts and mass deaths in the name of various ideals, the consequences of which may also be abetted by psychic numbing. The sudden destruction of civilians of all ages, the people of Hiroshima and Nagasaki, stand as incredible testimony to the failure of empathetic caring. The systematic separation and slaughter by the Nazis of six million Jewish adults and children, as part of a deliberate and protracted genocidal campaign, is a reality that exceeds comprehension. Yet it occurred.

One may ask whether the distancing, numbing, dehumanization, and other distortions that allow such atrocities could have persisted in persons whose lifestyles and values merged a personalized and empathetic caring with more abstract universal principles.

Paths to Moral Responsibility. How then can one encourage moral principles and insure that the interpersonal and affective dimensions are embedded within? The best process may take place gradually, as a distillation of experience (Kohn, 1990). As one makes caring responses to many people, one may become increasingly convinced that one ought to help, and may gradually arrive at guidelines for doing so fairly. "Congealed empathy" can emerge by a form of induction. Further, if this model is based in relatedness rather than in self-transcending altruistic motives, and if it can expand outward gradually from these personal relationships to a more abstract relatedness and mutuality, it can mature "beyond altruism." Helping may come increasingly to be viewed not just as aid for the other, the self, or one's group, but for the all-inclusive "us." Increasingly, then, one's "band" can become humanity and the viewpoint part of one's "species self."

Individuals can encourage a child to be socially responsible, first by solid nurturance, to help the child feel secure and good about herself or himself, interpersonally aware, competent and assertive, with a sense of personal power, and a valuing of peaceful and cooperative solutions over aggressive ones. The next steps occur by teaching, modeling, and encouraging an empathetic and socially responsible style of living, with a self-image that incorporates these qualities (Berman, 1991; Kohn, 1990).

Creative development does not guarantee moral behavior, or even help in every respect, but on balance it seems capable of enhancing the underlying capacity for moral behavior, if not always the motivation. If moral responsibility and creative thought are developed together, the potential areas of conflict should be minimized, the consonances elaborated, and the social returns greatly amplified.

Conclusions

We stand at a critical point in human history with the capacity to destroy much of what has come before. Yet in the face of this
crises, we display major areas of blindness, including the inability to see hazardous but slow changes and heretofore unimagined dangers, and to look beyond our delimited reference groups to our species needs. In addition, we erect hurdles of helplessness and psychological defense to avoid even further the discomfort of awareness.

When we finally become alarmed, we may turn with hope to our more creative people, only to find that many of them are already occupied, some with their own personal concerns, and others with endeavors that even exacerbate our global problems.

Creative characteristics may indeed provide an edge regarding a sustained cognitive-affective moral awareness, the courage and confidence to act, and the vision to look outward to issues on a species scale. Yet this capability does not guarantee moral motivation, nor its underlying reasoning or sustaining passion. Not only is moral vision required, but a vision that grows out of individual empathetic concern on an everyday level, to ultimately embrace universal principles. These relational origins insure the greatest moral power, and also help eliminate dangerous distortions that may mask themselves in a pseudomorality.

Ultimately, we are each responsible for our fellow human beings and our planet. We need to attend with haste, as individuals and a society, to our (a) conscious evolution, to remove our blindness to life-threatening dangers; (b) creative development, to provide the mental and emotional power for true and humane citizenship; and (c) development of effective and morally-responsible personal styles that will allow us to carry out our charge. The key lies in the interaction between these three dimensions. Creativity guided by moral responsibility can provide the vision to see beyond our limited world view to more hopeful alternative futures.

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Artists With AIDS Race Time To Preserve Work for All Time

BY RALPH BLUMENTHAL

Working frantically in an East Village studio, 43-year-old artist Mr. Berg is racing the clock to finish cataloging his work before AIDS beats him to the deadline.

"My greatest fear," he said last week as volunteers photographed and videotaped his archive, "is that I'm going to drop dead and my work will just disappear into some basement or be thrown away."

With hundreds of thousands of similar straits, an alliance of arts groups has been advising H.I.V.-positive and AIDS-stricken artists, musicians, dancers and writers how to prepare their estates to preserve their work. This month, the effort, called the Estate Project for Artists with AIDS, underwent a significant expansion with the first awarding of grants for legal services and the documentation of creative work.

"It's no longer possible to have one-stop shopping," said Patrick Moore, a writer and director in Los Angeles, who manages the estate project for the Alliance for the Arts, which devised it in 1991. While the alliance has distributed some 50,000 copies of a planning guide called "Future Safe," the group's president, Randall Bourscheidt, said it had graduated from trying to offer all by itself to awarding $200,000 to 12 specialized programs for free lawyer consultations, artist stipends, the videotaping and photographing of artwork and the choreographic notation of dances, among other grants.

AIDS has taken a particularly visible toll in the cultural world. The estate project cites estimates of the New York City Department of Health that 13 percent of the city's arts world — some 8,500 people — is afflicted. One is Mr. Berg, who struggles to fill the time he has left with new sketches and, to him even more important, the documentation and preservation of thousands of completed drawings, paintings, sculptures and journals that spill from his two homes and his walkup studio on Second Avenue at Sixth Street.

Highly praised for his line drawings and cartoonish figures, Mr. Berg says he uses "an American cartoon vocabulary to play in surrealistic ideas." He has also gained recognition and a comfortable livelihood as a Photo-Realist and apprentice of Charles Bell, who hired Mr. Berg to help execute his mammoth depictions of gum ball machines and pinball games.

Mr. Bell died in April.

"My studio is filled with projects for the future," said Mr. Berg, gaunt and highly charged as he darted among piled-up pictures and file boxes in a black T-shirt with the word "normal" printed upside down. Now, he said, he has to face the fact that his future is the present. "I'm trying to label every photo, every folder," he said. "The pressure of deadline is extreme." Reeling off a list of his symptoms, blood counts and 15 different medications, he said he was in a kind of lull between crises, nine years after the virus was first diagnosed. "I'm just fine until something goes wrong," he said.

Mr. Berg — who gleefully adopted the family nickname Copy after being named Vernon Edward Berg Jr. — holds a place in legal history for his landmark challenge of the Navy's efforts to discharge him dishonorably as a homosexual in 1976. An Annapolis graduate and son of a Navy commander and chaplain, Mr. Berg sued the Navy, helping to win a reversal of the dishonorable discharge policy and then agreeing to leave the service with an undisclosed cash settlement. The money, he said, paid for his graduate education in art. Partly because of the case, and with help from the estate project, the New York Public Library has agreed to take a big chunk of Mr. Berg's hundreds of sketches, journals and photographs for its gay and lesbian archives.

But the fate of the rest, which Mr. Berg numbers in the hundreds of thousands of items scattered through the studio, a lower Fifth Avenue apartment and a house on Long Island, is less certain. His companion, Paul Nash, a writer, died of a brain tumor two years ago. Shortly before his mentor, Mr. Bell, died, a good friend, Henry Geldzahler of the Metropolitan Museum, died.

Mr. Berg has willed his estate to Mr. Nash's mother for sale to raise money for charity, but he would prefer to keep his work intact, he said. "I'm in the dubious position of owning everything I made," he said. "The perfect solution is a gallery, but I don't have the strength to shlep the slides." That, he said, was when he called the estate project. A volunteer photographer, David Taffett, was dispatched to begin recording Mr. Berg's drawings. And another volunteer, David Hirsh, from a group called Visual AIDS, arrived to videotape Mr. Berg showing and explaining his art. With him, in solidarity, came another artist, Frank Moore, whose work is being shown at the

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'Three trying to label every photo, every folder.'

Copy Berg, left, who has AIDS, having his work photographed by David Taffett.

Sara Krulwich/The New York Times
Whitney Biennial and who helped
Mr. Hirsh found the archive project.
"I can't tell you, my anxiety levels just dropped," Mr. Berg said. "If I were to die tomorrow, Visual Aids would finish the job."
Mr. Moore said he was motivated by sad tales like that of a dying sculptor he knew. "He was worried about the disposition of his work," he said. "One day, like a miracle, a dumpster materialized in front of his door. He loaded it all in and went home to his family and died."
And the work? "All lost," Mr. Moore said.
Mr. Berg nodded. His companion, Paul, he said, had burned most of his writings before he died.
It was to deal with the specific problems of stricken artists that the estate project was recently expanded, Mr. Bourscheidt said. The $200,000 in grants went to such groups as the Dance Notation Bureau to record the work of three choreographers for placement in an archive; Downtown Music Productions, Meet the Composer and Positive Music for promotion of instrumental and vocal compositions; Art Matters, for fellowships to photographers, and Volunteer Lawyers for the Arts for free legal assistance and estate planning.
Three grants totaling $25,000 went to the New York Public Library for preserving manuscripts, archives and histories of people in the theater, dance and fine arts. The money was contributed by the New York Community Trust, the Joyce Mertz-Gilmore Foundation, Alliance for the Arts, Chemical Bank, the Heathcote Art Foundation and Time Warner, among others.
Patrick Moore said the estate project was also raising money in Los Angeles through special events at the Creative Artists Agency and the Getty Museum.
"I wanted to spend the time I had left to make art," Mr. Berg said. "Then one day I woke up and found I couldn't any more. I called the Estate Project. It's been a great help. I won't have to distribute it all before I die."
Mind and Mood in Modern Art, II: Depressive Disorders, Spirituality, and Early Deaths in the Abstract Expressionist Artists of the New York School

Joseph J. Schildkraut, M.D., Alissa J. Hirshfeld, A.B., and Jane M. Murphy, Ph.D.

This article documents the high prevalence of mood disorders in a group of 15 of the mid-twentieth-century Abstract Expressionist artists of the New York School. These artists, using the technique of psychic automatism (based on free association) in order to reveal unconscious material, created a psychologically and spiritually significant art that addressed the mythic themes of creation, birth, life, and death. Over 50% of the 15 artists in this group had some form of psychopathology, predominantly mood disorders and preoccupation with death, often compounded by alcohol abuse. At least 40% sought treatment and 20% were hospitalized for psychiatric problems. Two committed suicide; two died in single-vehicle accidents while driving; and two others had fathers who killed themselves. Many of these artists died early deaths, and close to 50% of the group (seven of 15) were dead before the age of 60. The material presented in this article suggests the following formulation and hypothesis. Depression inevitably leads to a turning inward and to the painful reexamination of the purpose of living and the possibility of dying. Thus, by bringing the artist into direct and lonely confrontation with the ultimate existential question, whether to live or to die, depression may have put these artists in touch with the inexplicable mystery that lies at the heart of the "tragic and timeless" art that the Abstract Expressionists aspired to produce.

(Am J Psychiatry 1994; 151:482-488)

A relationship between psychopathology and artistic creativity has been noted throughout history: from ancient Greece with its speculations concerning a link between creativity and madness, to the Renaissance with its idiosyncratic creative personalities, to the Romantic period with its introspective and moody poets and painters, down to the Modern era. Through historical (1, 2), biographical (3-5), psychoanalytic (6, and, most recently, systematic, empirical, diagnostic studies, high rates of psychopathology—particularly mood disorders, often resulting in suicide—have been found in writers and visual artists (8-10).

In their empirical diagnostic studies of contemporary artists and writers, Andreasen and colleagues (8-10) and Jamison (11-16) found high rates of affective disorders, particularly bipolar disorders, among creative writers. Moreover, Jamison (16) found that 38% of visual artists in her study had histories of severe mood swings.

In a previous study, we showed how depression play...
a crucial role in the artistic development of the twentieth-century Spanish artist Joan Miró, and we documented the relationship of Miró's spiritual beliefs and yearnings for transcendence both to his depression and to his art-making (17). Following up on this line of inquiry, we have gone on to explore similar issues in the lives and works of the mid-twentieth-century Abstract Expressionists. Many of whom were strongly influenced by Miró. This article will present a case study of the prevalence of psychopathology, particularly mood disorders, among the Abstract Expressionist artists who, after the end of World War II, effectively shifted the center of gravity of modern Western art from Paris to New York, while establishing themselves among the masters of twentieth-century art. As well as documenting the prevalence of psychopathology found in a group of these artists, we shall consider how their psychopathology may have been related to, or even have contributed to, the pathfinding art that they produced.

Although they have been classified as a school, the Abstract Expressionist artists came from a variety of cultural backgrounds and emerged with divergent styles. Many were immigrants or the sons of immigrants. New York became their common base, and they socialized at the Cedar Bar in Greenwich Village and at organized symposia on art. Many of them, however, worked in isolation outside of New York City. They had rivalries as well as deep loyalties among them. What they had in common was a resolve to develop personal artistic languages, influenced by the abstract visions and techniques of modern European art.

They shared technical ideas, such as painting large-scale and emphasizing their materials as essential elements in the work. But more important was their shared content. All were intent on creating an art with psychological and spiritual significance, addressing mythical themes and confronting the elemental issues of creation, birth, life, and death.

From the surrealists they borrowed the technique of psychic automatism, based on free association, which involved painting without preplanning in order to reveal unconscious material. In both form and content, these artists were strongly influenced by Joan Miró (17), whose 1925 painting, Birth of the World, may be seen as a precursor of abstract expressionism (18). And looking back to the end of the previous century, in Paul Gauguin's masterpiece of 1897, we find an explicit statement of what would become the subject of Abstract Expressionist art: "Where do we come from? What are we? Where are we going?"

METHOD

The criteria for including artists in a group are always somewhat arbitrary. The specific artists we selected for our group are 14 of the 15 Abstract Expressionist painters defined as members of the New York School by Sandler in his seminal work, The Triumph of American Painting: A History of Abstract Expressionism (19). They include William Baziotes, James Brooks, Ashile Gorky, Adolph Gottlieb, Philip Guston, Franz Kline, Willem de Kooning, Robert Motherwell, Barnett Newman, Jackson Pollock, Ad Reinhardt, Mark Rothko, Clyfford Still, and Bradley Walker Tomlin. All of these artists were born between 1899 and 1915. (We have excluded Hans Hofmann from our group because, having been born in 1880, he was a generation older than the other artists and had matured as a painter in Europe before arriving in the United States.) In addition, we have included David Smith (born in 1906), a sculptor closely associated with these painters (20), because his philosophy of art-making was similar to that of the painters in our group, and, after Smith's death, Robert Motherwell identified him as a member of the first generation of Abstract Expressionists (21, p. 194).

We have collected information on these artists from published biographies and from archival material such as letters and diary entries located at the Boston branch of the Archives of American Art, associated with the Smithsonian Institution. Diagnoses were made on the basis of this information following the principles and guidelines of DSM-III-R for mood disorders and alcoholism and Akiskal and Akiskal (22) for the affective temperaments. Since the subjects were not available for direct clinical interviews, however, we did not necessarily have access to specific details of the clinical history and documentation of specific signs and symptoms that are customarily ascertained during a clinical evaluation. In some cases, this limited our capacity to subclassify mood disorders to the extent specified by DSM-III-R. Retrospective diagnoses made on the basis of historical sources, in the absence of direct clinical examinations, are often problematic, and the problems and pitfalls of the historical approach have been discussed extensively by Runyan (23). With the awareness that terms such as "depressed" or "melancholy" may be used metaphorically or in a romantic or nostalgic sense, we have sought to validate reports of "depression" by objective criteria such as suicide attempts, hospitalizations or other forms of treatment, loss of function (occupationally or socially), and other evidence that the person was disabled. Since we have tried to err on the conservative side, it is possible that artists whom we are reporting to have been free of significant psychopathology did, in fact, have such problems even though we have not found their illnesses to have been documented.

In order to compare the mortality experiences of the men in this group with an appropriate reference population, procedures developed by Monson (24) were used. Implemented as a computer program, these procedures use cause-, age-, time-, gender-, and race-specific mortality rates for the United States during the period from 1925 through 1980. The observed number of deaths among the artists is compared to the expected number of deaths based on vital statistics information for the U.S. population as a whole in order to provide a standardized mortality ratio.

RESULTS

A strikingly high prevalence of psychopathology was found in this group. Depression or depressive spectrum disorders—i.e., depressive, hyperthymic, and cyclothymic personalities or temperaments (22)—were predominant. The results are summarized in Table 1. These findings are documented in a series of brief biographical summaries that are available from Dr. Schildkraut as an appendix to this article. Confirmatory data may also be found in a recently published book, The Turning Point, by Kingsley (25).

Four of these artists—Pollock (26-34), Rothko (35-36), Guston (37-39), and Baziotes (40)—suffered from recurrent episodes of depression, in several cases compounded by alcohol abuse. In addition, Gorky, one of the two artists in this group who ended his life by suicide, appears to have had what Akiskal and Akiskal call a depressive temperament with cyclothymic features (H.S. Akiskal and K. Akiskal, personal communication).
Moreover, in his book on Robert Motherwell’s formative years as an artist, Mattison (41, p. 96) writes of Motherwell’s “introspective, often depressed personality” and his lifelong obsession with death. Two other artists in this group, Franz Kline and David Smith, also may have had depressive, hypomanic, or cyclothymic temperaments, although in these instances documentation is less certain.

In addition, Pollock (34, p. 14) and Guston (37, pp. 172, 173, 179) are described by relatives as having experienced swings of depression and elation (often accompanied by heightened productivity). Baziotes (40, pp. 27, 30) and Smith (42) themselves described periods of markedly heightened productivity. While such periods of heightened productivity would be compatible with a hypomanic state, it should be recognized that the productivity of creative furor may not be identical with hypomanic excitement.

At least five of the 15 artists abused alcohol. They include Pollock (26–29, 32), Rothko (36), Kline (21, pp. 212, 219, 240), Guston (37), and de Kooning (21, pp. 213, 221). Others of the group also may have used alcohol excessively (table 1). Elaine de Kooning (an artist who was married for some time to Willem de Kooning) reported that in 1950 “booze flooded the New York art scene” (21, p. 213), and “[t]he whole art world became alcoholic” (37, p. 67). In assessing this phenomenon, one must consider the possibilities of its being a reflection either of the larger social context of that time, which was encouraging of drinking, or perhaps of a romantic identification with one or more heavy drinkers important in the art world.

Six of the 15 artists in this group are known to have received psychiatric treatment. Three were hospitalized for psychiatric problems: Pollock for alcoholism at least twice, once accompanied by depression (29, pp. 57, 67); Guston once for alcoholism and once for depression (37, pp. 136, 172); and Reinhardt for what was termed “anxiety” (the nature of the underlying problem is not clear), which led to his discharge from the U.S. Navy during World War II (43, p. 42). Two—Pollock (30, p. 3) and Rothko (36, pp. 72, 92, 99)—were treated with psychoactive drugs. And at least three—Pollock (29, pp. 58, 63, 221–222), Motherwell (41, p. 178), and de Kooning (21, p. 203)—were treated by psychotherapists; however, recognizing the romance with psychotherapy and psychoanalysis that existed in New York, particularly in the artistic community during the late 1940s and 1950s, in the absence of supporting data, one must be cautious about drawing inferences concerning possible psychopathology from this finding alone.

Two of the artists—Gorky and Rothko—committed suicide. Two others—Pollock and Smith—died in single-vehicle accidents, Pollock while driving under the influence of alcohol and Smith while chasing a sports car in his truck, leading to the speculation that the accidents were suicide equivalents. Two more—Kline (44) and Guston (37, p. 12)—had fathers who killed themselves when their sons were young boys.

As shown in table 2, many of the artists in this group died at an early age, and close to 50% (seven of 15: Gorky, Pollock, Baziotes, Kline, Reinhardt, Tomlir and Smith) were dead before age 60. We compared the observed deaths among this cohort of artists with mortality information about the U.S. population as a whole in order to provide a standardized mortality ratio. The analysis, adjustment for this cohort was made by taking gender, race, and chronological age into account for deaths occurring during a specified time period.

The year of 1945 was selected as the point of entry for this analysis since Ashton (43, p. 9) cited 1945 as the date often given for the identification of a new American painting, and 1945 was also the year which World War II ended and these artists began to gain recognition in the New York art world. In order...
emphasize premature mortality, the findings focus on deaths occurring before the age of 60. The number of deaths before age 60 in the group of Abstract Expressionist artists was seven, whereas the expected number of deaths based on matched population data was 2.3. The resulting standardized mortality ratio of 3.0 indicates that these artists were three times more likely to be dead by this early age than were men of the same ages at the same historical period in the U.S. generally (z=7.42, df=1, p=0.0006). Of the seven deaths before age 60, three were due to suicide or single-vehicle accidents and three were due to heart disease (table 2). In the overall group, the most frequent cause of death was heart disease, followed by suicide combined with accidental death (table 2).

**DISCUSSION**

As documented earlier, the 15 Abstract Expressionist artists in this group showed a high prevalence of depression or depressive spectrum disorders and alcoholism. They tended to die young from suicide and accidents (single-vehicle accidents while driving), as well as from other causes, predominantly heart disease. Six had definite and two had possible diagnoses of depression or depressive spectrum disorders. Five (or more) abused alcohol. At least 40% received psychiatric treatment, and 20% were hospitalized for psychiatric disorders. Two of the artists committed suicide; two died in single-vehicle accidents while driving; and two others had histories of paternal suicides. Seven of the 15 artists were dead before the age of 60.

In a moving recollection of David Smith, Motherwell wrote that “he killed himself in his truck . . . chasing Ken Noland in his English Lotus sports car” and further noted that “we both knew damn well the black abyss in each of us . . . the demons of guilt and depression that largely destroyed in one way or another the abstract expressionist generation” (21, p. 194). Similarly, “premature deaths from myocardial infarction or suicide” (46) were observed in a cohort of prominent mid-twentieth-century American poets with histories of bipolar affective disorders, as described by Simpson (47).

In the light of the findings of the present study, it is of interest that a study of mortality by occupation in England and Wales found that male painters, sculptors, and related creative artists had a significantly greater prevalence of suicide (Register General, 1978, cited by Miller et al. [48]). In their study of white male American artists, Miller et al. (48) also found a greater rate of suicide among painters (12 observed versus seven expected), although this rate did not attain statistical significance. Greater proportions of deaths due to arteriosclerotic heart disease and malignant neoplasms were also observed, and these differences were significant.

The data from the present study of Abstract Expressionist artists are also compatible with the findings from the general population studies of Murphy and colleagues (49, 50), which showed an association between psychopathology, particularly depression, and elevated standardized mortality ratios, with higher rates of accidental deaths and deaths due to disease of the circulatory system, especially heart disease and stroke.

In addition to the two instances of paternal suicides in this group (Guston and Kline), four others in the group (Rothko, Gorky, de Kooning, and Pollock) were separated from their fathers at early ages and never developed close attachments to them. Of note in relation to these findings are the long-term studies of college men that were carried out by Paffenbarger and colleagues (51–53). They found that early loss or absence of the father was a statistically significant precursor of death due to suicide and arteriosclerotic heart disease in later life.

Of the 15 artists in the present study, all but Tomlin married. Ten of these 14 men—Rothko (36, pp. 78–81), Pollock (32), Gorky (54, p. 9; 55), Guston (37, pp. 132–134), Motherwell (36), Smith (57, 58), Kline (59), de Kooning (21, p. 208), Reinhardt (60), and Brooks (61)—had broken, tumultuous, or multiple marriages. With regard to these data, it is of interest that Akiskal and Akiskal (46) have commented on the stormy object relations, as well as the greater prevalence of artistic creativity, that they observed in the subgroup of depressive disorders that they classify as the “soft” bipolar spectrum.

In seeking to understand why so many of these Abstract Expressionist artists, who achieved a place of prominence in the history of modern Western art, suffered from depression or depression spectrum disorders and related manifestations of psychopathology, it is useful to consider some recent commentary on the role of art and the artist in society. Dissanayake (62), in her book What Is Art For?, develops a hypothesis concerning the bioevolutionary significance of art. On the basis of anthropological evidence, she asserts that

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**TABLE 2. Mortality Data on Abstract Expressionist Artists**

<table>
<thead>
<tr>
<th>Artist</th>
<th>Year of Birth</th>
<th>Year of Death</th>
<th>Age at Death (years)</th>
<th>Cause of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arshile Gorky</td>
<td>1904</td>
<td>1948</td>
<td>44</td>
<td>Suicide</td>
</tr>
<tr>
<td>Jackson Pollock</td>
<td>1912</td>
<td>1956</td>
<td>44</td>
<td>Single-vehicle accident</td>
</tr>
<tr>
<td>William Baziotes</td>
<td>1912</td>
<td>1963</td>
<td>50</td>
<td>Lung cancer</td>
</tr>
<tr>
<td>Franz Kline</td>
<td>1910</td>
<td>1962</td>
<td>51</td>
<td>Heart disease</td>
</tr>
<tr>
<td>Ad Reinhardt</td>
<td>1913</td>
<td>1967</td>
<td>53</td>
<td>Heart attack</td>
</tr>
<tr>
<td>Bradley Walker</td>
<td>1899</td>
<td>1953</td>
<td>53</td>
<td>Heart attack</td>
</tr>
<tr>
<td>Tomlin</td>
<td>1906</td>
<td>1965</td>
<td>59</td>
<td>Single-vehicle accident</td>
</tr>
<tr>
<td>Barnett Newman</td>
<td>1905</td>
<td>1970</td>
<td>65</td>
<td>Heart attack</td>
</tr>
<tr>
<td>Mark Rothko</td>
<td>1903</td>
<td>1970</td>
<td>66</td>
<td>Suicide</td>
</tr>
<tr>
<td>Philip Guston</td>
<td>1913</td>
<td>1980</td>
<td>66</td>
<td>Heart attack</td>
</tr>
<tr>
<td>Adolph Gostlieb</td>
<td>1903</td>
<td>1974</td>
<td>70</td>
<td>Stroke</td>
</tr>
<tr>
<td>Clyfford Still</td>
<td>1904</td>
<td>1980</td>
<td>75</td>
<td>Cancer</td>
</tr>
<tr>
<td>Robert Motherwell</td>
<td>1915</td>
<td>1991</td>
<td>76</td>
<td>Heart attack or stroke</td>
</tr>
<tr>
<td>James Brooks</td>
<td>1906</td>
<td>1992</td>
<td>85</td>
<td>Alzheimer's disease</td>
</tr>
<tr>
<td>Willem de Kooning</td>
<td>1904</td>
<td>Living</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*Am J Psychiatry 151:4, April 1994*
the original function of art was to make communal rituals physically and emotionally gratifying, thereby reinforcing selectively valuable behaviors that served to promote group cohesion and reduce anxiety. Although modern Western industrial society lacks a communal belief system and a coherent myth, as well as shared rituals and religious symbols of significance such as existed in the cultures she studied, Dissanayake (62, p. 200) suggests that humankind may continue its biological craving for "socially shared significances" and that art can still provide a path to the sacred and spiritual, even in a profane and fragmented world. During the past two decades there has been a growing interest in the spiritual in modern art (63), and this subject has been extensively documented in two publications (64, 65).

Along these lines, Gablik (66), in her book Has Modernism Failed?, writes that before the rise of the independent artist during the modern era, artists were always thought to have a spiritual, "moral, and social mission." Art, like religion and ritual, "existed primarily to support the social order." The Abstract Expressionists, she notes, were the last generation of modern artists who challenged the secular materialism of society resulting from industrialization, and they were thus among "the last active carrier[s] of spiritual value in a materialist age."

Jung, whose ideas were well known to the Abstract Expressionists (67), also wrote of the artist's role in putting the viewer back in touch with the spiritual forces repressed by the culture and in giving shape to the human yearning for transcendence. The artist, he asserted, "makes it possible for us to find our way back to the deepest springs of life." And he noted: "Therein lies the social significance of art: it is constantly at work educating the spirit of the age, conjuring up the forms in which the age is most lacking" (68). He continued:

Art is a kind of innate drive that seizes a human being and makes him its instrument. The artist ... is a "collective man," a vehicle and moulder of the unconscious psychic life of mankind. That is his office and it is sometimes so heavy a burden that he is fated to sacrifice happiness and everything that makes life worth living for the ordinary human being. (69)

Csikszentmihalyi (70) similarly has stated that the absence of "transforming cultural symbols," which in earlier, more traditional societies enabled the artist both to express and to alleviate existential pain, forces the modern artist to reach into his own psyche "to deal directly with the raw suffering of human existence." One can see "the raw suffering" in Gorky's nostalgic paintings of his mother and of his homeland; in Rothko's black and gray paintings relating to tragedy and death; in Kline's tragic clown paintings; and in Guston's paintings of ropes, reminiscent of his father's hanging, and in his portraits of suffering Holocaust victims. "Raw suffering" can also be seen in the drawings that Pollock produced during his psychotherapy, as well as in his later black poured paintings with their connotations of death and mourning; in Newman's series of paintings, Stations of the Cross: Lema Sabachthani, his meditations on Christ's Passion and man's suffering and death, in which he asks the age-old question, "Why have You forsaken me?"; and in Motherwell's extensive series of paintings, Elegies to the Spanish Republic, his black and white meditations on the inevitability of death in life. Regarding these works, Motherwell noted, "Making an Elegy is like building a temple, an altar, a ritual place . . . I seem to have hit on an 'archetypal' image" (71).

As they explained in their public statements, many of these artists sought to transcend the pain inherent in their tragic subject matter and to create from it an art with spiritual significance. For example, asserting that all art deals with "intimations of mortality" (72, pp. 191-192) and "the fact that a man is born to die" (35, p. 187), Rothko decried the demise of myth in a society in which "the urge for transcendental" experience is no longer granted "official status" (Rothko M: "The Romantics Were Prompted," quoted by Chave [72, p. 185]). When asked about the meaning of his art on one occasion, he replied:

I am interested only in expressing the basic human emotions—tragedy, ecstasy, doom, and so on—and the fact that lots of people break down and cry when confronted with my pictures shows that I communicate with those basic human emotions. The people who weep before my paintings are having the same religious experience I had when I painted them. And if you . . . are moved only by their color relationships, then you miss the point. (73)

Moreover, in a famous letter to a New York Times art critic, Gottlieb and Rothko (in collaboration with Newman) proclaimed:

We assert that the subject [of art] is crucial and only that subject matter is valid which is tragic and timeless. That is why we profess spiritual kinship with primitive and archaic art: (20, pp. 205-207; 36, pp. 18-19)

In his introduction to the catalogue of "The Ideographic Picture" at Betty Parsons Gallery, New York, Jan. 20-Feb. 8, 1947, Barnett Newman had stated that "the basis of an esthetic act is the pure idea . . . that makes contact with mystery—of life, of men, of nature, of the hard, black chaos that is death, or the grayer, softer chaos that is tragedy" (quoted by Sandler [19, p. 187]) Motherwell further explained:

I think that one's art is just one's effort to wed oneself to the universe, to unify oneself through union . . . For make no mistake, abstract art is a form of mysticism . . . that grew up in the historical circumstances that all mysticisms to, from a primary sense of guilt, an abyss, a void between one's lonely self and the world. Abstract art is an effort to close the void that modern men feel. (74)

For some of these artists, the vision of art-making as a spiritual act grew from religious feelings stemming from childhood. Gorky, for example, influenced by his
mother's pre-Christian Armenian hylozoic, pantheistic philosophy, believed that "painting is divine work" (75, p. 287) that can "harmonize sadness with beauty and thus discover life's essential reality" (75, p. 251). Newman, who was raised in a traditional Jewish household, titled his paintings with allusions to Jewish biblical texts (76) and occasionally even worked out dimensions for his canvases according to the Kabbalistic system of numerology (77).

Others of these artists, not religious in a conventional sense, nevertheless created personal systems of meaning and values. Pollock, influenced by Theosophical ideas, felt a mystical connection to nature (29, pp. 77, 115, 160) that he tried to convey in his art. Baziotes believed in the Taoist principle that the function of art is to communicate spiritual insight (78). And even Reinhardt, although he disapproved of organized religion and tried to convince his friend Thomas Merton to leave the monastery (43, p. 9), called painting a ritual process and had religious associations to his black canvases, based on his extensive reading in mystical philosophies. Quoting Meister Eckhardt, he called black "the divine dark" and quoting Lao Tzu, "the dim and dark of Tao" (43, p.172).

Returning to the question of how the high prevalence of depression or depressive spectrum disorders might have related to and possibly even contributed to the pathfinding art of the Abstract Expressionists, we recognize that there are many relevant factors bearing on this relationship that we have not considered in this article. Among them are the possibilities of genetic links between depression and creativity, of the therapeutic effects of art-making, and of occupational hazards such as exposure to potentially toxic substances. Focusing on but one aspect of this complex relationship, however, the material presented in this article suggests the following formulation and hypothesis.

Depression inevitably leads to a turning inward and to the painful reexamination of the purpose of living and the possibility of dying. In our secular age, which lacks mediating communal belief systems and transforming cultural symbols, depression may have been particularly destructive to these artists at a personal level; yet, in instances such as those described in this article, depression in the artist may be of adaptive value to society at large. Thus, in bringing the Abstract Expressionist artists into direct and lonely confrontation with the ultimate existential question, whether to live or to die, depression may have put them in touch with the inexplicable mystery that lies at the very heart of the "tragic and timeless" art that they aspired to produce.

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When Someone You Know Dies of AIDS

Thoughts on Grieving
**Introduction**

This pamphlet is dedicated to helping you better deal with the exceptionally difficult period immediately following a loved one's death. When someone you care about dies you may feel depressed, insecure, frustrated, angry, and even relieved. If the person has died due to an AIDS-related illness, a lack of community understanding about HIV-disease may make it more difficult for you to express your loss. Our goal is to help you through this period. You know yourself best, but you can turn to the advice and insights in this pamphlet as a guide to help you through your time of grief.

Each of us will eventually find his or her own way to deal with the death of a loved one. It may be helpful to remember that you are not alone. Others have walked this path before you, and you can take strength from their experiences.

**Initial Reactions**

When someone you love has died there is an emptiness. There may be anger. There may be confusion. Sometimes, you may try to avoid feeling anything at all. You may feel numb. You may feel guilty.

*Despite what people may think or say, grieving is not “falling apart.”*

It is not unusual for someone who has lost a loved one to feel emotionally overwhelmed. The death of a loved one will affect you deeply. You will feel a strong need to do something about these feelings. For your own well-being, you will need to find places where you feel it's safe to cry, to scream, and even to strike out at loss.

What follows are some practical suggestions, based on the experiences of others, about how to handle grief. The first section has advice for you, the person who has suffered a loss. The middle section offers advice for you and the person(s) supporting you in your time of grieving. The last few pages discuss some of the issues that may arise when someone has died of AIDS.
Grieving is an important part of life. It is the process of expressing strong emotions and reflecting on the past. It is a part of the healing process. If you have never thought about what it means to grieve, now is a good time to start.

(1) Grieving is the process of letting go of that which has been lost.
(2) Grieving allows a person to get past loss and move on to new experiences.
(3) Grieving should not be suppressed.
(4) There are three interwoven processes that characterize grieving:
   • telling the story of the loss.
   • expressing emotions—crying, shaking, sighing, laughing, raging, etc.
   • putting the loss in emotional and/or spiritual perspective.

Despite what people may think or say, grieving is not “falling apart.” On the contrary, it is an essential part of the healing process. The bicycle rule applies here:

        turning in the direction of the fall will enable you to recover your balance.

Crying, for instance, will bring relief and comfort. It will free up your mind to take care of practical matters. Not permitting yourself to cry or express anger can leave you with bitterness and fear. Holding in strong emotions can limit your ability to function well in the necessary activities after the death.
SUPPORTING THE GRIEVING PERSON

Expressing loss is especially difficult when cultural or personal attitudes tell us it is not “okay” to grieve. We can help each other by removing these obstacles. We can try to make our attitudes about our own grieving more positive, and we can signal to others we know that it is “okay” to grieve. Providing a grieving person with the safety to express himself or herself is a key responsibility.

Telling the Story of Loss

A person who has suffered a loss will usually have a strong need to talk. The griever will want to talk to someone with whom they feel safe, someone who does not discourage the outward show of emotion. She or he will want to share a description of the loss. The grieving person may talk about what led up to a loved one’s death and how that death has left him or her with overwhelming feelings of pain, despair, confusion and fright. What happened, how it happened, when it happened, and what role the griever played in the deceased person’s life may all be parts of the story of loss.

Given time, the griever will probably tell many stories about the person who died. The griever may share photographs or keepsakes of that person or may want to visit places they once enjoyed together. Often the memories stirred up by these visits will bring on tears, sobbing and deep sighing. Sometimes the griever will laugh or shake.
Grieving can take months or even years. People who are grieving may need to tell stories of loss over and over again, cleansing themselves of emotional stress by giving their memories a voice.

The grieving person's need to share the loss with another may be just as strong as his or her need to "talk" to the deceased, to voice thoughts or feelings left unspoken when the person was alive. Death almost always leaves some issues unresolved, and "conversations" with the deceased can help the griever "tie up loose ends." This kind of activity does bring on powerful emotions. However, all of this is perfectly normal behavior in the face of death. It is behavior which leads to health.

**What is Usually Helpful:**
- Attentive listening.
- Acknowledging the significance of the loss: "She was a wonderful person," or "You must have loved him very much."
- Inviting the griever to share memories.
- Touching and hugging.

**What is Usually NOT Helpful:**
- Saying that reciting the story will only upset him or her.
- Minimizing the significance of the loss: "It could have been worse," "You'll find someone else," "I know what you're going through," or "It's not as bad as you think it is."
- Insisting that "It's time to get over it."
- Making "helpful" comparisons to your own experiences of grief. This really is seizing the role of the story-teller for your benefit. Usually it is best to wait for another time when it might more appropriately be your turn.
- Maintaining physical distance between yourself and the griever.

Expressing loss is especially difficult when cultural or personal attitudes tell us it is not "okay" to grieve. We can help each other by removing these obstacles.
Expressing Emotions

Telling the story will often cause sobbing and even more demonstrative behavior (slumping in despair, throwing or hitting things in anger, clinging to cherished objects for comfort). Working through the stress of grief by crying, laughing, etc. is not behavior which needs to be suppressed. Emotional release is an essential part of grieving; it needs to be allowed and gently encouraged. Remember that even anger can be channeled positively. As long as the griever is not hurting anyone or anything, the supporter does not have to feel overwhelmed by the griever's strong expressions of emotion and should not try to stop them.

If the supporter does feel threatened by the griever's emotions (and everyone does sometimes), it may be because his or her own "volcano" of unrelieved grief threatens to "erupt" by hearing someone else grieve. When feeling threatened, the supporter might even signal the griever: "Please don't cry, it will make me cry!" But for both the griever and supporter, the best advice is to trust your feelings and "Let it flow."

What is Usually Helpful:
- Letting the emotion flow.
- Hugs, touching, physical contact.
- Asking "What are you thinking?"
- Helping a new griever with practical matters, like cooking and shopping.

What is Usually NOT Helpful:
- Saying anything to discourage the display of emotion: "Big boys don't cry," "Try to get yourself together," "It will be all right," "Have a drink...or a drug (prescribed or otherwise)."
- Physical distance. Back-patting. No need to pound on the griever—it's a way of distracting a person from the actual grieving. Let your touch be steady and firm.
- Nonverbal signs of discomfort: looking away when the griever is trying to express herself or himself.
- Letting the griever become totally absorbed in chores. Although friends are generally relieved to see a new griever "coping so well," a griever's denial of strong emotions blocks the healing process.
Putting death in the perspective of a larger belief system can displace the rigidity, cynicism, and sense of hopelessness that the loss of the loved one may cause.

The griever may be feeling that life cannot go on without the person who has died. But for most people, the process of telling the story and working through painful emotions will in time bring a new and more healthy perspective. Eventually, the death of the loved one can be seen in the context of life's many changes, changes which are very painful but which can be survived.

Those who have worked through previous emotional hardships may be in a better position to adjust to the loss. People who have already come to terms with change, who have embraced both the joys and disappointments of life, will have a basis for seeing the loved one's death as one event—if a searing one—in a natural rhythmic process of gain and loss, birth and death.

Those who have not experienced loss previously may find it harder to come to grips with a loved one's death. The death may present them with an emotional roadblock which seems impassable. But putting death in the perspective of a larger belief system can displace the rigidity, cynicism, and sense of hopelessness that the loss of the loved one may cause.

Neither grievers nor their supporters are without spiritual and/or emotional resources. Almost every world religion and most schools of psychology suggest that our health and personal growth depend on acknowledging the relationship between life and death. They suggest that working through pain rather than avoiding it will lead to a deeper peace. In the end, this idea is consistent with the simple advice put forward earlier—the bicycle rule—turning in the direction of the fall will actually help you recover your balance.

As we grieve our losses, we are likely to find spiritual understandings that will enable us to keep going. By using inner resources to meet the
pain first, we may find unexpected meanings to life beyond the death of a loved one.

We can be most helpful to each other not by promoting our own particular world views but by allowing a griever come to his or her own understandings. Death, however painful, is a teacher. Many of us have bravely battled a loved one's illness with all our physical and emotional resources; but when death finally comes, we need to confront pain anew and listen to the voices of our own sorrow. By listening, we will survive. By fighting through pain, we will live and once again thrive.

WHEN SOMEONE YOU KNOW HAS DIED OF AIDS

Each death is unique, but when a person dies after battling an AIDS-related illness there are often special issues which have to be confronted.

The earliest known transmissions of HIV, the virus that leads to AIDS, in the U.S. occurred through gay male sexual activity and injection drug use. Since both of these behaviors are strongly condemned in our society, a diagnosis of HIV often carries with it a heavy burden of guilt and/or shame. Even when neither of these routes has been the source
of HIV transmission, HIV-infected people can experience the onset of AIDS-related illness as a public humiliation or "guilt by association." Likewise, in situations where an individual's sexual preference or drug use has been "a secret," the AIDS-related illness can lead to the additional problem of unwanted public exposure.

Those who care for people with AIDS and the families of people with AIDS need to be aware of the special dynamics set in motion by this culturally perceived shame. Some of these dynamics are:

**Denial**—A person with AIDS or that person's family may want to lie about the diagnosis or source of illness. "George has cancer!" is a frequently used cover. Death notices are written and funeral services arranged without ever mentioning the "dreaded word," AIDS. When thought to be embarrassing, the cause of death is often denied.

A positive HIV diagnosis can create particular problems for a person whose profession would seem to exempt them from high-risk activities (i.e.—injection drug use, unprotected sex). A number of clergy, for instance, have died of AIDS-related illnesses. In some cases they and their religious institutions have been very open about the cause of those deaths. More frequently however, institutions cover up the cause of death, even when an AIDS diagnosis is generally known.

Denial of HIV infection and/or its possible roots of transmission puts additional stress on the people who are grieving, especially when the griever is a partner already experiencing betrayal or uncertainty about personal health. For example, a gay couple may have enjoyed a long-term, very intimate and supportive relationship but one that has not

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*Denial of HIV infection and/or its possible roots of transmission puts additional stress on the people who are grieving, especially when the griever is a partner already experiencing betrayal or uncertainty about personal health.*
been shared with some family or friends. The onset of HIV-disease can force the non-infected partner either to publicly deny the relationship or awkwardly introduce it to disapproving family and co-workers. The long-time partner may be pushed aside and ignored when the deceased person's family takes over the process of public mourning.

**No one—no one!—deserves to be infected with HIV.** Whatever a person's opinions about homosexuality or injection drug use may be, it is nothing less than cruel to believe or teach that AIDS is a deserved punishment.

**Betrayal and Risk**—HIV can be spread through hetero- or homosexual sex, and all of an HIV-infected person's partners may also be at risk. In monogamous relationships, the HIV-infected person's partner may experience intense feelings of betrayal. For instance, the AIDS-related illness of a married, "straight" man or woman can bring condemnation to the HIV-infected person for both his or her bisexuality and promiscuity (whether or not a same-sexual affair has led to the HIV-infection). A spouse's or partner's experience of betrayal and legitimate fear for his or her own health, as well as concern for any children in the couple's care, make family support for the HIV-infected individual extremely difficult. A positive HIV diagnosis can create a great deal of fear and resentment among an HIV-infected person, his or her partners and their families.

**Final Notes:** People will make varied judgements about homosexuality, injection drug use and their relation to HIV infection. There are no formulas for dealing with all the complex ethical and emotional issues which can arise. There are, however, some touchstones that many people dealing with this disease have come to understand:

(1) **No one—no one!—deserves to be infected with HIV.** Whatever a person's opinions about homosexuality or injection drug use may be, it is nothing less than cruel to believe or teach that AIDS is a deserved punishment. **ALL OF US** have a serious responsibility to modify our
behavior in order to prevent the spread of HIV. HIV-infected people no more "deserve" AIDS than children of past decades attending school together "deserved" polio. Homosexual activity and injection drug use are not the cause of AIDS. HIV has most often been transmitted through male homosexual activity and injection drug use, but neither HIV nor AIDS are their consequence!

(2) Denial of an AIDS-related illness and death usually "solve" some short-term problems of embarrassment, but denial makes the long-term tasks of grieving more difficult. Denial isolates people from mutual understanding and assistance. In effect, denial of this kind says that what some people think is more important than your health, your emotional well-being, and the well-being of others. Denying the cause of an individual's illness and death may prevent someone at risk from getting appropriate medical attention and emotional support. There are enough problems in dealing with HIV-disease without having to deceive your support network.

(3) Even those who disapprove of homosexuality and/or injection drug use would not want to be forced to undergo the public scrutiny and condemnation people with HIV-disease so often face. The primary needs of a person with HIV-disease are for human support and good medical attention. The primary need of those dealing with a death from AIDS is for the safety to grieve their terrible loss. How could any of us offer less to our fellow human beings?
An appropriate panel approved this brochure for general settings. Items approved for general settings may be used in any setting. If you distribute this brochure with CDC HIV-prevention funds, your review panel must approve it.

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Sexual Compulsivity in Gay Men: Controversy and Treatment

LESTER PINCU

Compulsive sex among some gay men has been made a more significant issue by the AIDS epidemic. There is controversy as to whether or not compulsive sex is a disorder or if it should be thought of as addiction. The clinical usefulness of the addictive model is discussed, along with the commonalities between the two most prevalent and successful approaches used to treat this disorder: namely, group treatment and the self-help Twelve Step addictive model.

There has been much written (Bell & Weinberg, 1978; Freedman, 1971; Humphreys, 1970; Weinberg & Williams, 1975) about the phenomenon of anonymous sexual encounters of some gay men, and some attempts have been made to link this behavior with the notion of compulsive or addictive sex. This phenomenon, however, can also be seen in the non-gay environment in heterosexually oriented singles bars on Friday nights. The frantic search in both cases for sexual partnership often results in little more than a succession of one-night stands. Although the bar is similarly the locale of choice for meeting sexual partners among gay men, other more public locales, such as public restrooms (Humphreys, 1970), parks, beaches, bath houses, movie theaters, and highway rest stops, have been described and studied (Bell & Weinberg, 1978). The phenomenon of public sex has been prevalent among a segment of the gay male population.

The adverse public reaction to homosexual sex, both public and private, points to deep-seated cultural homophobia. Weeks (1985) believed that erotically based social interacting of gay men cuts across conventional forms of partnership and that given the perceived threat to conventional norms, it "... is not surprising that the social regulation of homosexuality often took the form of attempts to outlaw its expression altogether, both in public and private" (p. 220). In a society such as ours, where homosexuality itself is perceived as a threat, it is easy to understand why general courting behavior can become difficult and sexuality can become for some a major focus. It may be indeed that the more sexually repressed and/or homophobic a culture is, the stronger is the tendency for persons to engage in anonymous sex as a substitute for denied intimacy. There seems to be a direct relationship between repression and the choice of anonymous sex. In a study of Mexican public gay life, Taylor (1985) described a highly closeted repressed homosexual culture, in which sex in public places is a common phenomenon. In some gay-repressed cultures, public anonymous sex can become so routine as to be quite commonplace and even somewhat ritualized.

Sex in public places is not necessarily synonymous with compulsive sex, but for many persons engaging in public sex, their continued public sexual activity is compulsive. In my clinical experience, I have observed that where same-sex intimacy is not acceptable, narrowly focused fixations can easily emerge. The excitement, which is not unlike that of a child discovering something new or forbidden, is a strong motivating force in the continued search for gratification and temporary self-esteem in the arena of a public location. For these men, the behavior may well become compulsive. There is evidence that there are still gay men who continue to engage in unsafe and what might be termed, compulsive sexual behavior even during the AIDS epidemic (Richwald, Morisky, Kyle, Kristal, Gerger, & Freedland, 1988).

It is, however, in this labeling of compulsive or addictive sex that some recent writers see a grave political danger. Levine and Troiden (1988) emphatically warned that the term sexual addiction or compulsion and the very act of labeling this syndrome as such "threatens the civil liberties of sexually variant peoples" (p. 361). They conclude that there is no such thing as sexual addiction or even sexual compulsivity because, in their view, these constructs rest in a dependence upon a specific chemical substance. Sexual drives do not meet their narrow definition.

Kyle (1988) in a column in Frontiers, a gay Los Angeles newspaper, affirmed the beliefs of Levine and Troiden about this danger and stated that the mere labeling of sexual addiction in this age of AIDS places gay men in danger of being accused of societal criminality "... whose every sexual act is considered a threat not only to themselves but to the society as a whole" (p. 20).

Although Kyle, and Levine and Troiden, may have correctly identified the dangers in connecting homosexuality with a disease model in the public's mind, counselors must also recognize the possible usefulness of the addiction notion in the treatment of clients for whom sexual behavior threatens careers, relationships, and lives. It is clinical and not political or public relations judgments that we must make as counselors. It is specifically in this age of AIDS that we must be concerned with the individual who continues to engage in high-risk behavior, and this compulsivity must be addressed bluntly. Quadland and Shattle (1988) saw this issue as a problem with sexual control. They viewed this behavior as compulsive, driven, and irrational, for they stated "... most rational people do not choose to put their lives in jeopardy simply to satisfy a genital urge" (p. 282).

ELEMENTS OF SEXUAL ADDICTION

The issue of whether dysfunctional sexual behavior is a compulsion, an addiction, or both, or whether these are just stigmatizing labels as Levine and Troiden (1988) asserted, is not merely a theoretical argument. The issue has broad implications for the treatment of this complex problem. Because compulsive sexual behaviors have many of the same clinical characteristics of classical addictive behavior, the addiction model may be able
to provide counselors with a nonjudgmental approach to understanding this phenomenon as well as a useful paradigm for treatment. It also must be noted that the terms compulsion and addiction are currently being used interchangeably by some writers and are being more broadly defined than before.

John Bradshaw (1988) defined compulsive/addictive behavior as "a pathological relationship to any mood-altering experience that has life-damaging consequences" (p. 5). Ann Wilson Schaeff, in her best-selling book *When Society Becomes an Addict* (1987), defined addiction as "any process over which we are powerless... It takes control of us, causing us to do and think things that are inconsistent with our personal values and leading us to become progressively more compulsive and obsessive" (p. 18). Schaeffer (1987) described many dependent love relationships in terms of addictive behavior. For the gay man who is plagued by a seemingly uncontrollable need for continuous sexual activity at the expense of other activities and values, his thought processes are obsessive, his behavior compulsive, and the need exhibits many of the features of a true chemical addiction.

### Anxiety Reduction and Sexualization

Quadland and Shatts (1988) stated that, as with the classical addictions, changing the sexual behavior of the gay men in their study proved to be extremely difficult. These men, they believed, fell into a category of "those who have learned to use sex habitually to reduce anxiety..." (p. 288). This anxiety was not created by purely sexual motivation but "often had to do with low self-esteem, loneliness, and isolation" (p. 288). The pain of loneliness, accompanied by hiding one's sexual identity, exacerbates the isolation and exaggerates the sexual expression to reduce the pressure. Intimacy is difficult at best in this setting. They likened the pattern of lack of sexual control to be similar to the dynamics of overeating. Both food and sex are important aspects of most people's lives, but when either is used to sublimate other needs (such as intimacy), the perception of the need becomes distorted and the patterns of gratification become fixed, reinforced, and compulsive. When sex is sublimated in this way, the result is dysfunctional behavior, which was identified and termed sexualization more than two decades ago by Putney and Putney (1964). They defined sexualization as "the tendency to regard as sexual desire needs which are actually nonsexual in nature..." (p. 85). They continued by stating that the ensuing behavior is not likely to fulfill the other needs motivating the individual, and, in fact, it is those very needs from which a person is deprived that are likely to become sexualized.

Bradshaw (1988) stated that the issue of sexual compulsion is not about being "horny" but about "mood alteration" (p. 97). He believed that sex, in this case, distracts or alters feelings so that a person does not have to feel loneliness or the emptiness of abandonment. For gay people, the fear is often too real because coming out of the closet might very well mean the real abandonment by family, friends, and employers. With this overlay of fear, the sexualization of the anxiety and the flight from intimacy, the sexual pattern produces at least partial relief. This anxiety-reducing mechanism, be it by chemical or sexual means, is a main component of the addictive process. This process consists of the fix, seeking excitement, increase in tolerance, feelings of withdrawal, and loss of control coupled with denial.

### The Fix

As the sexualization of anxiety progresses, intimacy and relationships become subservient to the very physical act of sexual expression. Schaeff (1987), in identifying this as an addictive process, stated that "more and more people seem to be using sex as a means of relating but as a way of getting a fix" (p. 20). The fix for the sexually compulsive is the calming effect of the anxiety reduction component. This can be likened to the sedative effect of traditional addictive substances. As with any "fix," however, the effects are transient. In the case of sexual addiction, the anxiety reduction component is temporary at best but just satisfying enough to allow a pattern to become embedded. The pattern of the sexually compulsive gay man, who after the bar closes goes to an adult bookstore, a park, and then cruises around in his car, is not at all an uncommon one. I, as a clinician, have observed this pattern and its many variations.

The sexual situations and even the orgasmic release produce just enough reinforcement to keep the system churning. It has not been uncommon for a gay man to report in counseling that he was still feeling "horny" even after leaving a bathhouse where he had experienced several orgasms. It seems almost superfluous to say that in helping the gay man, as with overeating and gambling, the main therapeutic issues for the counselor becomes those of indifference and control.

The behavior just described is behavior that is now out of control. The sexually compulsive gay man, tired from the chase, is repulsed by the treadmill on which he finds himself, afraid that he is risking losing his job, friends, and lover, makes all kinds of promises to himself and others, only to break them the next subsequent nights. The risks of this sexual compulsivity are great. The possible loss of health, the threat of arrest, and the lowering of self-esteem are all prices the sexually compulsive individual must pay.

### The Excitement

This price of compulsive sex may not always be perceived steep by the client. Some researchers believe that it is the challenge of eluding arrest and the fear and the risks involved in the sexual exploits that energize, excite, and reinforce the behavior itself (Hoffman, 1968). Excitement is another important element in the addiction equation. The excitement of the chase produces a high that allows the sexually compulsive man to lose himself in the event of cruising, with the resultant release of inhibitions that is not unlike the process that occurs with other traditional addictive substances. The chase, not the prey, is what is appealing. Cruising alone often reinforces itself. Many of these men report a rush, a quickening heartbeat, a nervousness, and an exhilaration when in the midst of the sexual chase. Nakken (1988) noted this same effect in compulsive gamblers:

Addictive gamblers are not chasing the win. If the win was [sic] important, gamblers would stop when they won. They are chasing the action, the excitement, the moment, and eventually they chase the losing, for this allows them a reason to chase again. (p. 15)

Nakken believes that “Emotionally, addicts get intensity, intimacy mixed up” (p. 15). For the sexually compulsive man, the excitement of the chase becomes the additional primary reinforcer. It is this excitement that provides the “losing of self” and the escape from feelings that seems to be the base cause of the anxiety.
the base of this addictive behavior. For many, this overindulgence and lack of control eventually become troublesome, disruptive, and dysfunctional.

Tolerance, Withdrawal, and Lack of Control

The nature of the uncontrollable behavior and its effects have striking similarities to chemical addiction. When an individual is addicted to a chemical substance, a vicious cycle begins. The addict needs increasing amounts of the substance just to maintain equilibrium. Withdrawal produces painful effects and pressures the addict to continue taking the substance. Values and life-styles change to allow adaptation for the drug’s grip. For the sexually compulsive gay man, the same process seems to occur. More and more of the addictive agent (in this case, sexual exploits) is needed just to maintain equilibrium and function. The world becomes focused and centered on obtaining the addictive agent and maintaining a steady supply. Sexual activities become the primary focus of life. Other interests, ambitions, goals, and aspirations all take on secondary importance to the addiction. Values, ethics, and standards all become channeled through the clouded thinking of a pressing drive. For these men, the primary counseling objective centers on putting the client back in control of his life.

Putting the client back in control of his life becomes all the more difficult because of a seemingly unbreakable cycle that emerges. Not being in control but under the influence of this (or any other) addictive entity is ego-deflating. This assault on self-esteem leads to a vicious cycle, in which the lowered self-esteem produces anxiety. This anxiety then becomes sexualized, leading to a partial reduction in the anxiety by further compulsive sexual acts. This produces deflation of self-esteem, and so on, ad infinitum.

Denial and the Loss of Control

As with chemical addiction, the denial of the problem must first be addressed. Denial is the first and perhaps most difficult barrier to recovery (Nakken, 1988): All the traditional defenses of repression, rationalizing, minimizing, and intellectualizing are used by the compulsive individual to avoid admitting that there is a problem and that his life is out of control. In a clinical setting with a sexually compulsive gay man, this denial is filled with both excuses and promises. One often hears such things as the following: He only got arrested because he was careless; he wouldn’t have to seek out sex in bookstores if the bars were better or if the town had a better choice of men; if his lover “understood” him better, he wouldn’t be feeling so needy . . . “Next” time he will learn how to avoid arrest . . . The excuses and explanations are all very similar to the self-delusion seen by clinicians in dealing with chemical dependency. All are designed to rationalize the behavior and keep the magnitude of the problem repressed by the client.

As with chemical dependency, the problem becomes obvious to other people before it is readily admitted by the sufferer. As with chemical addiction, recognition usually comes when the individual has “reached his bottom.” In the case of sexual compulsions, this may take the form of an arrest (or close call), an illness, the loss of a job, or the loss of a lover or friends. Whatever the catalyst, recognition does not come easily nor without pain. There is a strong need to shield from conscious awareness the unacceptable truths that make up the distorted reality. The harmful consequences, the extent of the problem, the inappropriateness of behavior—all are hidden from ready view by the mechanism of denial.

Addictive Treatment Models

In dealing with the sexually compulsive gay male client, clinicians are treating some of the same phenomenon that surface when treating chemical dependency and addiction. There is disappointingly little in the literature to guide the counselor in this area.

What counselors working with chemical addictions have discovered is that traditional therapeutic approaches alone have not been very effective. Working just with the deep-seated frustrations, anxieties, and unfinished childhood issues will be in vain unless the behavior becomes the primary focus in therapy. Quadland (1983, 1987), who took a therapeutic group approach to compulsive sex, and Carnes (1983), who advocated the addictive model of the Twelve Step self-help groups, both concentrate primarily on a behaviorally oriented group approach to the problem.

Therapeutic groups. Quadland and Shattls (1987) advocated treatment in a group setting. The groups were specifically designed to allow the gay male client to gain control over his sexual behavior and “. . . not to conform to any arbitrarily imposed standard of frequency” (p. 289). The definition as to what behavior and how often were left to the client to decide. It was the client’s perception of lack of control that set the individual goal for each client. This perception, stated as a behavioral goal, became the therapeutic contract.

Mere recognition of a problem. Quadland and Shattls (1987) stated, did not automatically lead to change even when the client viewed the changes as desirable and necessary. Because they believed the gay man’s compulsive sexual behavior had been learned and reinforced, they argued that the conduct, and habits associated with it, needed to be unlearned. They saw this behavior as directly connected to “the avoidance of anxiety associated with feelings of loneliness, low self-esteem, problems with intimacy and closeness, and internalized homophobia” (p. 283), and it was these feelings that these groups worked to ultimately undo.

Quadland and Shattls (1987) reported that the groups took a twofold approach. First, the group explored the feelings, fantasies, and internal motivations that are related to the sexual behavior. Issues such as competence, attractiveness, and self-image were also examined and challenged both by the therapist as well as by other group members. The goal here was to increase understanding of the behavior and promote a decision-making process regarding sexuality that was more rational.

Second, and perhaps more important, there was a primary focus on the sexual behavior itself. A group norm pressing for behavioral change emerged almost at once. Decisions for a change in sexual behavior were encouraged whether or not the client understood the reasons for his own behavior. Specific questions relating to each client’s sexual activity, its frequency, the objective, the rewards, and the sexual cues were all common items discussed freely in the groups. Goals were set and therapeutic contracts were made by individuals with the group, which involved reducing, eliminating, or changing old sexual behaviors. New positive behavior was encouraged, attempted, and supported. It was from these behavioral changes that feelings and self-image changes occurred. It seems that it was the existence of group norms and the peer support that encouraged and reinforced the positive behavioral changes. In-
Pincu gram the type together is willingness that sufferer confrontation like believed a approaches group. For openness persons resistance problems. It be taken in adjustment the Twelve of the Twelve Step powerlessness. The compulsive model toward one. The therapeutic model is for the the steps are a method for accomplishing several purposes. First, they help the individual accept the addiction as unmanageable. Second, they help acknowledge the shame and guilt involved in the addiction. Third, they emphasize a willingness toward acceptance of change. Finally, they take the sufferer from shame to guilt to reparations and respectability. It is within the group, the newly found family, that self-confrontation can take place, and that support, understanding, and nurturing necessary for change can be achieved.

For treatment to be successful, issues of loneliness, intimacy, and honesty, however, must be managed. Carnes (1983) believed that these issues can be successfully addressed within a group model. Carnes stated the following:

Recovery from addiction is the reversal of the alienation that is integral to the addiction. Addicts must establish roots in a caring community... With help, addicts can integrate new beliefs and discard dysfunctional thinking. (p. 19)

CONCLUSION

Whether or not one accepts the conclusion that compulsive sexual behavior is an addiction, the addictive model itself seems to be a useful one. The model provides the counselor with a treatment approach that is specific and pragmatic. It provides a framework for conceptualizing the disorder that is understandable and concrete and nonjudgmental. The two approaches—therapeutic groups and Twelve Step programs—use this model.

Both approaches have a common theme. In both cases, the emphasis on the behavior and the need for changing that behavior is primary. Both approaches use a group approach, provide a solid support system, which includes honesty and openness about the problem, identification with a group of persons experiencing similar difficulties, confrontation of the resistance to change, and specific encouragement from the group toward behavioral change. The differences between these two seemingly different approaches seem more theoretical than concrete in practice.

As bonding occurs within the group, strong relationships are formed and the anxiety that has been sexualized gets reduced. In addition to this, reduced motivation, there is also group pressure to reduce the acting-out behavior. As the compulsive behavior outside the group diminishes, the potential for personal relationships to improve increases. Sexual compulsivity no longer blocks more satisfying interactions.

The central therapeutic issue for the counselor must always be how to treat the client, how to reduce the client’s pain, how to reduce or eliminate the undesirable behavior, and how to put the client back in control of his own life.

Compulsive sexual behavior and sexual addictions can be successfully addressed by obtaining the client’s commitment to change, which usually follows the client’s exhaustion of self-remedies. In the case of the sexually compulsive gay man, the primary issue that brought the client into treatment, the therapeutic contract, the focus of the therapy, and finally the criteria for success all must center on the dysfunctional compulsive sexual behavior. Feelings, insights, revelations, and fear must be dealt with, but always as they relate to the primary nucleus of the compulsion.

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A Pilot Study of Sexual Communication and Negotiation Among Young African American Women: Implications for HIV Prevention

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Recent epidemiological studies indicate that African American female adolescents are at a markedly higher risk for diagnoses with human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) than their White female counterparts. Although epidemiologic data are informative with respect to monitoring the course of the epidemic and quantifying the differential risk for AIDS/HIV infection among young African American women in relation to other populations, they provide less insight into the influence of the diverse cultural, gender, and psychosocial determinants of HIV-associated risk behaviors. A factor of particular importance is communication between sexual partners about condom use. Focus groups were conducted with African American women aged 18 to 25, to explore the process of sexual communication and barriers toward sexual negotiation of condom use. HIV prevention programs tailored to African American women should emphasize training in sexual negotiation, conflict resolution, and refusal skills.

The incidence of human immunodeficiency virus (HIV) infection in women is growing at a proportionately faster rate than in any other population (Mays & Cochran, 1988). Moreover, African American women diagnosed with acquired immunodeficiency syndrome (AIDS) are disproportionately overrepresented among female AIDS cases. National surveillance data report that as of October 1992, there were 13,711 cases of AIDS among African American women accounting for 52.8% of the total number of AIDS cases among women (Centers for Disease Control [CDC], 1992). The cumulative incidence of AIDS among African American women is 12 times higher than among White women (Bakeman et al., 1987). Similarly, African American female adolescents between the ages of 13 and 19 have a cumulative incidence of AIDS approximately 11 times greater than same-age White females (DiClemente, in press). Although epidemiologic data are informative with respect to monitoring the course of the epidemic and quantifying the differential risk of AIDS/HIV infection among young African American women in relation to other ethnic-minority groups, they provide less insight into the influence of pervasive cultural, gender-specific, and psychosocial factors that exert considerable influence and are perhaps the major determinants of HIV-associated risk behaviors (Wingood & DiClemente, 1992).

To reduce the risk of AIDS among African American women, maximally effective behavioral interventions must be culturally specific and tailored to the particular needs of at-risk African American women (Schinke, Botvin, Orlandi, Schilling, & Gordon, 1990). Generally, AIDS prevention programs tailored to this population have failed to account for the myriad of sociocultural influences pervasive in the African American community. These programs have ignored the sexual politics and social inequalities that often exist in heterosexual relationships and serve as barriers to the adoption and maintenance of HIV-preventive behaviors. More specifically, AIDS prevention programs have failed to address the process by which ethnic-minority men and women initiate communication about condom use, how such dialogues are constructed, and the effectiveness of these negotiation processes.

Understanding communication processes in ethnic-minority relationships is particularly crucial given that several studies have reported that disenfranchised ethnic-minority women, the group at highest risk for HIV infection resulting from heterosexual contact, may be the least capable of negotiating safer sexual practices with their male partners (Worth, 1990). Although it might seem that the inability of an African American woman to “just say no” in a high-risk situation contributes to the maintenance of the imbalance in heterosexual relationships, this female powerlessness is best understood in

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the larger context of change in the African American community (Fullilove, Fullilove, Bowser, Haynes, & Gross, 1990). Factors contributing to power imbalances between African American men and women include (a) the traditional gender power roles that reinforce male dominance and female submissiveness, (b) the weak sociopolitical networks of African Americans (De La Cancela, 1989), (c) the psychological and economic dependence of African American females on the male partner (Worth, 1990), (d) the lack of eligible African American males relative to the number of single African American females (Mays & Cochran, 1988), and (e) the threat of sexual abuse to African American women (Wyatt, 1985).

The aim of the present study is to explore the process of sexual communication and barriers toward effective sexual negotiation. This study used focus groups as a preliminary method in the development of a subsequent study. A subsequent study would design, implement, and evaluate an AIDS behavioral intervention program for young African American women. The qualitative nature of the present study will allow one to develop a structured research interview and develop more intuitive research hypotheses for the subsequent study. Additionally, the focus groups encouraged the generation of candid and spontaneous responses regarding sexual communication and negotiation from this community of African American women. Given the dearth of information about sexual communication processes between young African American men and women, the present study is an attempt to identify factors that impede effective communication and, ultimately, the use of condoms during sexual intercourse. Examining the factors that influence the communication process within the heterosexual dyad will lead to the development of more efficacious AIDS/HIV risk reduction interventions for young African American women.

**METHOD**

The study was conducted at the Bayview-Hunter’s Point Foundation, located in the Bayview-Hunter’s Point section of San Francisco. The Bayview-Hunter’s Point area is a predominantly African American community that is economically impoverished and geographically isolated from the rest of the city. The Bayview-Hunter’s Point Foundation is the largest African American community-based organization in the Bay Area and an integral provider of health and social services.

**SAMPLING PROCEDURE**

Recruitment criteria for the study included being an African American female, 18 to 25 years of age, residing in Bayview-Hunter’s Point, and providing written informed consent to participate in the study. Individuals who acknowledged injection drug use, crack cocaine use, or methadone use within the past year were not eligible for participation. These criteria were selected so that the results of the study could be generalizable to non-drug-using young African American females at risk for HIV infection due to their sexual risk behaviors.

The sample was a convenience sample of 18 of these participants recruited by street outreach recruitment strategies. A young-adult African American female outreach worker, knowledgeable about the Bayview-Hunter’s Point community, went into the low-income housing developments of Bayview-Hunter’s Point to recruit the participants. Although street outreach recruitment strategies do not produce a random sample, this strategy allows us to target subjects who are most likely to be representative of young women at risk for HIV infection as a result of their sexual practices. Women residing in Bayview-Hunter’s Point low-income housing developments were approached and asked if they would be willing to participate in a group discussion on sexuality and AIDS with other African American young adult women. They were informed that free child care would be available and that they would be compensated $20 for their participation.

**SUBJECTS**

The final sample consisted of 18 African American females, 18 to 25 years of age. The participants were characterized as follows: Their mean age was 21 years; they had an average of one child; 100% of the women were single; 75% of the women were unemployed; aid to families with dependent children (AFDC) was their principal source of income; 20% of the women lived with the partners; and the mean length of involvement in a heterosexual relationship was 10 months. More specifically, 3 women were involved in a relationship for longer than 2 years; 10 women had been involved in a relationship longer than 10 months but less than 2 years; 3 women were involved in a relationship for less than 10 months; and 2 women were not involved in relationships. All but 1 woman asked to participate became participants in the study. One individual refused to participate due to a lack of interest in the topic of sexuality and AIDS prevention.
INTERVIEW PROTOCOL

Discussion guides were used to facilitate group discussions. Discussion guides contained 20 questions that provided a structured format for asking questions and standardized detailed probes as follow-ups to questions. The protocol provided direction for discussion; however, the moderators asked questions relevant to the protocol that naturally flowed from the group discussions. The guide covered the following 10 categories: relationship status, degree of comfort in discussing sex with their male partners, attitudes toward birth control, comfort in using condoms, knowledge about AIDS risk reduction, importance of engaging in safer sex practices, ability to initiate a discussion about condoms, degree of control in the sexual relationship, potential repercussions of insisting on safer sex practices, and threats resulting from initiating a discussion about safer sex.

PROCEDURES

The present study used focus groups to gain a greater understanding of the communication process by which these women initiate communication about safer sex and negotiate condom use with their regular and casual partners. A focus group is a data collection strategy that generates qualitative information pertaining to individuals' feelings and opinions (Basch, 1987). This qualitative research technique has been widely used in health research, particularly with respect to the planning, development, and evaluation of health education programs. Although the data derived from focus group studies have limited application for testing hypotheses, they can be informative for generating hypotheses.

Focus groups were held at the Bayview-Hunter's Point Foundation. All participants were informed about the nature of the group discussions and gave written informed consent to participate in the group, which was audiotaped and subsequently transcribed. Two focus groups were conducted with nine African American women participating in each of the structured group discussions. Each focus group discussion was 90 minutes in length. The focus groups were conducted by two moderators experienced in focus group leadership techniques. Both moderators were young African American women. One moderator led the group discussion while the other moderator monitored the tape recorder and took notes on the participants' responses. The participants were asked to respond to the questions individually and to interact with one another.

DATA ANALYSIS

Over 40 pages of typed verbatim transcripts were obtained from audiotapes of the focus group discussions. The different speakers were identified in all transcripts by first name. Using the 10 categories generated from the interview protocol, the moderators first identified a list of 30 key content areas that emerged from each of these categories. The moderators then examined these content areas for common themes. The content areas were then clustered into six specific domains. These domains include sexual communication, sexual negotiation, trust within a relationship, conflict avoidance, attitudes toward using condoms, sexual self-efficacy, and gender-based power differences.

RESULTS

WOMEN'S ABILITY TO SEXUALLY COMMUNICATE

The term sexual communication has numerous parameters lending to a definition that is dependent on the behavior of communicating about sex to one's sexual partner and on the process of conceptualizing this sexual decision. How a woman relays her intention to communicate about sex, when she initiates such a discussion, and why she decides to initiate these discussions are some of the parameters that account for the challenge of sexual communication. In this article, sexual communication will be defined as the process of initiating a discussion revealing one's intention to engage in safer sex.

Most (n = 13) of the young women in the study reported the ability to initiate a discussion on safer sex with their sexual partner. The ability to initiate a discussion about using condoms had a strong inverse relationship to the length of the heterosexual relationship. Women who were beginning a sexual relationship or having sexual encounters with a casual partner were much more likely to initiate a discussion on safer sex than women involved in long-term relationships. The women unanimously reported that self-protection was the underlying motivation for communicating about safer sex with new, casual, or primary partners. Although the motivation for safer-sex communication was identical for all women, the approach to asking their sexual partners to use a condom differed markedly. Women broached this sensitive topic using a variety of strategies. Most of the participants asked
their partners in a nonassertive manner to use condoms. Several women were more assertive in requesting their use and, a small number demanded that if condoms were not used they would abstain from having sex. The manner by which women initiated communication about safer sex was illustrated by numerous statements. Several women mentioned the need to protect themselves from becoming HIV infected and the desire not to become pregnant as a reason for suggesting condom use, as in the following example:

I’m very scared about what’s going around and AIDS and I do not want to get pregnant and I do not want to be in that group so can you please put a condom on.

Other women were more assertive with regard to requesting that their partner use a condom. One woman described how she approached this topic:

All I would do is take it to him . . . and say if you can’t use it you can’t lay up with me.

The preponderance of women initiating a discussion concerning safer sex fails to support the evidence of the presumed powerlessness of young African American women. However, the small number of women negotiating condom use may be related to gender-based power differences and conformity to traditional gender roles.

SEXUAL NEGOTIATION

Although sexual communication focuses on the women’s competence to initiate a discussion concerning safer sex, sexual negotiation focuses on the women’s competence to actively negotiate condom use. Sexual negotiation is the process of bargaining for safer sex in light of the social cost of such negotiations. Therefore, the decision to negotiate condom use is based on the women’s perceptions of the costs and benefits to a particular relationship and the relationship’s role in the woman’s economic, social, and physical survival and goals (Worth, 1990).

Although the majority of the women reported that they were able to initiate a discussion regarding safer sex with their sex partners, only a minority of women \( n = 4 \) reported that they were able to negotiate condom use. This degree of assertiveness and bargaining concerning safer sex highlights the distinction, often overlooked, between sexual communication and sexual negotiation.

BARRIERS TO SEXUAL NEGOTIATION

CHALLENGING THE TRUST WITHIN A RELATIONSHIP

The major barrier to sexual negotiation within a long-term relationship appeared to be that any negotiation about using condoms would undermine the trust between the partners. As one participant stated:

If I told my man to use a rubber, he’d go flying all up in the air . . . I ain’t been telling him to use no rubber. Why I want to use one now? What I been doing? Like what am I doing?

Similarly, another participant described her partner’s negative response to her request that condoms be used:

You got something you don’t want me to catch?

This sentiment was reflective of the attitude of most of the women. Thus, by negotiating with their male partners, women raise the possibility that they have been unfaithful and, therefore, engender feelings of distrust in their partners. Negotiating about safer sex may also create feelings of distrust in the woman. The male partner may presume that this request for safer sex is in response to the female partner’s perception of his infidelity. One woman indicated how her perceived distrust prevented her from negotiating about condom use.

It’s like they feel you’re at an understanding where. Why do we have the need to [put on a condom], or something like that, they’re stuck on. Why should we [put on a condom], then they go ego tripping or something, and think you don’t trust them.

CONFLICT AVOIDANCE

Closely related to the issue of trust was the issue of conflict avoidance. The inability to avoid a dispute regarding condom use emerged as a consistent theme regarding why many women do not negotiate with their partners. Conflicts concerning the initiation of condom use resulted when the subject had not previously been introduced into the relationship, if the male partner felt there was no reason to use a condom, or if he suspected his female partner of being unfaithful. The following passage illustrates how difficult it is to avoid a dispute when introducing the topic of condom use:
felt that they lacked the skills to enter into negotiation about safer-sex practices. Several other women felt that they lacked confidence in their partner's ability to properly use condoms. One woman suggested the following to increase a woman's condom use skills:

Yeah, women should come to one of these sessions and learn something educational, like I don't think girls want to ask them [men] cause I don't think they know how to put them [condoms] on right.

GENDER-BASED POWER DIFFERENCES

The negotiation of safer sexual practices occurs in a social context in which there are gender-based power differences (Holland, Ramazanoglu, Scott, Sharpe, & Thompson, 1990). In the present study, most of the women did not perceive themselves as having the power to make their partner wear a condom. For example, when women were asked who has more control over whether or not condoms are used, over 90% (n = 16) responded that the male partner has more control. Women who did feel comfortable exercising their power, either possessed well-developed sexual negotiation skills or greater sexual self-efficacy. This small cohort of women felt more comfortable insisting on condom use or abstaining from sex rather than engaging in unsafe sex. Conversely, the majority of women who were either fearful of exercising their power or ineffective in resisting their male partner's power were more likely to engage in unsafe sex. One woman endured threats of abuse while trying to negotiate condom use. This woman's partner responded in the following manner when she tried to negotiate condom use:

B----, I'll beat your a----! Don't do me like that [don't ask me to wear a condom].

Another woman expressed fear about negotiating safer sex. She informed us of her predicament:

I never have [asked my partner to use a condom]. I'm scared to tell him to use one, he ain't been using no condom . . . , you don't know my man, honey.

DISCUSSION

Although this study allows us to qualitatively differentiate sexual communication and sexual negotiation and explore the numerous barriers to negotiating safer sex, its findings are preliminary. First, this study does not allow us to infer that there is a causal relationship between negotiating safer
sex and using condoms. Additionally, the sampling design of this study, including the small sample size and the nonrandom recruitment strategy significantly limits our ability to generalize to other female populations. In the present study, because the participants were young women, their views and experiences may be quite different from those of young adolescents or older women. Moreover, these women were recruited from low-income housing developments in a disenfranchised area of San Francisco and will therefore not be generalizable to all African American young women who are at risk for HIV infection due to their sexual behaviors. Furthermore, due to the reticence of discussing sexual behaviors and sexual feelings in group settings, the participants may have offered more socially desirable responses. In light of these limitations, the study does offer important insights for program planning and allows us to generate numerous research issues.

Although communicating about condom use is a preliminary step in conveying personal attitudes and expectations regarding condom use, developing skills in negotiating condom use may increase the likelihood of actually engaging in safer sex. This finding has been replicated in other studies examining sexual decision making among ethnic-minority women (Fullilove et al., 1990; Worth, 1990). Future research examining the relationship between sexual negotiation and condom use should be aimed at (a) understanding the role of the power dynamics between African American men and women in negotiating condom use, (b) determining the nature of sexual negotiations among African American women and men, (c) determining the predictors of successful sexual negotiation among these populations, and (d) identifying the factors driving the temporal relationship between sexual negotiation and condom use. In summary, future research will need to consider how information on HIV/AIDS education and HIV prevention management skills, including sexual negotiation, are integrated and applied in actual risk-taking contexts. We must address what negotiating condom use means for ethnic minority women who possess a personalized set of passions, frustrations, and anxieties regarding sexuality and safer sex. The personal meaning that women attach to negotiating condom use may in fact motivate them to engage or not engage in safer sex. Although findings from these studies have generated numerous research issues, they also offer us suggestions for HIV prevention programs tailored to young African American women.

IMPLICATIONS FOR PREVENTION

The results from this study also have significant implications for the design and implementation of HIV prevention programs. HIV prevention programs tailored to young African American women should emphasize skills that women can use to effectively communicate with their partner about their unwillingness to engage in unsafe sexual behaviors (Fullilove et al., 1990; Guinan, 1992). A recent HIV risk reduction study employed social and behavioral skills training techniques to teach assertiveness strategies to college students (Franzini, Sideman, Dexter, & Elder, 1990). Subjects who received training in assertiveness strategies had higher overall assertiveness scores related to requesting a partner to use a condom than did subjects in a control group. Moreover, during simulation exercises, students who received assertiveness training were significantly more likely to resist high-risk sexual overtures and insist on condom use. Thus the inclusion of assertiveness training in a multifaceted HIV intervention strategy may enhance sexual bargaining skills and lead to the development of competency in resisting unsafe sex practices. Although HIV/AIDS behavioral interventions tailored to young African American women should incorporate skills to increase the subjects’ ability to communicate and negotiate safer sex, maximally effective programs should include several key components.

First, HIV prevention programs tailored to young women should use peer educators. HIV social skills may be enhanced if peer educators are used in teaching sexual negotiation skills. Based in developmental and social cognitive theory, peer-directed educational interventions typically recruit and train peers indigenous to a target population to serve as paraprofessionals (DiClemente, 1993). Peer educators serve to empower others to take responsibility for, and control of, their behavior. Additionally, they serve as positive role models, an important issue particularly when training young adult African American women whose social environment may support risk behaviors.

Second, subjects should be informed of the differences between assertive behavior, aggressive behavior, and nonassertive behavior. Being assertive is being able to express oneself in a manner that informs someone of how you feel or what you want. Assertive behavior is not threatening or demeaning. Conversely, aggressive individuals express themselves in a way that is threatening, punishing, and demanding. Nonassertive individuals fail to express their needs. HIV prevention programs tailored to this population should focus on asserting oneself appropriately.

Third, HIV behavioral interventions should role-play scenarios that permit an assessment of the subjects’ communication and negotiation skills during sexual risk-taking situations. Role-play simulations may include situations where (a) the subject initiates a discussion about safer sex, (b) the subject is pressured to engage in unsafe sex and, (c) the subject negotiates safer sex. Peer educators could model healthy sexual behaviors and provide
informative feedback to subjects during role-plays to assist them in developing skills in negotiating condom use and cognitive techniques in resisting interpersonal influences (i.e., persuasive attempts by partners to engage in unsafe sex), to minimize their risk of HIV.

CONCLUSION

Current AIDS prevention efforts are severely limited by the lack of research examining the social processes and gender politics in which safer sex occurs. Engaging in safer sex is not merely a question of proper condom use; rather, it involves issues of trust, sexual negotiation, power, sexual self-efficacy, and gender roles. Because the threat that HIV poses for young-adult African American women is considerable and growing (Chavkin, Cohen, Ehrhardt, Fulfilove, & Worth, 1991), more information describing the influence of psychosocial and gender-specific issues is necessary for the development of maximally effective HIV social skills intervention programs (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). Without such information, attempts at program development will lack the gender and cultural specificity that often determines whether programs are accepted, adopted, and—more importantly—effective at modifying risky behavior.

REFERENCES


Making Art of Madness

On Nov. 15, 1934, Virginia Woolf began her rewrite of a novel eventually titled "The Years." "Lord! Lord!" she noted in her diary, "10 pages a day for 90 days: three months ... now, damnably disagreeable, as I see it will be — compacting the vast mass — I am using my faculties again. & all the flies and fleas are forgotten."

Seven years later the flies and fleas and larger plagues drove Woolf, who had fought mental illness throughout her life, to suicide. An increasing number of psychiatrists, neurologists and geneticists, says an article in this week's Science Times, believe there's a link between the genius and madness of artists such as her. Maybe so. But as anyone who's ever read Woolf's letters and diaries can attest, it's the link between imagination and self-discipline that got her a place in literature's pantheon. Her mind may have had a grasshopper's fleetness, but her industry was the ant's.

"People who have experienced emotional extremes, who have been forced to confront a huge range of feelings and who have successfully coped with those adversities, could end up with a richer organization in memory, a richer palette to work with," said Dr. Ruth Richards, a psychiatrist at McLean Hospital in Belmont, Mass., which often served as a haven for Robert Lowell, the fine American poet.

At least three fine English poets — Byron, Shelley and Coleridge — also suffered from manic depression or severe depression; and so did the composer Robert Schumann, who starved himself to death when he was 46. Dr. Robert M. Post, chief of the biological psychiatry branch at the National Institutes of Health, sees the link between bipolar disorder and creativity as "fortunate," because it is in so many other ways "a devastating illness."

To be mad is not necessarily to be creative, or there'd be a Shelley on every street corner. And to be creative is not necessarily to be mad, or Shakespeare would not have been a monument to shrewdness and adaptability. But to be creative is almost invariably to be diligent — and, manic-depressive or no, to swing high, swing low.
An Old Idea About Genius Wins New Scientific Support

The link to madness turns out to be real and measurable.

By NATALIE ANGER

As long as there have been poets to pierce the darkness with their diamond songs, and painters to capture rays of sun showering on cool cathedral stone, and artists of all persuasions to consoom with the gods and articulate the union, there have been social critics to notice that an awful but of these creative people are mentally unsound.

"Why is it," Aristotle asked in the fourth century B.C., "that all men who are outstanding in philosophy, poetry or the arts are melancholic?"

Three hundred years ago, the English poet John Dryden wrote:

Great men are sure to madness near allied;
And thin partitions do their bounds divide.

a sweet couplel that has since degenerated into the sorry cliché:

There is a thin line between genius and madness.

Yet as with any cliché worth the iteration, this one has a sizable grain of truth in it. After many decades of quarreling over how to define slipperiness and often subjective terms like "madness" and "creativity," along with a general resistance among scientists to any idea that has gripped the popular imagination for so long, psychiatrists, neurologists and evolutionary geneticists at last have acknowledged powerful evidence that the link between certain mental disorders and artistic achievement is real.

A study after study has shown that people in the arts suffer disproportionately high rates of mood disorders, particularly manic depression and major depression.

Those with manic depression, or bipolar disorder, oscillate between mania and the abyss — between a sense of grandeur and recklessness, a boundless, knockabout energy that instead of sleep, a profound depression in which anguish, lethargy and self-hatred dominate. Many of the most eminent creators seem to have had full-blown manic depression, others have had milder forms of the disorder and still others who have suffered repeated episodes of major depressions, the same idealism seen in the downswings of manic depression but without its euphoric counterpart.

As Dr. Kay Redfield Jamison points out in her recent book, "Touched with Fire: Manic Depressive Illness and the Creative Spirit" (Free Press), the list of artists in whom manic depression or severe depression has been diagnosed with confidence is a pantheon of glory: Lord Byron, Percy Bysshe Shelley, Herman Melville, Robert Schumann, Virginia Woolf, Samuel Taylor Coleridge, Robert Lowell and Theodore Roethke, to name but a very few.

"Most of the best studies in this area have only been done in the last few years," Dr. Jamison, a professor of psychiatry at the Johns Hopkins University School of Medicine in Baltimore, said in an interview. "People think this whole area of research is very squishy, very fuzzy and unsubstantiated. They don't realize how solid and consistent the work really is." Psychiatrists have found that among distinguished artists, the rates of manic depression and major depression are 10 to 30 times as prevalent as in the population at large.

Importantly, the periods of either mania or depression are interrupted by long stretches of normality in which the artists appear in command of their work.

"People have a problem with the idea that someone can be both very healthy and very ill," said Dr. Jamison. "But those with manic depression can be very scarred and extremely confident at the same time. It takes that hyperconfidence when you're breaking down borders in art and doing things that haven't been done before."

Although creativity is obviously an essential element in many professions, the link between creativity and mental instability is more pronounced in the arts than in other fields. For example, Dr. Arnold M. Ludwig, a professor of psychiatry at the University of Kentucky Medical Center in Lexington and author of a forthcoming book, "The Price of Greatness" (Guilford Press), looked at the incidence of psychiatric illness among 1,044 eminent men and women. Considering individuals in 8 creative arts with professionals in 12 other professions, of the nature of F. Scott Fitzgerald, Robert Breck Bell, Albert Einstei and Henri Matisse, Dr. Ludwig discovered that psychiatric disturbances were far more common among the artists than among the others. For example, the rate of alcoholism was 60 percent among artists and 41 percent among novelists, but only 3 percent among those in the physical sciences and 10 percent among military officers. In the case of manic depression, 17 percent of the artists and 8 percent of the poets were thought to have had the disorder, while those in the sciences were believed to have suffered from it at a rate of less than 1 percent, comparable to the incidence in the general population.

Hearing the striking concordance between emotional volatility and creativity, some researchers are now seeking to understand the neurobiological basis of both mental instability and inspiration, and to learn how a mood disorder may nourish or sharpen creative thinking. They insist they are not romanticizing mental illness or saying anything as foolish as "all artists are mad." And researchers emphasize that artistic achievement requires a sustained effort and personal sacrifice, a dedication beyond what most mortals are capable of regardless of their mental idiosyncrasies. Nor do scientists deny the pain and danger that a mood disorder can bring: if not treated with lithium or other medications, about 20 percent of those with full-blown manic depression will commit suicide.

Arousal of Brain Activity

"It's fortunate that there is this link" between bipolar disorder and creativity, said Dr. Robert M. Post, chief of the biological psychiatry branch at the National Institute of Mental Health. "In the past, we've been able to analyze only a few cases, but now we're in a position to identify patterns in the brain wave activity."

As with any scientific breakthrough, however, the problem is to translate the research to the patients. "The question is how to translate this into practice," said Dr. Post. "We need to find ways to improve the lives of people who have bipolar disorder without sacrificing their creativity."

"I think the best way to do that is through the arts," said Dr. Jamison. "By encouraging people to express their feelings through writing or painting, we can help them understand and manage their illness."

Virginia Woolf.

Robert Schumann.

"I feel certain I am going mad again," Virginia Woolf wrote. As with the composer Robert Schumann and other artists, the mental illness itself may have spurred her creativity.
Mental Health. “In so many other ways it’s a devastating illness.”

Psychiatrists believe that because manic-depressive patients are every rising the biochemical exressl between emotions, they end up more complexly wired and remain more persistently plastic than do the brains of non-sufferers. That heightened interconnectedness between one neural neighbor to another makes them more likely to start connecting random thoughts and to reorganize the entire into the extraordinary — the essence of artistic creation.

“People who have experienced emotional extremes, who have been forced to confront the idea of the bipolar mood disorder could be a global alerter of mental activity.

Dr. Jamison and others also propose that the excessive energy of a manic episode may be more of a volcano of ideas that the mind can then shape into something meaningful, according to the hypothesis that it is the perceptive moments of a depression or a bout of normality.

Researchers are looking at the problem from an evolutionary angle, arguing that manic depression is not a disease but a trait. That a common genetic variation on a chromosome that in prehistoric times conferred an advantage to those who inherited it. From family studies, researchers have concluded that a predisposition to manic depression is strongly inherited (although recent attempts to isolate a gene have not yet proved fruitless). Given the prevalence of manic depression in the population, the gene or genes responsible for the disorder could not possibly be around by chance. The single-locus, polygenic theory, the trait has been taken by evolution for a reason.

If this were simply an erroneous, random mutation, you’d expect to find, maybe 1 in 3,000 people with the disorder. But right now, it's 1 in 30,000. Even if you're looking at people in New York City or the Kalahari Desert. So you're talking about a gene that must have been around for 100,000 years or more. Even 100 times more common than it ought to be.

Other scientists have turned to the embryonic field of neuroimaging, attempting to map which parts of the brain respond during episodes of either mania or depression. Dr. Post and Dr. Terence Kettner, a neurologist at the National Institutes of Mental Health, have given volunteers intravenous doses of procaine: a drug that can elicit varying emotional responses from euphoria to anxiety depression. Using positron emission imaging, or PET, scans to measure relative blood flow in the brain, they found that when people reported feeling depressed, certain regions of the brain’s limbic system showed diminished activity, among them the amygdala, the orbital frontal cortex and the cingulate gyrus. These are the brain structures that control such emotions and behaviors as anger, pleasure and aggression.

Dr. Jamison, when the drug induced a euphoric state similar to mania in the volunteers, the researchers found that brain activity increased, as did responsiveness in structures of the limbic brain that interact with the limbic system, particularly the hypothalamic, a master regulator of many body functions, including sexuality. That a stimulated limbic system and hypothalamic might yield greater associative and imaginative powers is not surprising, scientists said. This region of the brain is a major switching station, turning external stimuli into emotional responses, and emotional responses into action. It is also the brain area that evolved in parallel with mammalian sociability, said Dr. Watson, allowing individuals in a group to recognize and respond to one another. As the region that helps people and other mammals take in the new, integrate it with the familiar and generate from the enterprise a novel response.

Researchers seek to learn how a mood disorder may nourish or sharpen creative thinking.

In the Temporal Lobes, Seizures and Creativity By NATALIE ANGER

Apart from mood disorders, other disturbances of the brain have been associated with artistic creation, in particular temporal lobe epilepsy. In this case, the temporal lobes on both sides of the brain, where memory and emotions reside, are intermittently seized by chaotic storms of electrical hyperactivity. Although the seizures are unpredictable to observers, they can prompt symptoms like Hallucinations, powerful religious sensations, fear, joy and a blessing for those in the arts — an unpredictable desire to write or draw, a desire that persists even after the seizure is over.

Seizures are different physiological expressions from epochs of mania or depression, but they can exert on artists a similar sense of grandeur and joy. Dr. Dr. Richard Thompson, among whose recently collected extraordinarily original and incantatory short stories, "The Psalmist at Rest," (Little, Brown). If you want the historical and scientific basis for temporal lobe epilepsy, among them Fodor, Dragoslovsky, Draflingen, Lewis Carroll. Some famous, and famously mad, creators may have suffered from temporal lobe epilepsy or manic depression, including Edgar Allan Poe and Vincent Van Gogh. Perhaps it was because Van Gogh’s blend of mental agony and creative passion was so profound that even after depression slowly drove him at the age of 37 to snort himself in the chest. The great Dutch artist managed to stumbe back to his own mind and paint more canvases that day before wellness overcame him. He died of a wound two days later.

Herman Melville, left, the 19th-century author, and Robert Lowell, the American poet, emerged as masters despite and perhaps because of the manic depression they are believed to have suffered.

The limbic system is, in a sense, a microcosmic creation.

But the Portrait of the Mad: Dr. Jamison, a professor of psychiatry at the University of Iowa in Iowa City and author of "The Broken Brain: The Biological Revolution in Psychosis," said that brain-imaging studies of manic depressives have revealed distinctive patterns in the metabolism of the prefrontal cortex, the motor area of the brain and the seat of human intellect, among them these metabolic eddies signify premonitions to be learned. Dr. Harold E. Sackheim, chief of the department of biological psychiatry at the New York Psychiatric Institute, and his co-workers have found that in maniac depressives, the overall blood flow in the brain is less than that in volunteers with no mood disorders.

Catherine Drachman and colleagues have revealed hemispheric distinctions between people with brain lesions that leave them either constantly weeping or constantly laughing. Those who cry without cease have damage to the left hemisphere of the brain, which is considered the half that is in command of language and rational thought, while those who are uncontrolably laughter display lesions in the right side of the brain, where nonverbal information is processed.

In manic depression or its variant, epilepsy, artists like Dylan Thomas, Shakespeare, Hemingway, and Hitler have shown that the brain’s limbic system can be reorganized. Depression and mania make the brain more plastic.

Before my injury, I wasn’t inclined to be a reader, or obsessed with God and the meaning of life, “he said. ‘Ever since this happened to me, I’ve been more introspective, constant finding philosophies, studying world religions and then having a fever, intermittently a fever, to write. It’s a lust, an obsession, to put it down, and in the act of writing I’m not Thoms Jones. And it’s such a relief to not be Thoms Jones.”

In her book on temporal lobe epilepsy, ‘Seized’ (HarperCollins), Eve LaPlante discusses other artists thought to have temporal lobe epilepsy, among them Fodor, Dragoslovsky, Draflingen, Lewis Carroll. Some famous, and famously mad, creators may have suffered from temporal lobe epilepsy or manic depression, including Edgar Allan Poe and Vincent Van Gogh. Perhaps it was because Van Gogh’s blend of mental agony and creative passion was so profound that even after depression slowly drove him at the age of 37 to snort himself in the chest. The great Dutch artist managed to stumble back to his own mind and paint more canvases that day before wellness overcame him. He died of a wound two days later.

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When Illness Yields Creativity

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Invited Address

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Abstract

Here we challenge the sometimes common assumption that what's "normal" is good and what's "abnormal" is bad, and even ask if illness can ever become a good thing. We consider psychological phenomena related to three biological models: (a) acquired immunity, (b) compensatory advantage, and (c) evolution beyond maladaptive genotypes. The evolution of memes as well as genes is considered, and creativity is defined in terms of the evolution of information. Two pairs of illustrations are given, the first involving the initial generation of information, and the second its processing or manipulation. An individual-level, and then a more speculative societal-level, illustration is given for each pair. Specific examples involve: (a) overinclusive thinking, as found in bipolar mood disorders; (b) the diversity of multicultural views; (c) coping with personal adversity and instability; and (d) coping with global challenges. Certain interpretations draw upon chaos theory, and upon a proposed process of "cultural brainstorming." Conclusions highlight the importance of preserving and facilitating individual and social diversity, and of distinguishing the harmful from the merely "deviant," while expanding our perceived "limits of normality." They also suggest that one can treat illness and at the same time enhance creative potential. Finally, it appears our creative growth, and indeed conscious evolution, can help us circumvent our genetically-based limitations to acknowledge and truly confront the critical challenges of the 21st century.
In our artificially dichotomized world of good and bad countries, books, movies, and so on, people sometimes separate good health from bad, cleanly and without ambiguity, and focus largely on the latter. There are literally armies of professionals designed to identify and stamp out disease, mental or physical, striving to replace it with some concept of "normalcy." This assumes, in turn, that the norm is inherently healthy.

Yet the balance between sickness and health may be more complex. Here, we address a popular notion that creativity is connected with mental problems that dates back over two millennia (Becker, 1976; Jamison, 1990), as well as extrapolating to some related phenomena at the societal level. Aristotle, back in Ancient Greece, in fact, spoke specifically of depression, wondering why "all" persons "outstanding in philosophy, poetry or the arts are melancholic..." (Jamison, 1990, p.333).

And Dryden wrote (in Absalom and Achitophel):

Great wits are sure to madness near allied;
And thin partitions do their bounds divide.

Many have heard of outstanding creative persons who suffered from mood disorders. Here we see Virginia Woolf, and Ernest Hemingway who were both manic-depressive as, most likely, was Vincent Van Gogh. This paper looks at the validity of such creativity-psychopathology links and some social parallels as well.

But in doing so, it is essential not to romanticize these psychiatric findings. The suffering in mood disorders can be extreme, as expressed by the novelist William Styron (1990) in Darkness Visible:

The pain is unrelenting, and what makes the condition intolerable is the foreknowledge that no remedy will come—-not in a day, an hour, a month, or a minute...It is hopelessness even more than pain that crushes the soul (p. 62).

These are serious disorders with a high morbidity and mortality, when untreated -- and this is particularly tragic since treatment can be so effective (Brent et al., 1988; Goodwin & Jamison, 1990). Among the creative persons mentioned above, Woolf, Hemingway, and Van Gogh all eventually committed suicide.

Sickness and Health: Initial Considerations

Before continuing with mood disorders, we (a) introduce three biological models of ways in which sickness and health may be intertwined; we will relate later psychological illnesses to these. We also (b) define creativity in terms of Dawkins (1976) concept of memes, or units of "cultural imitation"
(see also Csikszentmihalyi, 1988; Richards, 1990). Memes are metaphorically analogous to "genes," and allow us to consider the adaptive and healthy value of creativity in a slightly different way. The focus is on production and processing of information in a creatively growing society, and on creativity as a form of the evolution of information.

Three Biological Models

(1) *Acquired immunity.* It is in getting sick, after all, that young children help temper their immune systems — that they acquire certain forms of "resistance." Parents used to deliberately orchestrate certain exposures when a child was young, for instance to measles or whooping cough. One could often get off more "cheaply" at an earlier age. Yet whether one "pays" as a child or an adult, such immunity still has a price. Only more recently, with vaccines such as that for measles, mumps, and rubella, has the cost of certain types of protection gone dramatically down (Lawlor & Fischer, 1988; Smith, 1977).

(2) *Compensatory advantage.* The effects of blood disorders such as sickle cell anemia (or the thalassemias) are mixed. The person with full blown sickle cell disease, who inherits this from both parents (the homozygote), develops a serious anemia with risk of multiple medical complications and early death. Yet the larger number of genetic sickle cell carriers (the heterozygotes, who inherit from just one parent), may develop only a mild anemia, yet still show a positive compensatory advantage: resistance to malaria (Minkoff, 1983; Richards, Kinney, Lunde, Benet, & Merzel, 1988). Here too, a price is paid for a healthy result, but this time not everyone pays the same price. Indeed, some people pay very dearly. Significantly, such mixed results, these trade-offs of illness and health, are programmed into our genes.

(3) *Outmoded genetic blueprints.* We now turn from individuals, and from groups of individuals, to the multiplicity of species that has populated the earth at different historical times. This diversity of organisms (of their genetic blueprints, or genotypes, and their real-life expressions as phenotypes) has provided a rich range of possibilities to meet changing environmental conditions. Yet not all organisms have been successful in thus perpetuating themselves, as described by Steven Jay Gould (1989), at the Burgess Shale, high in the Canadian Rockies. There, out of numerous creatures which evolved, only a relative handful survived. Also, consider the dinosaurs, said to have perished after a meteorite, or perhaps a volcano, changed the earth's climatic conditions (Bak & Chen, 1991). Dinosaurs are now extinct in all but the movies. Taking a broad view, one might argue that this evolutionary process can at times reflect a form of ecosystem health — perhaps particularly if it moves toward a stable or increasingly diverse and interconnected life support system (e.g., Brown et al., 1992; Wilson, 1993). But just tell this to the dinosaur.

**Not Everyone Will Profit**

This situation may seem "unfair" to certain individual organisms. The person with sickle cell disease may suffer a terrible anemia "so that" the more numerous sickle cell carriers may thrive, and resist malaria. And what
is good for the human being won't necessarily favor the malarial protozoan, the staphylococcus that can cause pneumonia, or the spirochete that causes the increasingly-feared lyme disease. Much of life has been forged in conflict, both within and between species. Some solutions have "worked," at least on the average, but have left many victims.

The underlying principle in all this is biological variability -- the creation of new and adaptable organisms -- based on genetic material and its expression in a particular environment (the genotype and phenotype). This is surely a form of biological creativity. The point is to maximize adaptability to changing conditions (as for instance, with a staphylococcus that has developed resistance to penicillin). Species survival has been the ultimate goal. And reproductive, or genetic, survival, of individuals or of groups, has been an ultimate indicator of viability and health.

Our conscious awareness of individual or societal needs won't eliminate the underlying dynamic of conflict in this seemingly "unfair" struggle for survival. But it can, at times, help us reduce its costs to some of us.

This is one place where our own human creativity may enter: to broaden our environmental range of responses, to increase our options. We do immunize children against diseases like measles, and medically treat for sickle cell anemia. Challenging the status quo is what creativity is all about. "Everyday creativity," in particular -- involving originality and meaningfulness in the multitudinous activities of day to day life -- has been conceptualized as a survival capability (Richards et al., 1988; Richards, 1990).

Creativity as the Evolution of "Memes"

In addition to genes, or units of heredity, we speak metaphorically of "memes" or units of "cultural imitation" (Dawkins, 1976), and also look at their adaptive value (see also Csikszentmihalyi, 1988; Lumsden & Findlay, 1988; Richards, 1990). Memes are transmitted essentially from brain to brain (or book to book). Examples are an idea, equation, image, or melody -- and consider the powerful "meme-complex" comprising the English language.

Memes can be identified in other organisms, but reach their highest development in human beings (Dawkins, 1976). As with genes, memes can be replicated, and can increase in frequency. But a "population explosion" of memes is unlike anything else. Memes can move at extraordinary rates, via published materials, video transmissions, computer networks, and the like. Indeed, memes can do in ten minutes what it may take generations of genetic evolution to accomplish.

As with genes, the viability of particular memes or meme-complexes can be vastly influenced by environmental forces (consider the fate of last week's newspaper, compared to Shakespeare's sonnets). Sometimes the effects are widespread, dramatic, and nearly instantaneous, as with the news of "President Kennedy's assassination."

In addition, memes can influence the viability of genes (as with the people who didn't freeze because they discovered fire), and such cultural and biological forces can continue to interact in a constantly changing dance (Lumsden & Findlay, 1988; Tooby & DeVore, 1987).
Creativity is most comparable to the "recombination of memes," to the putting together of information. This process is potentially more complicated than "genetic recombination" -- than two mating organisms exchanging predetermined pieces of DNA, even though the biological offspring can be quite diverse. With memes, or information, one can put together anything at all that one wants. Memetic recombination can draw all at once, without limit, on multiple memes spanning thousands of miles and thousands of years. At its most original and meaningful (two widely accepted criteria for creativity, see Barron (1969)), this process is just what many of us mean by creativity.

This power of creativity is critical; it represents a different sort of "evolution," an evolution of information, and one which offers us -- as purposeful, foresightful, and sometimes rational beings -- a great deal of hope.

Illess and Creativity: Four Psychological Illustrations

Of the four illustrations below, the first and third deal with personal psychiatric problems, and issues of production or processing information (or "memes"). The second and fourth represent extrapolations to the societal level. Particular time is spent on the first example, because it has more empirical support.

For each illustration, the following is given: (1) a specific example, (2) the biological model, (3) the pathology, (4) the evident benefits that are intertwined with this, (5) ways to reduce our costs, and (6) creativity and "memetic evolution."

This discussion is not meant to imply that creativity is only the result of illness or conflict. Other potential routes exist (see Richards, 1981). Curiosity, challenge, mastery, the delights of beauty, and the joy of discovery can still be enough.

Example I -- Bipolar Mood Disorders

(1) Far-Reaching Manic Thoughts: John Ruskin

I roll on like a ball, with this exception, that contrary to the usual laws of motion I have no friction to contend with in my mind, and of course have some difficulty in stopping myself when there is nothing else to stop me....I am almost sick and giddy with the quantity of things in my head -- trains of thought beginning and branching to infinity, crossing each other, and all tempting and wanting to be worked out (In Jamison, 1993, p. 29).

(2) Model: Compensatory Advantage

As with John Ruskin's mania, we ask if there is ever a "positive" side to
the genetic risk for bipolar mood disorders -- and does this include higher creativity? As with sickle cell anemia, can people who are "carriers" of a bipolar vulnerability, or people who have milder mood disorders or episodes, show a compensatory advantage? And could the diversity of information (memes) generated, this rich range of information -- in its sometime eccentric entirety -- have adaptive value for society, even apart from the individual?

(3) Problem: Prevalent and Painful Disorders of Mood

Among other psychiatric disorders, bipolar disorders have a particularly strong genetic component (e.g., Goodwin & Jamison, 1990; Wender et al., 1986). The genetics are likely more complicated than those of sickle cell anemia (e.g., Richards, Kinney, Benet, & Merzel, 1988).

The possibility that there's some positive evolutionary advantage to this serious form of illness becomes all the more compelling when one hears that as much as 4-5% of the population may develop a mood disorder with an underlying bipolar vulnerability (Akiskal & Akiskal, 1992; Akiskal & Mallya, 1987). This is a large group! Evolution may not only have avoided selecting against these illnesses, but may have favored them (Richards, in press-b; Wilson, in press).

Wide "spectrum" of mood disorders. Included are bipolar I disorder (manic-depressive illness), bipolar II disorder (severe depressions, but milder mood elevations), cyclothymia (milder mood elevations and depressions), hyperthymia (a condition of more ongoing mild mood elevation), bipolar III disorder (a "masked" condition in which anti-depressant treatment elicits a mood elevation), and, with some overlap, "pure" unipolar depressions or dysthymias with a bipolar vulnerability in the background. These conditions show other clinical features as well (e.g., Akiskal & Akiskal, 1992; Goodwin & Jamison, 1990; Keller, 1987). There are also evidently "healthy" people who carry a bipolar vulnerability without showing obvious symptoms. The latter turn out to be quite important.

Indeed, if one were hypothetically to assume there was one relative without a mood disorder (but carrying a bipolar vulnerability) for every person who has one of the above mood disorders, it could be that as much as 10% of the population carries the underlying risk for a bipolar disorder. This segment of society is so large as to raise serious questions, indeed, about why it might exist (e.g., Richards, in press-b).

(4) Benefits

Before turning to these millions of people at risk, and the everyday creativity of all of us, we look at creativity and creators getting eminent recognition. These are the creators with fame, notoriety, public recognition, or high professional regard, whom people often identify with the word "creative."

a. Ongoing traits: Eminent creators. Interestingly, the literature, including older studies that are individually flawed, all tends to point in the same direction: toward greater psychological difficulty among creative people who have reached eminence, especially in the arts (See Andreasen, 1978; 1987; Jamison, 1990; Ludwig, 1990, 1992a; Ostwald, 1991; Richards, 1981, 1990).
Newer rates of illness, using more thorough diagnostic and interviewing approaches, may seem truly startling. Consider Nancy Andreasen's (1987) discovery that a full 4 out of 5 eminent creative writers had a major mood disorder (80% compared to 30% of controls). It was the rare creative writer who didn't have a mood disorder. In addition, the majority of these writers had a bipolar disorder, often with mild mood elevations (bipolar II disorder). In support of this is Kay Jamison's (1990) finding that 38% of eminent British artists and writers had sought treatment for a mood disorder -- a striking figure against the tragic fact that only about one out of three affected people even tend to seek treatment (Jamison, 1990). In addition, almost all (89%) of Jamison's sample had "intense creative episodes" sharing many qualities with the mild mood elevations of clinical hypomania.

In an invited address following this talk, Arnold Ludwig (1992a) will present further data on the prominent problems of artists -- from a whole different perspective -- while talking about pathology across 18 separate professions. As past research also suggests (see Richards, 1981, for review), scientists don't show as much obvious psychopathology as artists. But it is still there.

b. Ongoing traits: Everyday creators. My research with Dennis Kinney and others at McLean Hospital and Harvard Medical School (Richards, Kinney, Lunde, Benet, & Merzel, 1988; Richards, Kinney, Benet, & Merzel, 1988), on everyday creativity speaks less to psychopathology per se, than to some more subtle qualities that may go along with it. This is more of the compensatory advantage type of phenomenon. With sickle cell anemia, one recalls, it was the larger number of mildly affected "carriers" who showed the greatest advantage.

1. Everyday creativity may be a way of life. Our work on "everyday creativity" started with the millions of bipolar patients and their relatives, and not with a small handful of eminent creators, however interesting these may be. We looked at original accomplishment (just as long as it was meaningful, and not random) across the wide range of activities of everyday life, both at work and at leisure. We used our Lifetime Creativity Scales, which we developed and validated for this purpose on over 500 personally interviewed persons (Richards et al., 1988a).

We're not talking here about the famous scientist or the eminent composer. We're talking about people who excelled in home landscaping, school teaching, repairing cars, raising their children, managing an office, and also about people who designed dangerous wartime resistance activities. We only required that they show originality, and this can be brought to just about anything.

We're also not talking here about intelligence, or about special talents and skills, say in art or in music. These are certainly important to doing excellent work. But being able to copy a painting perfectly is of no use if one can't do a new and original one. We're talking about a style of thinking, a way of reacting, perhaps a way of life -- a dispositional dimension of personality. As Barron (1963a) said, "originality is almost habitual with persons who produce a really singular insight" (p. 139).
ii. Something very broad is running in these families. Interestingly, Nancy Andreasen (1987) found, looking at relatives of her exceptional creative writers, that they too were more creative than relatives of her control subjects. But the writers' relatives weren't all writers themselves -- they weren't necessarily even in related fields. Some were in music, mathematics, teaching; they were all over the block. What was running in these families wasn't a knack for writing, but something more basic about liking to think in new and original ways. Our own family findings supported this too (Richards et al. 1988b).

Before considering results for our 44 index subjects (manic-depressives, cyclothymes, and their first-degree normal relatives) and 33 control subjects (normal individuals, and persons carrying another diagnosis), consider what Eugen Bleuler, said of manic patients (Jamison, 1990). It seems Bleuler was right:

Because of the more rapid flow of ideas, and especially because of the falling off of inhibitions, artistic activities are facilitated even though something worthwhile is produced only in very mild cases and when the patient is otherwise talented in this direction (p.23).

iii. Creativity in better-functioning persons. We found it was not the full-blown manic-depressives who came out most creative on the average -- although certain manic-depressives did excel). Rather, it was their more mildly affected relatives, the cyclothymes, who showed the milder mood elevations and depressions. But then there was one real surprise: also included were their psychiatrically normal first-degree relatives.

It's worth parenthetically noting that everyday creativity was assessed by raters who knew nothing of the subjects' diagnoses or even their identities. And diagnoses were made by people who knew nothing at all about subjects' creativity. Thus the chance of even an unconscious sort of bias in these results was minimal.

Normalcy by itself wasn't the reason for heightened creativity, either; our normal control group didn't show this "creative advantage." Nor for that matter was depression the cause. For in a small pilot study, we also showed higher creativity among so-called "pure" depressives with a family history of bipolar disorder than in depressives who lacked this family history (Richards, Kinney, Daniels, & Linkins, 1992). Thus, the traces of a genetic bipolar liability may be subtle indeed.

In addition, the cyclothymes in our earlier work (Richards et al., 1988b) may have included people who would now be diagnosed with a bipolar II disorder -- meaning the cyclothymes were potentially more heterogeneous at the depressed than the "higher" end of the mood spectrum. (This also puts this group closer to the eminent creative writers described by Andreasen (1987), where bipolar II was the most common diagnosis). Findings by Akiskal & Akiskal (1988), Eckblad & Chapman (1986), Jamison et al. (1980), Schuldberg (1990), and others (see Richards, 1990), support once again, with everyday samples, the importance of states of mild mood elevation, or of having a bipolar disorder in the family, for enhanced creativity.
c. State of mind and creativity: The benefits of mood elevation. Mood states may contribute in different ways to creativity; there are reports, for instance, of depression increasing one's sensitivity (e.g., Andreasen, 1987; Jamison, 1990, 1993; Richards, & Kinney, 1990). But we focus here on that mood state most widely linked with creativity, the state of mild mood elevation or subtle "highs." We take two different perspectives: (a) styles of thinking linked with mood elevation, and (b) features of so-called bipolar "thought disorder." We ask several questions:

i. When do patients feel most creative, and why? Work with both everyday and eminent creators (Akiskal & Akiskal, 1988; Eokblad & Chapman, 1986; Jamison, 1990; Richards, 1990; Richards & Kinney, 1990; Schuldberg, 1990) indicates that a state of mild mood elevation may be particularly important for being creatively productive -- whether or not the creator also has more dramatic "highs" and "lows."

Jamison (1990) broke this down further, finding a range of cognitive, affective, and behavioral changes during the hypomanic-like "intense creative episodes" of eminent writers and artists. In a pilot study (Richards & Kinney, 1990), we took this list and asked bipolar patients if they had experienced any of these features during their most creative mood states, along with asking what this mood state was.

We found three types of clusters. The first was independent of subjects' preferred creative mood state, and suggested tempered positive feelings (e.g. sense of well-being, confidence, enthusiasm). The other two clusters came up only for subjects who liked creating when their mood was elevated (either elevated a little or a lot). One cluster suggested a spontaneous exuberance (expansiveness, impulsivity, euphoria), and another a cognitive facility (rapid thinking, association, fluency with new ideas).

Keeping well in mind that this is only one part of the picture, we turn to questions of cognitive style and creativity. One important question is whether thought which appears "normal" in one context might be considered "abnormal" in another. Below, we put together several pieces of the puzzle.

ii. How does mild mood elevation affect thinking in general? We're not talking just about the mood disordered now, but about everyone (see Richards, 1993, in press-a).

Isen and others (e.g., Isen, 1985; Isen et al., 1987; see Richards, in press-a) have shown that even a very slight mood elevation across several forms of induction -- after watching a brief comedy film, for instance -- can increase all of the following: unusual word associations, overinclusiveness of categorization, and actual creative problem solving on specific laboratory tasks. Unusual associations and overinclusion have been associated with creativity in other contexts, as well (see Richards, 1981, 1990).

iii. How does mania affect thinking? Loose associations are characteristic of mania. Interestingly, so is overinclusive categorization, both behavioral (number of elements included in a category), and conceptual overinclusion (range of classification rules employed, including ones that are more vague, or distant, or developmentally primitive). The Object Sorting Test (Goldstein and Scheerer, 1941) is often used for this sort of study.
It's worth looking at two real-life examples:

**Example.** Conceptual overinclusion (with primitive and shifting classification): A little girl, when she was one year old, happily thought several different things were a "cow," namely: (a) a chain saw (the buzzing sounded a lot like a "moo"), (b) a black and white patterned fish at the aquarium (it had the right markings); and finally (c) the domestic animal whose milk we often drink.

**Example.** Behavioral (quantitative) overinclusion: An adult gave as instances of things with "wheels": a car, truck, watch parts, earth on its axis, wheels within wheels, Wheel of Fortune, wheeling and dealing, a wagon wheel used as a table (etcetera). One should note that this person could do well on an "Instances" test of creative thinking (e.g., Wallach & Kogan, 1965).

**iv. How does thinking compare in manics and creative writers?** First, consider this report by a manic patients (Jamison, 1990):

> Thoughts chased one another through my mind with lightning rapidity. I felt like a person driving a wild horse with a weak rein, who dares not use force, but lets him run his course, following the line of least resistance. (p.27)

Groundbreaking early studies by Nancy Andreasen and colleagues (Andreasen & Canter, 1974; Andreasen & Powers, 1974) help complete the circle. Creative writers, manics, and schizophrenics were compared on overinclusive thinking. As it turned out, there were many similarities between writers and manics, but not schizophrenics. The creative writers were also higher on abstract and cohesive thought, suggesting greater control of their so-called "deviant" processes.

One is reminded of studies of eminent creative writers reported by Barron (1969) where the average writer, remarkably, was in the top 15% of the general population on every MMPI psychopathology scale. Yet writers showed in addition the unusual combination of high "ego-strength" -- and therefore appeared to be "both sicker and healthier psychologically than people in general" (p.75).

**d. States of mind: How creative is "thought disorder"?** Taking another perspective (see Richards, in press-a), we look at examples of responses that can be called "disordered" on the Thought Disorder Index of Phillip Holzman and associates at McLean Hospital (e.g., Holzman et al., 1986; Shenton et al., 1989; Solovay et al., 1986). These descriptions were in response to projective materials such as the Rorschach Ink Blots -- that is, responses to ambiguous stimuli which could bring about "thought slippage":

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"It looks like a mastodon wearing shoes."  (incongruity)
"A beetle crying."  (incongruity)
"Because it's black, dark, darkness, lovemaking."  [poem?]  (looseness)
"Two crows with afros, and they're pushing two hearts together."  (fabulized combination)
"An evil witch doing a square dance...She had her dress like this and she was do-si-do-ing."  (playful confabulation)

1. Is manic thought creative?. These are colorful and lively responses. They relate to two dimensions that distinguished manic thought from schizophrenic thought in post hoo factor analysis of 22 scales from the Thought Disorder Index (Shenton et al., 1987) -- namely combinatory thinking (marked by incongruous of fabulized combination and playful confabulation) and, in the middle example, irrelevant intrusions (looseness, flippancy).

But do these colorful responses mean the individuals who gave them are also more creative? If our criteria for creativity are originality and meaningfulness, we may be in trouble on the meaningfulness part, particularly if the person is in poor contact with reality. This doesn't mean creative potential isn't there. Consider the nature of manic thought. According to Holzman et al. (1986):

Manic thought disorder manifests itself as loosely tied together ideas that are excessively and immoderately combined and elaborated. Often, there is a playful, mirthful, and breezy quality to their production.... Schizophrenic thought disorder shows very little, if any, of the exuberant, jocular, frivolous elaborations of the manic patients.  (p.369)

From the patient's point of view, at the time, there may have been a sense of amazing capability. But later things can look different:

The memory is complete. One idea calls up a host of related ideas without effort. The man cannot but consider every question...in all its aspects simultaneously, and he sees the right answer at once...  (Jamison, 1990, p.29)

ii. Is "submanic" thought creative? Florid mania, one might think, would leave little room for controlled acts of creative exploration. One may recall that, even with fully manic-depressive individuals, it was not the extremes of elation or depression that are reported as best for creating (e.g., Goodwin & Jamison, 1990; Richards & Kinney, 1990). Rather, it was the states of mild mood elevation -- and occasionally of normalcy. There are intertwined issues of idea-generation and idea-selection. What is needed is an appropriate balance of inspiration and control.

There are a great many questions that remain. No one knows how this works. Is the creativity effect a "state" or "trait" phenomenon? Does this style of thinking just emerge when people are "up," or do they learn some
tricks that "carry over" to other times of their lives. Is this thinking style mainly genetic in origin, so that it's preprogrammed to happen, no matter what? Or does environment also play a role such that this thought style can also be "picked up," maybe as part of a "family culture" or style -- in the same way that college kids might get a little "loose" and silly at night, laughing in a dorm. (See Jamison, 1990, 1993; Richards, 1990, in press-a)

And if this overinclusive and creative style can actually be taught, then shouldn't we perhaps be trying to do more of this -- and not just for people with a mood-disordered background, but for people in general?

iii. But how does one explain higher creativity in "normal" relatives? What about the psychiatrically normal relatives of bipolar, who also show an "everyday" creative advantage? Or for that matter the bipolar III individuals, "pure" depressives or dysthyms with a bipolar family history, who don't themselves show the times of mild mood elevation?

It's fascinating that for manics, (as well as for schizoaffective and schizophrenic patients) Holzman's group at McLean (Shenton et al., 1989) found thought disorder of the same general sorts in the first-degree relatives of patients, including relatives who are not themselves clinically ill. (Other evidence supports such patterns, both with schizophrenic families and with normal college students and their parents (see Richards, 1981, in press-a).

Thus the "dysfunction" of thinking, if it truly is one, may be subtle indeed. It could be separate from mood, or perhaps represent an undiagnosed condition of a very mild mood elevation (hyperthymia), as we have suggested (Richards et al., 1988b). This subtle state may even be optimal for creativity, providing a wealth of potential material along with the optimal controls to fashion it in creative ways.

iv. Can people turn this "thought disorder" on and off? One perspective, in general, is that creative persons are able to exercise flexible choice between conceptual styles of different developmental origin -- and that more primitive modes of thinking become yet another tool in their conceptual toolbox (Richards, 1981). As with Andreasen and Canter's (1974) "overinclusive" creative writers, during times of higher ego-functioning, some creators may have controlled access to this "thought disordered" type of creative tool.

(5) Reducing the Costs: Treat the Pain -- Don't Pathologize the "Differences"

For the sufferer of sickle cell anemia, we offer medical treatment, and this does not diminish the compensatory advantage in sickle cell carriers. We have improved the situation for everyone. Can we do the same for bipolar mood disorders?

We don't want to try too hard to "improve on nature," since we don't really know very much about nature. But there are at least two things we can do, as healers, to give people options, and to ease their suffering. The first is to ease the pain of illness, and the second not to create illness where it doesn't even exist.
a. Treat those who suffer. A Robot Man comic strip (Boston Globe, 1-29-89) showed Vincent Van Gogh after taking an antidepressant. He threw up his arms, exclaiming, "I feel better already! I feel like painting happy paintings! Like rolling surf and sunsets and clowns on black velvet..."

Will treatment stifle creativity? This is a dangerous assumption (see also Andreasen & Glick, 1988). In fact, treatment may not only decrease suffering but also increase creative potential. It is not the terrifying extremes of elation and depression that feed the most creative moments, as we have seen, but a more modulated state of mind (Richards, 1990, in press-a).

i. If creativity and treatment seem at odds. Yet think of the high rates of mood disorders among eminent creative artists. Mightn't emotional extremes provide content or process for such artists, which is useful at a later point as raw material (e.g., Richards, 1981; Andreasen, 1987; Jamison, 1993). Indeed they might, particularly if one is writing, acting, painting, singing, etcetera, about mood disorders and the human condition. Yet one might ask how often one must go to Hades to describe it (and also how close one must get). Plus, what of satisfactions and later strengths that come from the mastery of great pain (Krystal, 1981). There will be more on this later.

Plus there is tremendous potential in treating creative artists with conservative and carefully titrated doses of medication (e.g., Andreasen & Glick, 1988; Goodwin & Jamison, 1990). In one study, many more creative artists than not said that treatment with lithium helped, or at least did not hurt, their creativity -- and it did indeed help their pain (Schou, 1979). And who is to say, in any case, that creativity should be a higher priority than one's health? If anyone at all, surely it's the artist. Yet in view of the lethality of this illness (e.g., Brent et al., 1988, Jamison, 1993), the only truly rational course is to give the medication a try -- and then decide.

ii. Realities of treatment. Clearly, no one should be forcing treatment on a person who doesn't want it, but treatment should at least be a realistic option. And it cannot truly be an option until the average person is much better informed about mood disorders, the great effectiveness of treatment, and the tendency for a pervasive stigma based on ignorance to get in the way.

Some people, for instance, have the misguided belief that depressed people could just "snap out of it" if they'd only try a little harder. These critics would probably never speak this way to people suffering from pneumonia, gout, diabetes, or an ulcer. Yet, with an untreated bipolar disorder, as many as one out of five people may actually die -- they commit suicide (Jamison, 1993). We are talking here about a highly fatal illness, and not a little case of "not trying." Van Gogh himself was one of the suicide victims.

Treatment, as mentioned, can be highly effective (Brent et al., 1988). Plus, in some instances, even the knowledge of an alternative (other than suicide) can be of great help. Ultimately, the creator must decide what to do. But it seems possible, given the strong pull to create, and the adaptive value of the process and result, that the creativity linked with mood disorders will take care of itself.
b. Valuing differences and diversity. Secondly, we should strive to depathologize behaviors that may be considered "different" but are not at all harmful -- and which may in fact be quite the opposite. These may be behaviors of the mood disordered, the traumatized, or the unaffiliated nonconformist. These individuals are not just repositories of "abnormality" to be "normalized" to look like "us." They are us. Theirs are the many flavors that we share together. They also represent points along the colorful spectrum of response in an actively evolving culture. And in the 21st century, we will likely need a great deal more of this divergence! Did you hear an odd thought or comment? "How interesting. I'm glad you thought of it, because I wouldn't have seen it that way."

What is the source of the discomfort? Does something become "abnormal" simply because it's not the norm, not expected? Or is the issue one of context? A loose association is fine in a poem, but not in a business presentation? "It's black, dark, darkness, lovemaking' is a manic-type "thought disordered" response to a Rorschach inkblot (Solovay et al., 1986). How strange would it appear in poetry?

Or is the issue fear of loss of control? We seem more comfortable with exceptional creators' very interesting high scores on multiple MMPI psychopathology scales (Barron, 1969), because these creators also show an above average ego-strength. Are these creators painting from an optional palette which we feel they could put away if they wanted? Is such "divergence" then, OK with "us," if these creators can also "hold it together?"

We need to take our supposed respect for individual differences -- along with respect for group and for species differences -- and apply this just a little closer to home. To the biases engendered by our cliquish small-group orientation, which is a topic we shall discuss presently.

(6) Creativity as the Evolution of Information

Three other, briefer, illustrations follow, involving multicultural distortions, dealing with personal stress, and global trauma. But before turning to these, we speculate about what social good all this creativity is doing, how it may operate, and how it may influence both our memetic and genetic survival and progress. The discussion below is focused on bipolar mood disorders. But it can be applied, as we'll see, to the other problem areas as well.

We first look at an: (a) artificial intelligence model of mania that evokes images of overinclusion; (b) creative insight, through the lenses of chaos theory, and the "criticality" of naturally evolving complex systems, (c) the nature of "open" and "closed" minds, as a chaos phenomenon, and, in this context, a (d) proposed phenomenon of cultural brainstroming in which adaptive creative thinking for society involves a division of labor -- including groups of people devoted to the transmission and to the reception of new ideas. (See Bak & Chen, 1991; Gleick, 1987; Hoffman, 1987; Lumsden & Findlay, 1988; Waldrop, 1992.)

a. Speeding "overinclusively" between ideas: Artificial intelligence model. Picture an expanse of valleys and hills, a topographical system with contour lines representing the degree of elevation. Now let the valleys instead represent key concepts in memory. A car with a lot of energy could race among
these valleys and hills before losing speed, going up one rise and then another, slowing down at the top a bit, but still making it over to the next valley. The course of the trip could be broad, varied, and complex. A car with a more limited amount of energy might travel a bit between two or three of these regions, but perhaps only briefly. A car with extremely low energy might simply wobble a bit in one neighborhood (whichever one it happened to start out in), and ultimately become stuck at the bottom (in energy terms, in a local minimum).

Now apply this model to mental processing during mania. Hoffman (1987) did a fascinating artificial intelligence simulation, based on Hopfield's neural net model, looking at associative memory and gestalt-seeking during cognition. The manic state corresponds to increased randomness of state adjustments of individual neurons. One might say that mania raises the "temperature" or the energy level of the system. This leads to "jumps" from one gestalt to another -- jumps from one valley to the next in the picture. Thus, thoughts can range more widely over neural pathways, gathering in more distant gestals and associations. But this accessibility has a price, namely instability and distractibility.

These "manic" cars are the ones that go too fast, "go too far," and may even go "out of control." For creativity, we need a compromise -- a car that may not range as widely, but can be handled. Ideally, we might also give it a gas pedal and good brakes. Mild mood elevation, modulated by good ego strength (e.g., Barron, 1969), could fit this bill. This model is consistent with findings of overinclusive thinking, richer associations, cognitive complexity, and defocused attention in controlled states of mild mood elevation (e.g., Isen, et al., 1987; Richards, in press; Simonton, 1988).

In real life, however, we find a diversity of personal patterns and mood states, including ones that are "stuck" and that "go too far" (even in the same person at different times). We don't get only patterns that are optimal for creativity. Creativity may, indeed, be the compensatory advantage that "makes up" for a lot of the rest.

b. Creative insight: Action at the edge-of-chaos. We turn from cars in motion to lofty sand dunes, and from "speeding" too fast to states of chaos. The topic: How creative insight may fit into the picture.

One has probably heard of impossible-to-predict natural events such as landslides, avalanches, or tornados, which can be started unexpectedly by just the tiniest particle -- the critical grain of sand, snowflake, or puff of air. A flurry of changes then follows, readjusting things across some significant part of the system. This has also been called the Butterfly Effect, where a butterfly's movements in Peking might transform a storm system in New York (Gleick, 1987).

In fact, large systems built up from even very simple elements, when they interact with each other, can produce a totality that is much greater than the sum of its parts -- a complex global picture with its own "emergent structure" (Forrest, 1991a,b; Waldrop, 1992). In a simple sandpile, each grain of sand reacts locally and predictably with its immediate neighbors, based on simple rules. Yet the whole pile has a an overarching configuration, appearance, history, and also potential, which too can be described. Further, such large interactive systems tend to evolve toward a chaotic state (Bak & Chen, 1991; Gleick, 1987). In the case of a tall sandpile, this may mean major collapse.
And does such complexity built from simple beginnings apply to human beings? According to Forrest (1991), for certain problems such as modeling intelligent behavior, "it may be the only feasible method" (Forrest, 1991, p.1).

Consider some "simple" neural models (e.g., Forrest, 1991a,b; Hoffman, 1987, Lumsden & Findlay, 1988; Waldrop, 1992). Various "nodes," all interconnected, represent specific memories (e.g., Hoffman, 1987, as above) or mental schemata (e.g., Lumsden & Findlay, 1988). The connections become stronger or weaker, depending on whether they are used more or less. The system thereby "learns"--and certain mental roads, as it were, become wider and better travelled. With a large number of strong, varied, and "creative" links (e.g., the person who was thinking of "round things...a car...the earth...Wheel of Fortune...wheeling and dealing...," and so forth), a single added association could reverberate widely throughout an extended mental system.

Plus, the human intellect is even more complex than this. At minimum, the evolving creative mind should lend itself to a chaos analogy.

c. Creative and not-so-creative processing. Consider information arriving anew at this creative mind. The process works from the ground up. The arrival of some pieces of information will scarcely be felt. A new fact, like a grain of sand, may fall on a sand dune, and shift a few particles locally around it. Perhaps an overinclusive mind will be a little more responsive; the sand may shift a little bit more. But the changes won't be great. Taking a few descriptive liberties, we can apply this to simple, and to not-so-simple, problem solving.

Say that a person sees a new sign: "You can't park your car here." Registering this fact may result in a small and local reshuffling of information, mediated by braking counterforces for accommodation of this new information with the old (even as Piaget said). What will this person do? Probably review the memory banks and substitute a new mental hierarchy of places to park.

Yet if this shifting of hierarchies is sudden, dramatic, unexpected, and involves many interrelated consequences, it may, as Holland and associates have suggested, feel like an "Ah Ha" experience (e.g., Waldrop, 1992).

In this case, a key new concept may trigger a major cascade of mental shifts and accommodations, leading to a whole new mental reorganization, a reframing of one's experience. Intricate networks of thinking, of assumptions, of interdependent beliefs, are shaken and shifted all at once, falling into new and perhaps even awe-inspiring configurations. "Eureka! I've got it!" said Archimedes, leaping from the bath, instantaneously certain that a submerged body displaced its own volume. And what about the worldview shifts from classical physics when one finds that a photon of light is a particle and a wave at the same time (e.g., Goswami, 1993). This dramatic "coevolution" of ideas may be just what we experience with creative insight.

d. Creativity and the "edge of chaos." The chance of rich mental possibilities should be greater the closer one gets to the so-called edge-of-chaos -- but also the risks of "overdoing it." The latter may be particularly important for bipolar persons.
Now we mix metaphors again, by bringing in the now-classic physical model for the edge-of-chaos phenomenon (Waldrop, 1992): the phase transition between ice (which is rigid, inflexible, fixed) and water (fluid, dynamic, perhaps even chaotically turbulent). At this thin but richly portentous border of the "almost frozen," a range of possible new configurations exist. As the temperature drops even one-thousandth of a degree, whole new worlds come into existence, sudden complex crystallizations of water-turned-ice. Yet these new patterns still connect integrally with the old.

One might compare these shifting, freezing, melting, and joining molecules of water with the conceptual "nodes" in the examples above. The issue is how free these mental nodes are to connect, reconnect, disconnect, and holistically reconfigure with webs and systems of others. There had better be a little "ice," or resistance, in this mental system, or one's past experience could be swept away. Where do you live? What's your phone number? Who knows?

But with too much rigidity, a person's new experience could be effectively finished. There would be nothing else that could be linked in. The evolving creative mind should balance successfully between a baseline of fixed or frozen areas of mental rigidity, and the chaotic currents of unstructured and unanchored thought -- to leave plenty of latitude for the big creative leaps, while not getting swept away by the turbulence.

e. A possible "bipolar" edge-of-chaos. People at risk for bipolar disorder may conceivably have greater access to such a mental "edge of chaos." This could involve both static and dynamic factors (See Matthysse, 1991; Richards, in press-a). For bipolar disorder, these may be comparable to certain trait and state factors. The static (trait) factors could involve the rich associative connections between networks of ideas or "nodes" -- connections which make a range of specific associations more likely, but also allow these ideas to be "used" and their linkages to be further modified. ("Round things...car...earth...Wheel of Fortune...wheeling and dealing...")

Dynamic (state) factors, such as the manic "temperature" factor in Hoffman's (1987) neural net model, may specify, more globally, just how far afield within -- or outside of -- a meaningful matrix of ideas one might go ("...Wheel of Fortune...wheeling and dealing...wheels within wheels...plots and counterplots...spies and double-agents...John LeCarre...Great Britain...Prince Charles...Princess Di..." and the manic may loose-associate out of context, and out into mental space.

With a chaotic phenomenon, a wide range of possibilities is required, in order to make more likely the desired ones in the middle. Thus at certain times, and for certain people (and not just for bipolar individuals), the expected diversity of response may "go too far." How to handle this may be an extremely important question.

f. How chaos may play out in "open" and "closed" minds. First, the "open mind" may tolerantly and cheerfully accept some of this jumbled diversity, even "weirdness." It is overinclusive, and it's all part of the price, and the picture. England may do this rather well at times compared to the U.S. According to a British born radio personality, "The U.K. encourages
eccentricity in its citizens -- always has -- it's quite acceptable to be odd, different, slightly batty. Here in the U.S., we encourage people to be "regular" -- just look at how many TV ads want people to be regular people, just like everyone else....in business, the most eccentric thing you can do as a man is to wear a bow tie, and that makes you suspect" (V. Jones, in Hirsch, 1993).

In the creatively "open mind," there may be significant ongoing evolutions of systems of information across many aspects of "personality," albeit still in small "fits and starts." In more "closed minded" individuals, there may be little movement, and many unwelcome additions which simply disappear from consciousness, until that moment of crescendo when they can no longer be avoided. (Then one abrupt action or another may result.)

Who is apt to be "open minded"? Certainly persons with more complexly organized associative mental structures (the static quality), and the energizing potential to access these (a dynamic quality). (See Matthysse, 1991; Richards, in press; Simonton, 1988). These people will also have fewer mental "blocks" or defenses to inhibit such exploration, and a true pleasure in this organization. Involved is the "deferred gratification" to seek and maintain temporary states of uncertainty and disorder, toward an ultimate joyous resolution. This is a description of the creative person and the associated cognitive style of "integrative complexity" (e.g., Barron, 1963a,b). It is also a description of a number of bipolar persons (Richards, in press-a).

g. Cultural brainstorming. Not everyone is "wild" or eccentric, and not everyone should be. In this context, we suggest a division of psychological labor into senders and receivers.

(1). Creative senders: The "far out" people who can "seed change." That certain persons, including persons at risk for bipolar disorders -- and perhaps also persons with an uninhibited vs. inhibited reaction to novelty, as studied by Kagan (1989), or who show higher levels of "psychoticism" as measured by Eysenck (in press), are rewarded for filling a necessary cognitive niche (Tooby & DeVore, 1987), or societal role. This involves generating new information or memes for the rest of society to contemplate (see also Barron & Bradley, 1990). These are the people who speak out, wake us up, and "seed change."

These people may well not have the final say. Society has a range of braking counterforces to select, modify, transmit, or just plain discard, new information (e.g., Csikzentmihalyi, 1988; Ludwig, 1992b; Richards, 1990). Stories reported, books published, papers read, pictures hung, compositions performed, complaints registered, votes counted. Certain bits of raw information, in addition, will be intrinsically more useful than others. For a healthy society, however, a significant ongoing "circulation" of new memes may be necessary.

Conventional "brainstorming" (Osborn, 1963) involves people or groups generating a wide range of ideas, including some very wild ones -- indeed one cardinal rule is that "anything goes" -- and judgment is deferred until later. By analogy, we propose the process of cultural brainstorming at a higher level of organization. A subset of the population generates all manner and sort of ideas. Some are useful and some are impossible. The major judgments are
meanwhile deferred, at least in a whole-society sense. Subsequently, other parts of the population work to sort these ideas out, to decide which are the most useful in a given situation. Of course, they won't always be right.

(ii). Creative receivers: It isn't always easy to hear the message. With creative ideas, reception is far from guaranteed, as Kuhn (1970) indicates in *The Structure of Scientific Revolutions*. One revolutionizing insight: "The sun, not the earth, is the center of the universe." This was Copernicus' heliocentric theory, and it had profound scientific, religious, and philosophical implications. The process of discovery can be pleasant for the creator (sometimes), but it may not be welcome at all to certain consumers. The psychological costs (e.g., Rubenson & Runco, 1992) may be too high. Consider the citizens who locked Galileo up for advocating the heliocentric view and related notions -- persons who weren't ready for a mental avalanche of ideas for which they were unprepared, and which they could not control. They preferred to deny, suppress, or avoid the information, and instead tried Galileo for heresy (Redondi, 1987).

(iii). Speeding up the rate of new ideas. How can we make a *society* more "open minded" to new ideas? (See Ludvig, 1992b; Lumsden & Findlay, 1988; Simonton, 1984, 1988, 1990). Perhaps, among other things, by insuring a certain "critical mass" of creatively processing persons at the everyday level -- persons who receive, enjoy, tranform, and integrate, those new *memes* or creative insights they run into. The schools can be a big help here -- we're talking creative styles and values. These creatively open people could help "seed change" at the level of reception, facilitating the major conceptual shifts that help bring about the societal changes of true innovation. The great many individuals at risk for bipolar mood disorders could certainly assist with such a role.

Finally, if society is to change even faster -- for some badly needed memetic evolution -- then society should be "seeded" with a greater number of these creative change agents, both the "senders" and the "receivers." The goal is a more flexible, productive, risk-taking age -- and there are certainly historical examples of Golden Ages for creativity in the past (Richards, 1990). Happily such transforming creative attitudes and methods can be taught. This should perhaps be a key aspect of what Ornstein and Ehrlich (1989) have called our "conscious evolution."

h. Genetic evolutionary advantage. Assuming these mimetic evolutionary phenomena are valid, does the genetic (reproductive) evolutionary advantage become clear, the survival edge that could maintain the gene(s) for bipolar disorders in the population down through the generations? After all, wouldn't one expect "genotype" to interact with this mimetic diversity, to produce more viable "phenotypes"? (e.g., Lumsden & Findlay, 1988; Tooby & DeVore, 1987). Not necessarily -- or at least not only. The potential mechanisms are still many, and they may all be true at once.

(i). Candidates for an evolutionary "edge." Perhaps the "advantage" is not creativity at all, but the hypersexuality that can be found with bipolar disorders themselves. Creativity, the so-called *compensatory advantage*, could merely be a byproduct or epiphenomenon.

In whatever case, though, the evolutionary edge is likely to be a grass roots matter, operating on the level of the everyday person. A few
outstanding creative writers, however reproductively active they may be, just aren't going to make the difference (Richards, in press-a).

Some other possibilities for "reproductive fitness," found in connection with a personal/family history of bipolar disorders (e.g., Goodwin & Jamison, 1990) include personal appeal, leadership qualities, and increased socioeconomic status. Creativity could also play an indirect role as a health-producing activity -- a bit like cardiovascular exercise -- yielding more vigorous, in-control, and immune competent people. There is indeed some evidence for this (e.g., Locke & Colligan, 1986; Pennebaker, Kiecolt-Glaser, and Glaser, 1988; Richards, 1990). Perhaps such people might also have higher fertility or reproductive success. This whole area badly needs study.

(ii). Cultural brainstorming and evolution. Nonetheless, the main hypothesis here has already been mentioned (and is not to exclude the others). Based on the notion of cultural brainstorming, we propose that persons at bipolar risk fill specific "cognitive niches" (Tooby & DeVore, 1987) and are rewarded by society for this. These are the colorful folks who can "seed change" at both the everyday and eminent levels -- they propose, the argue, they try out the new, they export it to others. If society wants this, these creators may attain recognition, socioeconomic status, perhaps sexual appeal, and also the means to raise a family.

But if society has "had too much," then some of these same people may perhaps be scorned, they'll be the ones who "go too far," who are odd, abnormal, and misfit, who should toe the line, behave in class, and "contribute to society like everybody else."

What is therefore proposed with the notion of "cultural brainstorming" is an open changing metabolism of novelty and reactive forces, in unstable equilibrium -- and one which, at various times and in varying degrees, approaches the "edge of chaos." But in this case, the process of challenging and responding, of creative mental evolution, takes place at the interpersonal rather than the intrapersonal level.
Example II — Multicultural Distortions

(1) The Disappearing Playwright: Aphra Behn

Dale Spender (1982) wonders why so many female thinkers have virtually "disappeared" from conventional historical records over the centuries, and in an 800 page documented book, she resuscitates a large number of these. Included is Aphra Behn, a highly popular playwright, as well as novelist, poet, adventuress, activist, abolitionist, feminist, and friend of John Dryden's in Restoration England, and who is buried not too far from Dryden, in Westminster Abbey. In a London that had only two theaters, Aphra Behn had seventeen plays produced in seventeen years. She also wrote thirteen novels. Spender wonders if Behn's typical outspoken advocacy from a woman's point of view, in plays like The Forced Marriage, had something to do with her relative "disappearance."

(2) Model: Outmoded Genetic Blueprints

As once occured with the dinosaurs, are we losing a foothold on our changing environment? Here, we propose both an antiquated genetic program, and, partly in response to this, the equivalent of "diseases" among collections of memes. At issue is the loss, or retarded or distorted growth in our dominant culture of parts of certain domains of knowledge (e.g., history or literature). At worst, major meme-complexes could become "extinct." Malcolm X (1964) addressed this possibility with outrage, when he accused Toynbee of saying that Africa was the only continent without a history.

(3) Problem: Adaptations to an Earlier Environment

At best, the richness of multiple cultures and viewpoints provides us a diversity of ideas, stories, sounds, visions, cultures, myths, remedies, traditions -- gives us multiple "memes" to select from -- and at a higher level of human organization than in the previous example of "conceptual overinclusion." These are social experiments that have worked, at least in some setting, have gone through their own mini-chaotic reactions to novelty, and had the rough edges removed. A certain amount of interchange and jostling among cultures and subcultures can broaden every one of us. When recast as "political fragmentation," this diversity has proven to be a societal condition for increased creativity (Simonton, 1990).

a. Opportunities lost. Yet, at times, we draw with great difficulty from the rich and varied sources around us. There is the isolation of geography and language, and unsuspected prejudices we may unknowingly assume from authority figures (consider the neglected wisdom of certain medical treatments considered unconventional in our society (Eisenberg, 1992) or, indeed, Spender's (1982) arguments about women intellectuals.)

In addition, false dichotomies between fields, e.g., the current devaluation of the arts in an increasingly scientific society, or the language of feelings "versus the language of logic, limit our potential to adapt to our world, and to accept all parts of ourselves and others (Richards, 1991).
b. Prehistoric biases. These problems, obviously, have complex environmental and genetic sources. Yet one worrisome genetic source derives from our evolutionary past, from our once necessary identification with small groups of kin or associates, in highly role-structured hunter-gatherer "bands." As strong as ties within the group could be, too, was the uneasiness felt about "strangers" from without (e.g., Tooby & DeVore, 1987; Glantz & Pearce, 1989; Wilson, 1983).

Today too, it is sometimes hard to think outside of our accustomed roles or reference groups. Yet the ancient programming that still has us searching for our in-group, while nursing our xenophobia, will not lead us well into the global information age, or help us solve problems requiring global cooperation. We are left instead with the legacy of weapons -- developed to defend against that everpresent stranger -- that could easily destroy us all (Barron & Bradley, 1990; Gruber, 1989; Lifton & Markusen, 1989; Richards, 1993).

Creative response is what's needed here now. Our genes can't fix this problem -- they can't change fast enough. It is up to the memes, up to what Robert Ornstein and Paul Ehrlich (1989) have called, in thier book entitled New World, New Mind, our "conscious evolution."

(4) Benefits.

a. "Political fragmentation" as a model. Consider the circumstances if we learn from diverse perspectives. In Simonton's (1990) historiographic research on political fragmentation (as found with independent nation states in the ancient world), growth could occur from peaceful juxtapositions, but not if the picture included devastating war or internal anarchy (with overwhelming external threat or internal chaos). We might find a loose parallel to a compensatory advantage within the range of possible political disruptions, loosely comparable to the example with bipolar disorders. For enhanced creativity, political fragmentation can create some social disorder, but not too much, while keeping the strengths of the "organism" intact.

b. Influences during the early years. Ideological diversity seems especially affected by political fragmentation -- yet this occurs with a generational lag. Simonton suggests these political events may be key environmental variables during the developing years. We add to this, from the chaos and complexity perspectives (Gleick, 1987; Waldrop, 1992), that a child might develop a richer mental mental connectivity, more fluid habits of movement within one's mind (static and dynamic factors), and fewer "frozen" mental areas of the in-group, out-group type (the in-group is right, the out-group is wrong) with the rich early exposure. This is consistent as well with the "creative style" of "integrative complexity" (Barron & Bradley, 1990; Richards, 1990, in press; Simonton, 1990). Conditions for creativity can come closer to the edge-of-chaos.

In addition, Simonton (1990) suggested that rich cultural diversity along with a localization of politics may nurture an internal locus of control, supporting greater creative initiative. This might be called the resilient position (e.g., Flach, 1990; Garmezy & Rutter, 1983; Richards, 1990), extended to this societal level. Plus there is lowered arousal with political fragmentation; this is important for creativity, and the opposite of the hyperarousal of
international war. It seems appropriate that a personal creativity may result from conditions enhancing societal possibilities.

(5) Reducing the Costs

Rapid global access in the new information age -- worldwide computer networks, data superhighways, and indeed the increased "externalizing" (Donald, 1990) of our own memories and thoughts, as we link more continuously into external data sources -- will make huge quantities of data available (Dertouzos, 1992), and eliminate many barriers to other cultures. We are already seeing new "electronic tribes" (consider "America On Line") that can make physical distance all but irrelevant. In addition there will be proliferation of cable channels, and interactive networks for special interests of all sorts (e.g., Kantrowitz & Ramo, 1993).

Yet "multiculturalism" is not merely a matter of information accrued, or arrayed out in a row. An integrated valuing of the range of human experience is central, and this will require attitude change, in the schools, in families, in social institutions. Acknowledgement that "there are may ways to live," "there is no one right answer," "there is cooperation as well as competition," that "everything is interconnected," that "process is at least as important as outcome," will all be a part of this. "Integrative complexity" (Barron, 1963; Barron & Bradley, 1990; Richards, 1990, in press) -- or the stylistic drive for complex integration of information -- will be one essential quality.

(6) Creativity as Memetic Evolution

Our genetic, as well as memetic, survival is increased when we avail ourselves of the huge and richly elaborated libraries of human experience -- and when we refuse to be burdened by "false memes" (or errors). If we honor personally a broader range of possibilities than we could ever conceivably even know or master, the ones we hope will be there, one day, will still exist. There is a parallel with species extinction, for we, in our shortsightedness, may well extinguish 1/5 of the species on this earth by the end of this century (Brown et al., 1991). Our conscious evolution needs to address the preservation of our heritage(s) as part of the preservation of ourselves.
Example III -- Resilience to Personal Adversity

(1) Overcoming Fears: Charles Lindbergh

Imagine you were a boy with frightening nightmares about falling off a cliff or building. Imagine too you had such a stoic and fearless father that he chose to undergo abdominal surgery for over an hour without an anesthetic, and he never once gritted his teeth. The boy was Charles A. Lindbergh, Jr., who spent much of his childhood energy overcoming his fears, whether threatening to jump from a high tree, racing his motorcycle along a stream bank or, when older, doing stunt flying in an airplane. In later years, of course, it was Charles Lindbergh who, by himself, flew The Spirit of St. Louis, a small monoplane, in the first nonstop solo flight from New York to Paris, across the Atlantic Ocean (Goertzels & Goertzels, 1962; Britannica, 1975).

(2) Model: Acquired Immunity

We turn to "benefits" from coping successfully with personal adversity. The biological model involves acquired immunity, through which an individual develops immune response to various threatening organisms and antigens.

The hypothesis here involves a form of psychic immunity, a creative stress-resistance developed under fire. The proposed benefits involve one's style of information processing -- the integration and courageous use of one's experience. Freud (1908, 1920) was the prime advocate of creative transformation of internal, unconscious conflict. We suggest that the past decision to confront, rather than avoid, various internal or external adversities, when followed by successful results, can result in increased ability and motivation for a courageously confrontative and affectively integrated future response. The difficulty is that many may be vanquished for the few that survive (see Richards, in press).

(3) Problem: Adversities Beyond One's Personal Control

It surely can't be an accident that, in one study of 400 eminent 20th century individuals, three-quarters came from troubled beginnings (Goertzels & Goertzels, 1962). Many eminent creative persons have dealt with early adversities, including troubled childhoods, poverty, parental illness, traumatic loss, physical disability, or mental illness (see Albert, 1983; Albert & Runco, 1986; Andreasen, 1987; Goertzel & Goertzel, 1962; Ludwig, 1992; Ostwald, 1991; Richards, 1993; Roe, 1963; Sandblom, 1989; Simonton, 1984, 1989). They have emerged competent and resilient, at least in the area of work performance.

We take as examples (a) persons with bipolar mood disorders, and (b) survivors of trauma. Results could conceivably apply to many others facing unexpected and emotionally charged shifts, stresses, and challenges, coming from without as well as within (Richards, 1993). This certainly includes the experience of having a depressed or bipolar parent. Mood disordered individuals can, themselves, experience sudden and unexpected shifts of mood that can disrupt their very sense of self, integrity, stability, and connection with others and their environment. Unlike some people, who can shut off bad moods or experiences

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and move on to something else, these people may find the shifts inescapable.

**a. Example of "affective integration."** Among other personal, interpersonal, and situational strengths that help people cope (e.g., Garmezy & Rutter, 1983; Rolf et al., 1990), we turn to different means people have for handling emotions, and once again to the example of bipolar mood disorders. Consider first how one creative actor establishes a mood:

You start with something peripheral -- the room, the smell, it's grandmother's house, and it always had a smell -- bread or whatever. If you don't push, that smell will lead to something else -- and something else. But you do it gently -- and it all starts connecting. Use the senses, the color of the room, a little chain reaction -- you get into that -- and (then) you speak the lines. (Personal communication, Richards, in press-a.)

**b. Avoiding adversities: Forces working against affective integration.** This fluid movement between different emotional states is neither easy nor common. Many people, in fact, have strong forces working against it. Their thoughts flow along more homogeneously in mood-congruent channels, as opposed to skipping readily from one affect to another (see Blaney, 1986; Bower, 1981; Richards, in press-a).

In addition, this flow is guided by principles of positive mood maintenance and negative mood repair. People tend to try to hold onto a good mood ("what a nice day," "everything's looking good," "I remember last year at the beach..." and to banish a bad one ("forget it!", "I'm not going to think about that.") (Isen, 1984, 1985; Richards, in press-a). Whole areas of experience get emphasized and deemphasized, if not banished altogether. This might be said to create a certain amount of mood-linked dissociation.

These forces can limit the rich associative mental networks (e.g., Simonton, 1989) that favor creativity. Paradoxically, mood factors may also damp the motivation for creativity. Isen et al. (1988) have shown that mood elevation tends to lower willingness to take risks. As the saying goes, "why take a chance with a good thing?" We suggest this creates a negative feedback loop that seems designed to discourage creativity! (Richards, in press)

**(4) Benefits: Affective Integration and Creative Courage**

**a. Confronting adversities: Forces favoring affective integration.** By contrast, persons experiencing bipolar mood swings beyond their control could conceivably develop a qualitatively different mental organization. Through contiguity, and sequential anticipation of swings between mood elevations and depressions, they could develop a more affectively integrated and complex mental organization (Richards, 1993, in press-a).

**b. The "flight from depression."** Of particular interest is mania, which has classically been described as "a flight from depression" (Eaton & Peterson, 1969). Hypomania too may have this quality. As one patient said, "I have felt infinitely worse, more dangerously depressed, when manic than when in the midst of my worst depressions." (Jamison, 1990, p.27).

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Whether or not such a manic defense actually succeeds, the alternation of mood states may also forge directional links between these affective conditions, that is, create associative pathways between diverse mood-linked schemas in memory storage. These could work against the more usual principles of mood-maintainence and mood-repair (see Richards, in press-a).

c. Building creative capacity and motivation. Indeed, the bipolar person suspects that good moods won't last anyway, but neither will depressed moods. And it is in action, not inaction, that relief from depression may seem most available. This more resilient response might occur, especially, for individuals with other personal strengths to support the effort, including intelligence, personal supports, and adequate ego-controls (Albert & Runco, 1986; Barron, 1969; Garmezy & Rutter, 1983; Jordan, 1990, 1992; Richards, in press). They could develop the ongoing stylistic conviction that negative material could be used toward positive purposeful ends (Blaney, 1986). Plus, negative material could increasingly come to evoke positive affect, derived from the success of mastery (Krystal, 1981).

Thus, success could result from confronting and transforming the negative affect, rather than from banishing it. Lasting results could include a more complex cognitive organization, increasing creative capacity, through richer associative pathways between affectively charged material, and with greater confidence about, and motivation for, facing difficulties directly, in creative confrontation. Each subsequent success would build this capacity even further (Richards, in press-a).

But the problem is, once again, the number that are vanquished by these events, for the few that survive.

d. Degrees of success and creativity: Treatment of severe trauma. This process of mastery also applies to the treatment of trauma. Yet trauma, in the form of early sexual or physical abuse of a vulnerable, trusting child, can leave in its wake major psychological and physical damage that may be altered only gradually and with difficulty (e.g., Peterson et al., 1991). In our analogy, such trauma represents the full-blown and devastating disease, rather than a more benign immunization against adversity and stress.

As the mind of the trauma survivor struggles somehow to cope with the inexorable, it may alternate between periods of emotional numbing, with cognitive and affective distancing, and frank amnesia, and periods of intrusive and lifelike recollection with intense and overwhelming affect. Treatment of trauma can certainly change lives, and progress can be dramatic, but at times progress will be slow, and recovery not complete.

Notably, Mardi Horowitz's (1988) model for treating post-traumatic stress disorder (see also Peterson, Prout, & Schwarz, 1991) is directed precisely at the resolution of such "incomplete information processing." Success involves forging links between diverse cognitions and affects that may have been banished completely from consciousness, or dissociated from each other.

Rather paradoxically, we suggest the divisions and distortions of consciousness borne of trauma may, in certain cases -- with a courageous processing of one's experience -- serve not only to treat the trauma but even to reverse some of the "normal" fragmentation of consciousness due to the
principles of mood maintenance and mood repair. In certain areas of experience, at least, a particular mental openness and creative flexibility may result. This could enhance creative courage and resilience, and could be a very hope-producing outcome indeed, in the treatment of trauma.

(5) Reducing the Costs

Must one endure, and integrate, painful early experiences to have creative courage? Must one have a severe mood disorder and somehow live with it? No indeed. There are a range of alternatives between forced traumatic experience and sugar-coating the world. The fact is, life involves problems, and the solution isn't to pretend that these don't exist. As we've said, one can treat the mood disorder. As for stress, one needn't erase it with high doses of positive mood maintenance but, rather, can learn to deal with it in measureable amounts.

a. Keeping realities in view. A child can be exposed advisedly to certain realities, and at the same time be taught to cope through small creative steps, encouraging a more resilient, effective, and self-confident style. Risks can be taken when there's a good chance of success, both on the personal level (e.g., facing fears of the dark, jealousy of a sibling, parents' arguing, e.g., through games, question-and-answer sessions, drawings -- fairy tales can also do this more passively), and on the social level (hunger, poverty, environmental deterioration, e.g., through concrete actions, including food collections, letters, student recycling programs); this can also build a sense of empowerment through group action.

A child can learn that there are problems, but that they can also be faced, made concrete and less frightening, and then manipulated creatively -- and that it can feel very good to do so (Berman, 1991; Kohn, 1990; Richards, 1993). Furthermore, this child can become one of many who succeed. Very few need be left at the wayside.

b. Creative personal confrontation of stress situations. The school has an important role. Consider two ten year olds. One is in a hurry and grabs the other's bike without asking. The second starts hurling abusive names and accusations. "You jerk, you thief, you creepy..." and so on! An adult can just separate them. But what if, instead, the children are helped to air their differences directly with each other, and then work out alternative solutions, perhaps through role-playing and role-reversal. They confront the problem head on, including the feelings it evokes. They are able to feel heard, understood, more empathetic for the other, and can gain a sense of alternatives. They can also lay groundwork for cooperative problem solving and conflict resolution.

For both children and adults, programs like Stress Innoculation Training (Peterson, Prout, & Schwarz, 1991) provide a formal route to responsible coping. Students learn and practice skills to conceptualize and respond to stress, taking steps that increase in difficulty. Poignantly, this program was used to help children in a wartime situation prepare for possible shelling raids. When an ultrasonic boom sent the school into the air raid shelter, other children panicked, but these children remained calm and organized.

c. Why not run away if you can? Be there any doubt about the healthy effects of creative confrontation, consider a study (Pennebaker, Kiecolt-
Glaser, & Glaser, 1988) in which college students were asked to write creatively about some of their most traumatic experiences, ones they had discussed very little with anyone. Each writing session was only 20 minutes long. Meanwhile, a control group wrote about something more neutral. After only four days, not only did the first group end up feeling better psychologically, but showed evidence of stronger immune system function. Creative confrontation was physically as well as psychologically healthier.

Why might this be? One woman who had been sexually abused as a child wrote first about her embarrassment and guilt. But with time, this turned into anger at her victimization, and finally yielded a broader perspective. "Before...I'd lie to myself....Now I don't feel like I even have to think about it because I got it off my chest." (p.244)) This woman saved valuable psychic energy for a better purpose. She also built confidence, mastery, and coping skills that would immunize her, psychologically as well as physically, against future adversity.

(6) Information Processing: "Seeding Change"

Progress involves overcoming difficulties. But these must first be seen, named, and accepted as part of our reality. In a rapidly changing world, we will have more of these conflictual "memes" to integrate into our awareness, in all of their emotional and intellectual complexity, if we're to cope and remain healthy as individuals and citizens. As things stand now, certain persons with "problems" are most apt to be forced into this creative awareness. Yet a healthy society in the 21st century will need more of this awareness in general, and also more key individuals to "seed change." We all need to learn to point out the problems, not run away, and to be our own creative instigators. If we collude with each other, we might even get somewhere.
Example IV -- Facing Global Threats

(1) Becoming Aware: "The Silence of the Frogs"

This was the title of a recent New York Times Magazine cover story (Yoffee, 1992). Across the world, even in environments that seem relatively pristine, these familiar amphibians are disappearing. Their immune systems have been weakened, and changes created by humans in our global environment likely have something to do with it. Indeed, frogs are broad samplers of nature in their complex life-cycles, moving from water to land, and from plant-eater to insect-eater. The immune system of the earth itself -- the healing balance we depend upon -- may in fact be at risk. Frogs have been likened, on a global scale, to the "proverbial canary in the coal mine."

(2) Model: Maladapted Genes (and "Missing Memes")

The main problem is that we don't confront global threats very well. For evolutionary reasons, we don't always even see them! When we finally take a look, we may put them quickly out of mind (Richards, 1993). The biological model involves outmoded genetic blueprints (and as before, there also remain issues of acquired immunity, or lack thereof.) The psychological focus is information processing: finding the "missing" process memes to increase our capacity for awareness, and then the content memes to warn us of approaching dangers. These tasks are part of our "conscious evolution" (Ornstein & Ehrlich, 1989).

(3) Problem: Delayed Awareness, Then Traumatized Response

The unprecedented threats we face include overpopulation, global warming, pollution, and decimation of natural resources (e.g., Brown et al., 1991; Ehrlich & Ehrlich, 1991; Rifkin, 1990). Yet despite the fact that our own futures, and our children's futures, are at stake, it may take a feature on the frogs to awaken us.

a. We don't even see it. Our perceptual and conceptual apparatus was formed in prehistoric times (e.g., Glantz & Pearce, 1989). (The whole process may be likened to how the visual system responds to light (Guyton, 1976; Ornstein & Ehrlich, 1989). Cells in our visual cortex are sensitive to edges and to dark-light changes.) Thus, we're out there in the grassy plain with our "hunter-gatherer" band, watching for the lion to attack us. Meanwhile, we're breathing poisons that we rarely even think about. Our systems are designed to respond to the sudden and spectacular -- a good means no doubt to get out of the way of the animal before it pounces. But a steadily growing and lethal danger can be easily overlooked.

Meanwhile, the trivial, if sensational enough, will still draw our attention. We are thinking about the marital separation of "Princess Di" on the cover of Newsweek, while depletion of the tropical rainforests presses forward at a rate of 10 city blocks per minute, threatening the balance of life on our planet (Adler, 1991; Ornstein & Ehrlich, 1989; Richards, 1993).

In many important ways, we are adapted to the wrong environment (Glantz &
b. We close our eyes to it. We don't always feel hopeful or effective about problems on a massive scale, so at times, we may simply abolish them.

Very much in collusion with each other, we may experience "psychic numbing" (as used by Lifton and Falk (1982) in describing reactions to Hiroshima), numbing ourselves even to the misery even at our doorsteps, when it appears too overwhelming to address -- the hunger, the poverty, the violence. We may read about this in the papers, we may give to a cause, we may even do some work (or we may not), but our actual human appreciation of the extent of the problem, or what it's like for that homeless mother and child, for instance, on a day to day basis, may be temporary or limited (Richards, 1993).

And currently, the figures of persons who doubt that the Holocaust even occurred -- a shocking one out of five people (Carroll, 1993) -- is an unbelievable testimonial to the capacity to distort or deny reality.

The strategies of positive mood maintainence and negative mood repair stand people in good stead here. They enhance a collective and consensual dissociation from some of the most painful realities. They are certainly not psychological strategies we should simply take note of and accept. They are perhaps better indicators of the amount of trauma which we, as a society, seem to endure and tolerate.

(4–6) Our "Conscious Evolution"

We all need to see ourselves as trauma survivors (see also Freyd, 1991; Jordan, 1993), to work toward an enhanced mental openness and creative flexibility, so that we can better tolerate, and thus better confront, the problems in our world. Some of our most creative people will serve us well here as truth-tellers and instigators. But to hear what they say, and to act, we will also need to attend to the "conscious evolution" of every one of us, if we are truly to progress as a species.
Some Overall Issues and Conclusions

(1) Reducing the risks, not eliminating the disease.

Kay Jamison (1990, 1993) has raised concerns that advances in genetic engineering may lead people to want to eliminate, or to select against, the gene(s) for bipolar mood disorders. This is a concern indeed.

It's not that simple with psychopathology and creativity. There are not clear cut categories or prescriptions. The range of presentations we see with a bipolar vulnerability is one reflection of the diversity of which we're capable -- and in a very real sense of the diversity that makes life possible. The border between the normal and abnormal is not only blurred, but it is shifting, depending upon a range of conditions. One genotype may produce this entire range. And we need this range.

The question is not one of eliminating a condition, or an illness. This is simplified thinking about a complex and shifting spectrum. If one were somehow to stamp out bipolar mood disorders, it would endanger the diversity of our world, and every one of us. Indeed, with such a prevalent condition as this, it probably isn't even possible. The question, instead, is one of reducing the costs, to allow people to make more subtle shifts within the phenotypic range, to ease the fates of individuals. Some persons may still choose not to seek this. Creativity as they understand it has a strong adaptive pull. Thus, the true benefits of treatment and costs of abstention should be widely known and strongly stressed. Beyond that, it is up to individuals. Conceivably, the very choices made could further increase the diversity we see.

(2) Creativity viewed as evolution of information

Creativity at once moves toward greater complexity, and an elegant simplicity in the organization of new forms. "Memetic evolution" can create more phenotypes, more options for us, and thus greater genetic viability. This is not particularly new. It's how it has always worked! But we might go further and ask: "Which is more important, evolution of genes, evolution of information -- or of both?" This question is more than an exercise, for with the possible advent of sophisticated artificial life ("A-life") in the 21st century, the information may be able to forge some evolutionary paths on its own.

(3) What we never see, and what we refuse to see.

This all assumes we know what's going on and can choose. But there are many events in our environment we don't even see, including crucial global problems and threats. Here is a crucial place where genetic evolution may be not only be aided by memetic evolution, but saved. Our "conscious evolution" should, without question, be one of our highest priorities.

But we must deal first with the other side of this coin. When we're numbed to what we do see, we remain helpless and deceived. We have our own mini-distortions to keep our daily life running smoothly (or so that we can think it
is). We act like trauma victims, and indeed we are dissociated from much of our human experience on the global level. Meanwhile, the whole system is about to explode. It’s our "conscious evolution" that can save us.

(4) Cultural brainstorming

The cultural context, and embedded social roles, may help determine the value of "creativity" versus "thought disorder." A subtle shift in atmosphere may help shape whether innovative individuals will be rewarded or censured -- that is, whether the creative heat will be turned up or down. Each individual will be rewarded according to individual efforts, as valued by society at a point in time. But the cumulative effect will give a portrait of a society.

At a higher level, there might be adjustments we can contemplate in a society, in both senders and receivers of innovation, adjustments in the proposed process of "cultural brainstorming" to further raise or lower the "creative heat." This is another potential aspect of our conscious evolution. And here we are, not quite sure about what is sick, and what is healthy, and missing a lot of other critical dangers in addition. At this point, it would appear, we had better turn the creative heat up.

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Disorders of the Pathways Involved in the Creative Process

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ABSTRACT: The apparent contradiction between the frequent incidence of affective disorders among highly creative people and studies that support significantly positive correlations between creative abilities and ego strength can be accounted for by distinguishing between the form and essence of the creative act. Creative potential is universal. All creative acts entail disrupting an existing homeostatic structure and subsequently synthesizing a new, more adaptive one. This cycle is a necessary part of the healthy response to stressful events. Thus, certain psychiatric illnesses can be reformulated as being disorders of psychobiological mechanisms underlying the creative process, a viewpoint that offers substantial benefits to psychotherapeutic efforts.

Is creativity a sign of mental health or illness? When we examine the biographies of those famous for their creative accomplishments, we cannot help but be struck by the frequent occurrence of emotional and behavioral disturbances. The poet, Edgar Allen Poe, the painter, Vincent Van Gogh, and the writer, Ernest Hemingway, are only three examples of that connection. Small wonder, then, that a powerful link between outstanding creative achievement and mental illness has been so widely presumed. Only recently, Andreasen (1987) reported that writers—and even their families—showed a significantly higher incidence of affective disorder, especially of the bipolar type, than a carefully matched group of control subjects. She employed as a measure of creativity the ability to produce the written word in such a way as to form characters and plots that would win critical and perhaps commercial acceptance. Lack of creativity was represented by the pursuit of careers in law, hospital administration, and social work, which, on the whole, involved more pedestrian, conventional, and structured forms of activity.

However, counter-positioned to those impressions, other investigators have found the very opposite, namely an inverse relationship between creative ability and maladjustment. For example, Schubert (1988) tested a group of college students using the Minnesota Multiphasic Personality Inventory and Guilford’s standardized tests of creative performance. Those students who tested high on the creative performance tests scored low on all scales of personality dysfunction; moreover, they were less likely to fail or drop out of school.

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than were the low-creativity performers. In fact, they were above-average achievers, significantly more autonomous and resistant to the pressure of their environment, and less bound by traditional and stereotyped responses. Other investigators, including Barron (1963), Cashden and Welsh (1966), and MacKinnon (1965), arrived at similar conclusions, finding a large number of ego-strength traits among creative men and women. Such coping abilities include: a high level of autonomy, a low likelihood of blindly incorporating external demands of society into self-image, the capacity to set one's own personal goals, verbal fluency, curiosity, openness to stimuli, intuition, social poise, a wide range of interests, a strong sense of responsibility, dedication to self-chosen purposes, originality, a blending of traits conventionally attributed to the more masculine or feminine side of the personality, and a strong sense of personal destiny.

At first glance, those points of view would seem to be diametrically opposed. Some highly creative individuals demonstrate a great deal of emotional instability, whereas others seem to possess the very characteristics that should provide unique strength to deal successfully with the stresses that commonly trigger emotional and behavioral disorders.

Form Versus Essence

One explanation for this seeming contradiction undoubtedly lies in the form of the creative process rather than its essence. When the creative act assumes a form that is, by consensus, an outstanding work of genius—be it a great painting, inspiring musical composition, or profoundly moving novel—many complex factors beyond creativity alone come into play. Not only is something new created, but the creator must also possess a singular talent that he or she has developed through practice and study. The creator's vision of the world around him or her and of the human experience must be unique and original. He or she must be strongly motivated to express talents creatively, considering the obstacles that must often be overcome and the discipline that must be exercised with regularity. Such motivation often represents a way to resolve internal conflicts or a protection against the disorganizing and immobilizing potential of such conflicts (Storr, 1972). With a few notable exceptions, da Vinci being one, such creative geniuses tend to be intensely one-sided; their creative efforts are made at the expense of many other dimensions of ordinary living, thus setting up a condition of relative deprivation. Finally, they must have the means and the opportunity to engage in their creativity; shortage or absence of such resources readily induces ongoing frustration. Therefore, their apparent susceptibility to emotional disturbances may rest as much in the conditions required for their creative expression as in their creativity itself.

It may be no less important to define the arena in which an individual's exceptional level of creativity operates. Cattell and Butcher (1970) surveyed the lives of eminent scientists and concluded that the typical research scientist of genius appeared to be more introverted and stable and less prone to behavioral illness than creative artists. Hudson (1968) also noted that scientists seemed less likely than artists to experience mental and emotional disorders. He referred to the scientists as "convergers," whose personalities were more tightly structured and controlled from early life, and used the term "divergers" to describe the make-up of artists, whose per-
sonality structures were more loosely knit and who revealed more emotion and instability.

Originality

Another aspect of creative greatness is originality. To be original implies that one is able to look at something in a way that is meaningfully different from the way in which the object is ordinarily considered. Einstein’s theory of relativity falls into this category. In his doctoral thesis research, C. Flach (personal communication, 1986) uncovered a clue as to the roots of originality. He studied visual information processing styles in relation to personality profiles and performance on standardized tests of creative problem solving. Those subjects whose preferential form of information processing could be called “central” and whose scores on psychological testing showed strong field independence, appeared to be more introverted and less responsive to external stimulation or vulnerable to its diversionary and prejudicial influences. They also scored significantly higher on tests of originality; therefore, one can hypothesize that an inherent part of originality in the creative process depends on a long-standing—perhaps even life-long—tendency to be more or less perceptually cut off from, or independent of, environmental input, less susceptible to adopting conventional wisdom, and hence freer to form one’s own perception of reality.

This suggests an interesting difference between the requirements of scientific and literary creativity. The mind in search of new mathematical formulations can easily benefit from being divorced from ordinary environmental stimuli. The writer, attempting to bring creative originality to bear on his or her perception of human events, must continually shift between a state of contact with and observation of the world (which necessarily has an impact while he or she does so) and still remain sufficiently detached to permit singular interpretation of events that are to be expressed in the written produce. Moreover, we can even speculate that the writer’s relationship with the people he or she creates on the page may well assume such power and reality in his or her own mind that he or she may become vulnerable to the kind of depression that originates within interpersonal contexts (Klerman & Lubin, 1988).

The Disruptive-Reintegrative Nature of the Creative Process

When we look beyond the form that creativity takes to the essence of the creative process itself, its nature assumes much broader dimensions. Whether one is engaged in searching for a new scientific theory or attempting to solve one of life’s seemingly unsolvable problems, the underlying process involves the disruption of existing mental, emotional, interpersonal, or environmental structures, and the subsequent building of new, more suitable and more adaptive ones.

Kubie (1958) defined creativity in the broadest possible terms. Creativity, he stated, implied invention—the uncovering of new facts or new relationships among new and old data. “This is not the whole of creativity,” he wrote, “but an essential part of the process without which there can be no such thing as creativity” (p. 50). Wertheimer (1959) defined creative thinking as “the process of destroying one gestalt in favor of a better one.” He viewed the phenomenon within Gestalt theory, involving closure and the ability to shift from one whole to another.
Stein (1988) described the fundamental process of creativity in this way: "At the start of the creative process the creative individual experiences a state of disequilibrium. His psychological condition is marked by disturbed homeostasis—tension arising from a lack of perceptual closure and a lack of emotional satisfaction with the existing state of affairs. This total state may be traceable to the creative person's own doing... or he was uniquely predisposed and sensitive to the disequilibria already existing in his environment" (pp. 53–54). The creator may be acting or reacting to internal or external conditions. As he works his or her way forward, the capacity to tolerate ambiguity is manifest... to quote Stein, "to exist in a state in which he does not necessarily comprehend all that he perceives or feels" (p. 54). Such lack of structure inevitably generates emotional distress, which usually takes the form of anxiety or depression, but not infrequently with a disorganizing quality.

During the creative act, access to many levels within the individual's personality is required. Memories, perceptions, anticipations, and imaginations commingle; the situation is not unlike the episodes of regression and reduced intrapsychic structure seen in the course of psychoanalytic psychotherapy, the so-called "regression in the service of the ego." Gradually, new ideas and combinations of ideas emerge until one or more takes shape; that illumination and synthesis is commonly associated with a sense of joy and even exhilaration. In the end, closure takes place. The new insight or vision is then ready for critical scrutiny. If its validity is established, its actualization usually calls for further dedicated, persistent effort of a highly organized nature.

In this sense, the term creativity can be applied to any form of human discovery, however personal, regardless of whether or not it is great, original, or socially recognized as innovative. Is not the child who destroys one perception of himself or herself in favor of a new one—as in discovering that mastery of motor skills imparts control over the environment—engaged in a creative act? Is not the patient who gains a remarkably new insight, such as a radically different way to view his or her family relationships, fulfilling Kubie's definition of creativity as "the uncovering of new facts or new relationships among new and old data?" Has not the person who is engaged in reorganizing the bits and pieces of a life shattered by economic reversals, divorce, or the death of a loved one embarked on a journey that demands creativity for its successful completion? Don't these require the formation of a new Gestalt? In fact, would it not be more accurate to state that any significant change in the organization of one's personality, or in the meaningful structure of one's life, demands activation of the creative process? This would seem to be a necessary prerequisite for proceeding from the demise of things as they have been to the construction of things as they are becoming and will be.

The need for disruption and reintegration of one's personality structure and surrounding environmental conditions recurs throughout the natural life cycle. The degree to which this will be true of any one person depends greatly on the conditions of his or her life. As Butler (1903–1957) wrote in The Way of All Flesh: "In quiet, uneventful lives, the changes internal and external are so small that there is little or no strain in the process of fusion and accommodation; in other lives there is great strain, but there is also great fusing and accommodating power. A life will be suc-
cessful or not, accordingly as the power of accommodation is equal or unequal to the strain of fusing and adjusting internal and external changes" (pp. 296–297).

Moving from childhood to adolescence, from young, single adulthood to being married and becoming parents, reaching middle age, and moving beyond into later life—each shift requires some forfeiting of both intrapsychic self-perceptions and external landmarks that had been established in prior phases of life but that no longer apply to present circumstances. Additional stresses, such as accidents, unexpected illnesses, divorce, the death of a child, serious financial reversals, and even high levels of success and achievement, also mandate a period of psychobiological disruption to set the stage for reintegration and the formation of a new, more differentiated psychic structure. The essence of the creative process must come into play repeatedly in everyday events in the lives of people whenever and wherever they must abandon old ways of looking at things in favor of new ones; when they shed obsolete responses in favor of new skills, acquire important insights, or rebuild the conditions of their lives.

**Creativity and the Resilience Hypothesis**

The recurring need for disruption and reintegration forms the basis of the view I have called the *resilience hypothesis* (Flach, 1988b). Psychobiological resilience is that combination of psychological, biological, and environmental elements that must be present for the successful transit of stress-induced episodes of disorganization and reorganization. Not surprisingly, one of the central attributes of resilience is the ability to think and act creatively.

In fact, instead of asking whether creativity is a sign of mental health or illness, we would better inquire: *Does mental illness represent an abnormality or dysfunction in the normal process of creativity or various processes which serve as the basis of creativity?*

As a first step in answering that question, we must be willing to redefine the nature of mental and emotional illness. Psychiatric diagnosis has evolved in a systematic manner through the identification of clusters of psychological and behavioral symptoms that seem to fit together into coherent patterns and follow more or less predictable clinical courses. But psychiatric diagnosis suffers from serious limitations. As with the nature of creativity, form must be distinguished from essence. Symptom clusters are little more than a matter of form. The essence of the turbulent, disorganizing event itself—whatever traditional symptomatologic profile it assumes—is something else, and a wide variety of states of emotional disturbance that clinicians presume to represent illness may in fact not warrant such a conclusion at all.

Consider depression. Is the experience of depression evidence of illness in and of itself? The common denominator in many episodes of depression is that they are triggered by stressful events, such as the loss of someone or something valued, or more specifically the loss of a vital influence that supports one's identity and self-esteem (Kaplan, 1987). If we examine the elements that go into a diagnosis of affective disorder, we find that illness depends not so much on the melancholic mood itself but rather on the phenomenology of how the mood is experienced, and on the resources that should enable the depressed person to recover effectively from a depressive episode in a reasonable period of time.
What is true of depression is no less true of other forms of behavioral distress, from anxiety to disorganizing panic. It is not so much the painful emotional state nor the extent of personality disorganization that indicates illness, but how the episode of disruption is managed, how it is interpreted by the patient, and how well and quickly reintegration follows.

Three Opportunities for Illness

According to the resilience hypothesis, there are three opportunities for illness. The first lies in the inability of the person to experience disruption when confronted with stresses or changes that demand it. The presence of a rigid, inflexible personality organization and the pervasive use of such defensive mechanisms as denial—however well such a person may function in the world—represents at the very least a special vulnerability to illness. Lack of personal growth and the failure to learn advanced adaptational abilities render such persons less and less able to deal with change in themselves or others. They can also give rise to a personality structure that, if ruptured by extreme stress, can lead to overwhelming disorganization and the tendency for such disorganization to persist with the same tenacity that once sustained the original inflexible structure. Furthermore, recent evidence suggests that such inflexibility sets the stage for a variety of psychosomatic illnesses, and even cardiovascular disease or cancer, particularly when it is associated with a high level of hostility or learned helplessness, respectively (Eysenck, 1987).

Such people are reminiscent of Koestler’s (1974) description of the plight of Australia’s koala bear, overly organized and too specialized in its organization. “. . . that charming and pathetic creature, the koala bear,” Koestler wrote, “which specializes in feeding on the leaves of a particular variety of eucalyptus tree and on nothing else; and which, in lieu of fingers, has hook-like claws, ideally suited for clinging to the bark of the tree—and for nothing else” (p. 281).

The second opportunity for illness lies in the manner in which the individual experiences disruption. Anxiety and depression are the norm rather than the exception at such times. Should disruption be associated with auditory or visual hallucinations, one may conclude that the form it has taken is unhealthy. But even then, one cannot be sure. For example, the difference between a state of anxiety and depression that can be successfully managed and one that propels itself into a state of utterly disorganizing panic can lie not so much in the level of health of the patient as in the nature of his or her environmental support systems. Not infrequently, moderately depressed individuals confronted with rejecting and unempathic husbands or wives can be driven to a degree of chaos that would never have occurred had they had spouses who sensed their suffering and could reach out to them caringly (Flach, 1986).

Successful management of the disruptive phase of the normal response to stress involves the ability to tolerate ambiguity, a characteristic cited earlier by Stein (1988) as describing one of the unique qualifications for the creative act. It is this phase in the cycle that I believe that Andreasen (1988) was referring to when (in her response to my letter about her article in the American Journal of Psychiatry [Flach, 1988a]) she wrote, “I suspect that creative people have a characteristic underlying cognitive style that predisposes them to be both creative and vulnerable to fluctuations in mood . . . characterized by curiosity and adventuresomeness . . . and a willingness to take risks. This style is likely to generate more positive and negative life events, more sub-
Subjective experiences of both happiness and sadness, and a fresh and innovative approach to almost any task that is undertaken" (p. 772).

The third opportunity for illness lies in the failure to reintegrate—when living on the edge becomes a life style. There, the chronic form of behavioral illness comes in. If one persists in a condition of disorganization, anxiety and depression will necessarily endure and closure will not take place. What begins as a healthy response to stress becomes disabling.

Again, the reintegrative stage of the resilience cycle involves psychological, biological, and environmental parameters. Certain patients whose distress and disability persist over time lack adequate biological resilience. Among depressed patients, resilience is a function that can often be restored by means of psychopharmacologic agents such as the antidepressants. Certain so-called schizophrenic patients with a tendency to relapse into disruption may be said to lack adequate social and vocational skills to support their lives in the community, a situation that can often be corrected through training and education (Liberman & Engel, 1989).

Psychiatric Illness as a Disorder of Creativity Processes

The appearance of emotional and behavioral instability among highly gifted and creative individuals could be seen as indicative of an inevitable marriage between creative accomplishments and illness. However, it seems more logical to view the connection as a reflection of a disorder that specifically involves the ability to successfully engage in the cycle of disruption and reintegration provoked by stress and disequilibrium.

In other words, the essence of the creative process—regardless of what form it assumes—is present, either actually or potentially, within most human beings. In that sense, it is akin to any other psychological process, such as memory or intelligence. Thus, certain forms of mental illness, primarily those that are commonly precipitated by stress (as in the case of affective disorders) represent a disorder of the essential mechanisms that underlie the operation of creativity. They include the abilities to recognize and reject incorrect or maladaptive personality or environmental structures, to tolerate the uncertainty of living—for a while—without such structures, and finally, to synthesize and construct new structures that are more appropriate and usually of a higher degree of organization than those that went before.

Therapeutic Implications

Envisioning certain forms of psychiatric illness as disorders that involve the psychobiological pathways of the creative process has an important implication for patient care. In ordinary clinical assessments, the therapist can assess the creative skills of each patient with an eye toward the role those skills can play in furthering the patient's recovery. Usual psychometric tests can be supplemented with those that evaluate various aspects of creative ability (Davis & Kaltsounis, 1977; Hocevar, 1981).

Many highly creative individuals fear psychotherapy and biological treatment lest their original output level be diminished. That is not an entirely spurious concern, because inappropriate psychotherapy strategies can inadvertently interfere with creativity in an effort to "normalize" the patient. Repositioning emotional dysfunction caused, in part, by disordered creative process can set the stage for compliance.

This concept of creativity can also en-
hance restoration of a patient's morale, seen by Frank (1974) as the heart of psycho-
therapeutic healing. For example, if a pa-
tient can view his or her illness partly as a
natural response to overwhelming stresses
as well as one that promises the possibility
of a more effective level of adaptation af-
the patient can look on a period of resurgent distress as part of a learning experience rather than simply as a relapse—both hope and mo-
tivation for therapy can be strengthened.
In addition, certain negative counter-
transference reactions can be mitigated.
One of the more difficult aspects of therapy is the challenge patients represent to therapists' sense of their own emotional health. Even as therapists seek a frame of reference within which to evaluate the dis-
tressed persons consulting them, how can they not help but position themselves within a similar context? If episodes of emotional distress—even to the point of dys-
function—are regularly seen as signs of illness rather than reflecting a stage in the creative experience, what conclusions can ther-
apists draw with regard to their own feel-
ings of uncertainty, anxiety, and futility?
The skilled therapist must be the mas-
ter of ambiguities. As such, he or she must be steeped in knowledge about and ex-
perience with creativity.

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Creativity and Mental Health

in Everyday Life

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ABSTRACT: The connection between mental health and creativity has traditionally been studied in terms of outstanding aesthetic-professional creativity and mental illness. More interesting, however, is the possible connection between "everyday" creativity and mental health. Everyday creativity involves attacking day to day activities in a divergent way: It derives from a complex of cognitive, affective, personal, motivational, and social factors, and is characterized by openness, flexibility, autonomy, playfulness, humor, willingness to take risks, and perseverance. These characteristics are also consistently emphasized in models of "normal" personality growth, so that the possibility of promoting mental health arises by fostering creativity in day to day life. Several small studies described in this article give examples of how this might be done and the kinds of benefits which can result.

High Creativity and Mental Illness

The idea that there is a relationship between creativity and mental health is one of psychology's oldest issues: Plato, for instance, concluded that poets are set aside from ordinary mortals by the fact that the gods speak through them. More than 2000 years later, at the beginning of the era of modern psychology, Lombroso (1891) argued that genius and madness are closely allied. Over the years, this theme has repeatedly been the subject of research (e.g., Ellis, 1926; Juda, 1949; McNeil, 1971; Rothenberg, 1983). The idea of a connection between creativity and mental illness has received renewed attention in the last few years. Broadly speaking, two approaches are to be seen: Some studies have examined highly creative individuals and have asked whether they display a significantly higher incidence of mental illness than ordinary members of the public (e.g., Andreasen, 1987). Others have studied people regarded as either "odd" (e.g., Weeks & Ward, 1988) or mentally ill (e.g., Richards, Kinney, Lunde, Bennet, & Merzel, 1988), and have asked whether they are unusually creative.

In seeking to explain the psychological connection between creativity and mental illness, Cropley and Sikand (1973) initially adopted a cognitive position, hypothesizing that the connection is best explained in terms of thinking and related processes. They showed that the members of a group of creative ar-

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architects, writers, and musicians resembled a sample of patients diagnosed as schizophrenic in some aspects of the cognitive domain, and that both groups were significantly different from people who were neither creative nor schizophrenic. However, they also found that, despite the cognitive similarities between schizophrenics and creatives, there were substantial noncognitive differences between them: The creative individuals tended to be excited by unusual associations in their own thinking and tried to build upon them, whereas the schizophrenics were frightened by them, and tried to avoid them. Thus, Cropley and Sikand concluded that the relationship between creativity and psychological disturbance is more a matter of affect than of different ways of thinking. Other early studies of creativity and schizophrenia are those of Heston (1966), Karlsson (1970), and Walder (1965).

Holden (1987) described a study by Jamison of 47 British artists and writers who had all either won major awards or were members of the Royal Academy. Jamison found that 18 had been treated for manic-depressive conditions, a figure six times as high as would be expected in the general populace. Linking these data with observations of famous creative people from the past such as Byron, Shelley, Coleridge, and Poe—who were apparently able to work creatively only when their mood was elevated—Jamison concluded that mood "highs" are essential for creativity. Such "highs" are characterized by unusual fluency in thinking (i.e., cognitive processes), but also by high levels of motivation and an overwhelming feeling of self-confidence (affective variables) (see Holden, 1987). However, as both Holden (1987) and Andreasen (1987) emphasized, the connection between affective disorders and creativity may not be directly causal in nature at all: It is possible that wide mood swings, on the one hand, and rich imagination and high motivation to create, on the other hand, both result from a common cause, without actually influencing one another directly. Such a common cause could be "emotional reactivity" (Holden) or possession of a particularly labile or "fine tuned" nervous system (Andreasen)—a tendency to react unusually strongly to external stimuli and internal mood signals. It is important to notice that, as Richards and Kinney (1990) concluded after examining the results of a number of studies in the area, florid psychosis does not seem to be a favorable condition for creative productivity; nonetheless, mild affective disorders may favor it, possibly through mechanisms such as those just outlined.

**Everyday Creativity**

The approaches just discussed have three important limitations: They have (even if implicitly rather than explicitly) understood creativity as professional and aesthetic (practical/scientific/artistic/literary) production; they have concentrated on people whose creative behavior reached a level of unusualness or rarity sufficient to bring public acclaim; and they have concentrated on mental illness. By contrast, the present article focuses on creativity as (a) an everyday phenomenon found in all people and (b) as a facet of personality capable of contributing to the maintenance of mental health.

Of particular interest in this context is the conceptualization of creativity as a qualitative aspect of mental functioning: About 20 years ago I described creativity
as a "style" for applying intelligence, rather than as a separate ability (Cropley, 1969); more recently, Gardner (1983) referred to creativity as the highest form of application of intelligence, and Runco and Albert (1986) defined it as intelligence in action. Horn (1988) distinguished between two basic styles of reacting to novelty, one involving avoidance, the other attraction. In essence, the "style" approach argues that, at all levels of ability, people may deal with situations requiring intelligence either by trying to re-apply the already learned, concentrating on proven tactics, and relating the new situation to the familiar, or by searching for the novel, backing intuitions, taking a chance, and so on. For brevity's sake, I will call the first kind of tactic "convergent," and the second "divergent." In real life these are obviously stereotypes, as few people function permanently at the one or other extreme, most tending toward a greater or lesser degree of divergence/convergence according to the particular situation in question.

An early treatment of creativity as an aspect of day to day life was that of Nicholls (1972), in an article entitled "Creativity in the person who will never produce anything original and useful: The concept of creativity as a normally distributed trait." In essence, he argued that creativity need not be regarded as something which is present in a tiny group of exceptional people but absent in most, but as a quantitative property which is, in principle, possessed by all, even if to different degrees. More recently, Richards et al. (1988) reported on an investigation of creative activities carried out in everyday life by "ordinary" men and women without pretensions to fame as creators. At work, everyday creativity was divided about equally among the arts, the sciences, the humanities, the social sciences, organizational activities, and leadership. Leisure-time creative activities were, however, almost completely confined to the crafts and the fine arts. Among children and adolescents, Milgram (1990) reported on out of school and leisure activities in, among others, science, music, fine arts, writing, drama, and dance.

Psychological Components of Everyday Creativity

The connection between creativity as a psychological disposition and actual creative behavior in the forms investigated by Richards et al. (1988) or Milgram (1990) has been elucidated by Nečka (1986). He argued that people behave creatively when three psychological elements are present: special content-related knowledge and skills (for instance, a carpenter must know how to use tools, a writer how to put words together to form sentences); special creativity facilitating abilities (the ability to get new ideas, see the unexpected, make new combinations, branch out from the known, and the like); and willingness to expend energy in producing some product or other (i.e., motivation). Only when all three prerequisites are fulfilled is there what I call "freely developing creativity." In other cases, where one or more element is missing, "incomplete" forms of creative behavior are seen. Nečka lists a few examples of only partially realized creativity: abandoned creativity (motivation is lacking), frustrated creativity (high levels of technical skill exist, but the spark involved in having new ideas, seeing the unexpected and the like is missing); or juvenile creativity (technical skills are missing—a person might wish to paint creatively and may have many novel ideas, but simply be incompe-
tent in design or use of the brush). Of particular interest in the present context are the two psychological components—on the one hand, creative thinking, on the other, personal characteristics (motivation, personality).

Cognitive Processes

The initial impulse in modern times in this area came from the work of Guilford. Early theorizing adopted a relatively undifferentiated approach (intelligence as convergent thinking, creativity as divergent thinking), but this has since been expanded by a number of authors. Torrance and Hall (1980), for instance, concluded that creativity involves: (a) unifying disparate ideas by putting them into a common context; (b) being able to imagine, at least as a theoretical possibility, almost anything; (c) enriching one's own thinking through the application of fantasy; and (d) adding spice to one's thinking through the use of humor.

Nečka's (1986) "triad" model of creativity went beyond a purely cognitive position. Nonetheless, the cognitive elements are of great importance; they involve original, inventive, effective thinking strategies, which are prerequisites for actual creative behavior in real life settings, although not by themselves sufficient. These are essential tactics for processing information, and include: (a) forming associations; (b) recognizing similarities; (c) constructing metaphors; (d) carrying out transformations; (e) selectively directing the focus of attention; and (f) seeing the abstract aspects of the concrete.

Sternberg (1985) emphasized the importance of "metacognitive" processes through which people reflect upon their own thinking, evaluate it, choose new tactics, and differentiate between blind allies and promising approaches. Among the metacognitive processes which are important for creativity are: (a) recognizing the nature of the problem; (b) representing the problem internally; (c) determining which solution strategies are relevant and promising; (d) choosing and organizing cognitive resources; (e) combining thinking strategies; (f) evaluating progress towards the solution of a problem; and (g) identifying new lines of attack when old ones fail.

Creativity as a Facet of Personality

Despite the importance of cognitive processes, creativity depends upon more than thinking skills (Barron & Harrington, 1981). In fact, Farisha (1978) concluded that personality is consistently emphasized in the literature as a deciding factor in the emergence of creativity. People need to be willing to branch out and to break away from the conventional; to have confidence in themselves and their ideas; to be able to tolerate the anxiety resulting from questioning the commonplace; to be able to stand up to pressure to conform to the group; to be capable of living with the consequences of being divergent, of accepting and coming to terms with the "loneliness of the long distance runner" (cf. Rothenberg, 1990).

Many attempts have been made to give details of the association between creativity and personality. Earlier studies (e.g., Delas & Gaier, 1970; Foster, 1971; Taft & Gilchrist, 1970) have, like the by now "classic" studies of Barron, Cattell, MacKinnon, Roe, and Torrance, suggested that persons such as artists and creative scientists have specifiable personality characteristics which differentiate them from the public at large. In summarizing some of the findings, Neff (1975, pp.75-76), listed the main charac-
teristics on which there is agreement. These include: (a) flexibility; (b) sensitivity; (c) tolerance; (d) sense of responsibility; (e) empathy; (f) independence; (g) positive self-image; (h) need for social contact; and (i) interest in getting ahead.

The list has been extended by Heinelt (1974, p. 29), who identified the following characteristics of creative school children: They (a) are usually introverts; (b) are self-willed; (c) are not dependent upon group support; (d) are intellectually active, and ask many questions; (e) are extremely flexible in their thinking; (f) show wit and a sense of humor; (g) often remain aloof from their classmates; (h) prefer to work independently; (i) are often socially isolated; (j) feel superior to their classmates and tend to be arrogant; and (k) are not among the most popular in their class. In addition, certain traits seem to be seen less frequently in creative people than in noncreative, although there is some disagreement in the relevant literature on specifics (Neff, 1975). The list of "uncharacteristics" of creative individuals includes: (a) feeling of well being; (b) willingness to conform; (c) self-control; (d) desire to make a good impression; and (e) conformity.

Creativity and Motivation

In addition to possessing certain personal traits, creative individuals are characterized by their willingness to expend effort. Some people seem to be able to tolerate high levels of uncertainty, or even to have a need for novelty (Cropsey & Sikand, 1973; Dellas & Gaier, 1970). Associated with this is the willingness of some people to take risks, for instance by abandoning previously held positions or trying strange or different tasks.

These factors define "the courage to create" (Motamedi, 1982, p. 84). Finally, as Roe (1953) initially showed and later writers (e.g., Biermann, 1985) have confirmed, successful creative people as a group show high levels of persistence—they stick at something once they have started it. Treffinger, Isaksen, and Firestien (1983) developed the following list of key characteristics of creative individuals in the domain of motivation. Creative individuals display: (a) curiosity; (b) willingness to respond freely in stimulating situations; (c) openness to new or unusual experiences; (d) willingness to take risks; (e) sensitivity to problems and a desire to solve them; (f) tolerance for ambiguity; and (g) self-confidence.

In his model of creativity, Nečka, (1986) distinguished five classes of motives which energize creative behavior:

1. **Instrumental motives**: creative behavior is a means to an end.
2. **Playful motives**: creative behavior leads to a state of inner satisfaction. This kind of motivation is also an aspect of the process of self-actualization;
3. **Intrinsic motives**: creative behavior is an end in itself. The value of creativity is regarded as self-evident, and creative behavior arises from a sense of duty or the feeling of having a mission.
4. **Control motives**: creative behavior increases a person's level of competence or strengthens the feeling of having the external world under control.
5. **Expressive motives**: creative behavior makes it possible to communicate one's own thoughts and feelings to other people.

In the case of actual creative achievements, these motives probably interact and combine rather than acting singly; for instance, a verbally gifted person might seek fame and fortune through the writing of novels (an instrumental
motive), but at the same time have a strong sense of mission (intrinsic motivation) or a desire to "reach" other people (expressive motivation). It is also probable that different people show different combinations or patterns of motives, with different weightings of the various areas in different people. As a result, it is possible to speak of an individual structure of motives. Furthermore, it is likely that these structures change with the passage of time. The original profit motive of the novelist mentioned above could, for instance, eventually be replaced by the feeling of having something important to say to humanity.

The different kinds of motivation for creativity listed by Nečka (1986) include a mixture of external and internal factors. Amabile (1983), however, argued that extrinsic motivation (i.e., the desire to obtain rewards offered by the external world and consequent shaping of one's behavior in order to make it pleasing to external authorities, such as teachers) is deadly for creativity. According to her, the crucial element in creativity is intrinsic motivation; a certain activity is pursued because it provides internal satisfactions—it is fascinatingly interesting in itself for a particular person, satisfies some internal drive or need, or produces a feeling of pleasure or well-being. Amabile went so far as to argue that the real task in fostering creativity is helping children become immune to extrinsic motivation (see also Amabile, Goldfarb, & Brackfield, 1990).

Social Factors in Creativity

Newborns display many socially unacceptable behaviors. However, with the passage of time the hitherto asocial infant comes to confine itself to patterns of behavior acceptable to the people around it. Even "difficult" children may come, in adulthood, to stick rigidly to their society's way of doing things. A transformation occurs with the passage of time as children learn to conform to the rules of the society in which they live. Not only are specific forms of behavior learned, such as what to say when introduced to someone for the first time, but also more general values and standards. Children learn, for instance, that authority may or may not be questioned, that the good opinion of peers is or is not of supreme importance, that to stand alone is tolerable or intolerable, and so on. As Cropley (1973) put it, each society has a central core of behaviors which are totally taboo; public defecation would be an example from Western European-North American societies. Surrounding this is a shadow zone of behaviors which are barely acceptable and lead to public disapproval, but are not necessarily "fatal," and a further zone of mildly disapproved behaviors, and so on. The actual contents of the various zones differ from society to society, and even from social class to social class both within and across societies. Also, there are often discrepancies between what is officially frowned upon, for instance by virtue of being against the law, and what is publicly tolerated, accepted or even regarded as brave or smart; an example of this is tax evasion. Despite the limitations just outlined, it remains true that the rules of society restrict freedom of ideas—naturally, no evil intention lies behind this; on the contrary, it is vital for all groups of people who share the same living space to agree on certain ground rules. The problem from the point of view of creativity, however, is that the rules may go far beyond what is needed for peaceful coexistence, and may become rigid and self-perpetuating. As Fromm (1980) put it, a society has
"filters" through which not only behaviors, but also ideas must pass. Otherwise they are rejected; they become literally unthinkable. Amabile et al. (1990) referred to "surveillance," through which a society keeps watch on its members and makes sure that the rules are not broken.

The effects of social standardization of thinking on creativity raise questions about the whole relationship between creativity and nonconformity. To the extent that their divergent thinking is often accompanied by flamboyant nonconforming behavior, creative thinkers frequently show up as highly unconventional. According to Cropley (1973), creative people are in a certain sense social deviants, because they often behave in ways lying outside the usual or expected in their society, and thus represent "failures" of the socialization process. Cropley even speculated that creative individuals may "suffer" from a biologically determined learning disability, deriving from faulty uric acid metabolism (Cropley, Cassell, & Maslany, 1970). The notion of creativity as involving negative social characteristics has also been put forward by Albert and Runco (1986), who pointed out that changing things, behaving differently and independently, inherently involves being dissatisfied with the status quo; The creative person is "oppositional and discontented" (p. 337). This may lead to rejection by others and imposition of sanctions ranging from sarcastic or humiliating remarks, exclusion from important peer groups, even rejection as "weird" or "crazy," or ultimately incarceration. Thus, the creative individual runs the risk of becoming a "marginal" person (Wallace, 1985). For this reason, creativity requires the capacity to diverge from the norm, but simultaneously to function within the society's rules (Fromm, 1980). Unconventionality is one of the concomitant of creative thinking, but mere unconventionality does not by itself signal the presence of genuine creativity. In creative people, social deviance is channelled into constructive activities.

One characteristic of highly divergent individuals which has struck many observers is their playfulness. They may, for example, be particularly good at making up humorous story titles, as was the case in the historically important study of Getzels and Jackson (1962). They often display a particularly lively sense of humor, and are frequently unusually alert to the funny side of life and especially good at making up humorous responses to tests. Creative people's playfulness may also manifest itself in the ability to play with the meanings of words so that they see new aspects to them which have not previously been seen. They may play with fundamental laws and principles and eventually arrive at unusual solutions to problems, or they may play with common objects until they see implications which have not previously been noticed. What such play involves, essentially, is the capacity to look at the familiar in a new light, and to break the set imposed by the stereotypical meaning of any particular stimulus (Gabriel, 1976). Many creative people, among them Einstein, have made this point about their own creativity. According to psychoanalytic theory, creative individuals are able to relax strict ego control and admit primary process material into consciousness (see Stein and Stein, 1984, who summarized the importance of play in a number of psychoanalytic models of creativity, including those of Freud, Kris, and Kubie).
Creativity and Mental Health

As has been shown in preceding sections, creativity is connected with personal properties such as flexibility, openness, autonomy, humor, playfulness, willingness to try things, elaboration of ideas, realistic self-assessment, and similar characteristics. Generally, these properties have been ascertained in studies of highly creative people, and they are usually thought of as prerequisites for the emergence of creativity (i.e., as something out of which creativity arises, or whose absence makes creativity impossible). However, theory and research on normal personality development—with or without direct reference to creativity—also emphasize similar properties as core elements of the healthy personality. According to psychoanalytic theory, the ability to express drives and impulses without excessive use of defense mechanisms, or to admit primary process material into consciousness, for example in the form of humor, requires high ego strength. Ammon (1974) saw creativity as an ego function in itself. According to Hartmann (1958), ego autonomy permits freedom from blind obedience to instinct and freedom from dependence on immediate environmental events; high levels of autonomy make it possible for the individual to cope in a positive way with change, even with catastrophies in life. Anthony (1987) concluded that there is a cause and effect relationship between creativity and mental health and argued that because creativity is related to ego autonomy, and ego autonomy promotes the capacity to deal with life situations, creativity favors the development of resistance to psychopathology.

In humanistic psychology, concepts such as self and self-realization are at the heart of healthy personality development. Maslow (1954) and Rogers (1961), in their classic studies, emphasized the importance of openness, flexibility, and tolerance in the healthy personality. Krystal (1988) made the link between mental health and creativity even more specific in a study in which he also took the unusual step of studying extremely uncreative people. He found that they had considerable difficulties in the area of self: “Self-caring” is difficult for them, for instance, and they lack “self-coherence.” Fostering creativity in these people would promote their mental health in the sense of self-realization. Cognitive approaches to creativity emphasize cognitive styles which involve openness to a wide range of environmental stimuli, flexible coding of information obtained from the environment, and ready accessibility of a variety of categories when information is called up from memory. Processing of this type requires assimilation of large amounts of information and necessitates frequent accommodation, if cognitive processes are to be rich, full, open, and flexible. Nearly 50 years ago Hudson (1938) made the point that convergers tend to be narrow and rigid in cognitive processes, achieving a sense of security in this way, but at the cost of healthy personality development.

Writing from a clinical point of view, Burkhardt (1985) offered a dramatic summary of the line of argument developed in preceding paragraphs. He defined the “right to be a unique individual” as one of the basic human rights. Although he did not refer directly to creativity, he wrote in much the same terms as in the present article, and saw what I have called “creativity” as an integral part of the personality of all human beings and an essential element in their dignity and individuality. However, he identified a “mass psychosis” of modern life which has at its core an “obsession
with uniformity and sameness." Thus, he not only emphasized the importance of creativity as a healthy phenomenon in itself, but also identified an unhealthy anticeptive "mass dogma," which he regarded as the result of mistaken understanding of the idea of equality and confusing the ideology of a particular age with ethics and morality.

Fostering Mental Health

The following argument has emerged in previous sections: Creativity is connected with psychological characteristics such as openness, autonomy, playfulness, and flexibility. Creativity training procedures usually proceed from this point to ask whether it is possible to train such personal characteristics and thus increase creativity. More important for the present article, however, is that such properties are highly favorable to the maintenance of positive mental health. The practical question raised here is that of whether it is possible to emphasize "creativity" in everyday settings, and by doing this help people to show more openness, flexibility, and autonomy. In this way, without trying to create highly creative individuals, it would be possible to make a contribution to the maintenance of mental health in day-to-day life. Several small studies carried out in Hamburg in recent years cast some light on this question. The following paragraphs will briefly outline some of these. All of the projects focused on everyday life. They are all modest in scope and scientific rigor, but close to reality.

Schwarzkopf (1981) carried out a longitudinal study with nine adult women who met once a week and worked "creatively" on sewing, knitting, weaving, crocheting, and similar projects. Factors such as making unexpected combinations, trying out new ideas, or seeing the familiar in a new way were emphasized. At the beginning of the year, each woman was rated on a number of personality traits by several relatives and close friends. These raters had no knowledge of the research project or its intentions. At the end of the year, the women were again rated and the more recent scores compared with those from a year earlier. There were significant differences in the ratings for a number of personality dimensions. In their day-to-day life, the women showed less anxiety in unfamiliar situations, were more playful, more self-critical, and less cautious. They were judged to be positively motivated by the need to make difficult decisions, more independent and lively, able to show more fantasy, more goal oriented, and able to show more task persistence.

Herrmann (1987) compared two soccer teams in a league for 10-12-year-old boys. One team was coached in an authoritarian way, and the other "democratically." Emphasis in the latter situation was on taking personal responsibility, spontaneously doing the unexpected, and even having fun. The democratically trained boys produced significantly more novel elements in a creativity test as well as making a significantly larger number of cross relationships. Correlating these with data on a personality test, Herrmann concluded that the democratic training style in the sporting domain had fostered self-confidence and reduced anxiety. The democratically trained boys made significantly more humorous responses, and Herrmann concluded that the creativity fostering training style had encouraged the expression of aggression in the form of humor rather than on-the-field violence.

Stranger (1987) worked with a group of 58 10-13-year-old boys and girls diag-
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nosed as legasthenic and showed that they produced the same number of responses on a divergent thinking test as "normal" readers. They also showed the same degree of originality. However, there was a large and significant difference between the two groups in the area of elaboration: legasthenic children were as capable as the members of the control group of producing novel ideas, but they were inhibited in extending and carrying through these ideas. Stranger interpreted this as reflecting the effects of lack of self-confidence and negative self-evaluation, and recommended emphasis in instruction with legasthenic children on obtaining and elaborating ideas and developing personal (internal) criteria for their evaluation.

Scheliga (1988) tested a group of dedicated amateur jazz musicians—mainly playing in jazz cells along the famous (or infamous) Hamburg Reeperbahn—with a paper and pencil creativity test. They scored significantly higher than a control group of lab technicians on dimensions such as spontaneity, wealth of ideas, power of association, willingness to take risks, and flexibility. An important conclusion by Scheliga was that "latent" creativity had been released by participation in music making, which offers (especially in the form of jazz improvisation) special psychological opportunities: expression of individuality, elimination of inhibitions, encouragement of fantasy, confrontation with one's own emotions, and use of nonverbal forms of expression. Nonetheless, the musician must remain within a particular framework—the product must be relevant to the main musical theme—so that blind unconventionality is not called for.

Of considerable importance in these studies is that a degree of personal development occurred. However, this took the form of a mirror image of the usual creativity training procedures: a "divergent" way of going about a real life activity was judged to have promoted personal properties (e.g., self-confidence, fantasy, openness to new situations), whereas the conventional procedure involves attempting to "train" personal properties in a formal laboratory or classroom setting in order to produce divergent behavior. This suggests the need to encourage people to attack everyday situations in a creative way, rather than expose them to abstract "creativity training" programs: Real life activities should be suffused with creativity enhancing elements. The result would be enhanced mental health.

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Rob 648-1339

parking?
phone plug in room?
closet
electric plug
measure his room

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