

# Mood Disorders and Patterns of Creativity in British Writers and Artists

Kay Redfield Jamison

EXTREMES in mood, thought and behavior – including psychosis – have been linked with artistic creativity for as long as man has observed and written about those who write, paint, sculpt or compose. The history of this long and fascinating association, as well as speculations about its reasons for being, have been discussed by several modern authors and investigators, including Koestler (1975), Storr (1976), Andreasen (1978), Becker (1978), Rothenberg (1979), Richards (1981), Jamison (in press) and Prentky (in press). The association between extreme states of emotion and mind and creativity not only is fascinating but also has significant theoretical, clinical, literary and societal-ethical implications. These issues, more thoroughly reviewed elsewhere (Jamison et al. 1980; Richards 1981; Jamison, in press), include the understanding of cognitive, perceptual, mood and behavioral changes common to manic, depressive and creative states; the potential ability to lessen the stigma of mental illness; effects of psychiatric treatment (for example, lithium) on creativity; and concerns raised about genetic research on mood disorders.

The current study was designed to ascertain rates of treatment for affective illness in a sample of eminent British writers and artists; to study differences in subgroups (poets, novelists, playwrights, biographers, artists); to examine seasonal patterns of moods and productivity; and to inquire into the perceived role of very intense moods in the writers' and artists' work. One of the major purposes of this investigation was to look at possible similarities and dissimilarities between periods of intense creative activity and hypomania. Hypothesized similarities were based on the overlapping nature of mood, cognitive and behavioral changes associated with both; the episodic nature of both; and possible links between the durational, frequency and seasonal patterns of both experiences.

Several research strategies exist for examining the relationship between affective illness and creativity. The first, *historical and biographical studies*, focuses on life study investigations of prominent individuals (e.g., Lombroso 1891; Ellis 1904; Nisbet 1912; Lange-Eichbaum 1932; Juda 1949; Tsanoff 1949; Wittko-

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wer and Wittkower 1963; Goertzel et al. 1978; Jamison, in press). These biographical studies have provided strong, suggestive but as yet anecdotal clues to significantly increased rates of mood disorders and suicide in eminent writers and artists.

The second strategy, *studies of creative ability in affectively ill patients*, provides a different perspective but corroborating evidence. DeLong and Aldershof (1983) found an unusually high incidence of special abilities (for example, outstanding artistic and mathematical talent) in a sample of children with manic-depressive illness. Richards et al. (1988) found significantly increased creativity in manic-depressive and cyclothymic patients, as well as their normal first-degree relatives, when compared with control subjects.

The third major strategy involves *systematic diagnostic and psychological studies of living writers and artists* (e.g., Andreasen and Canter 1974; Andreasen and Powers 1974; Andreasen 1987). This paper concerns research of the latter type. Andreasen and her colleagues, using modern diagnostic techniques, were the first to systematically study the relationship between creativity and psychopathology. They found an exceptionally high rate of affective illness, especially bipolar, in their sample of writers from the University of Iowa Writers' Workshop. Fully 80% of the 30 writers studied met Research Diagnostic Criteria (Spitzer et al. 1978) for an episode of affective illness at some time during their lives; 43% met criteria for bipolar illness (Andreasen 1987). First-degree relatives of the writers also demonstrated a disproportionate rate of affective illness, especially major depressive disorder.

## METHOD

### Subjects

The poets, playwrights, novelists, biographers and artists in the study were selected on the basis of having won at least one of several specified prestigious prizes

or awards in their respective fields. All painters and sculptors, for example, were either Royal Academicians or Associates of the Royal Academy. Literary prizes used as selection criteria included the Queen's Gold Medal for Poetry and the Hawthornden, Booker, and James Tait Black Memorial Prizes. In addition, 9 of the 18 poets in the study sample were already represented in *The Oxford Book of Twentieth Century English Verse*. Of the 8 playwrights, 6 were winners of the New York Drama Critics Award or the Evening Standard (London) Drama Award; several had won both, had won one of these awards more than once, and/or had received Tony Awards.

Participants in the study were either British subjects (87%) or citizens of the British Commonwealth or the Republic of Ireland (13%). Most were men (87%), and the majority were Protestant (77%); 15% were Catholic, and 7% were agnostic or had no religious affiliation. The mean age of the sample was 53.2 years ( $SD=12.9$ ). Demographic characteristics for the subgroups—poets, playwrights, novelists, biographers and artists—are summarized in Table 1. There were no significant differences between subgroups, except that the poets were disproportionately Protestant (94%) and the novelists disproportionately Catholic or agnostic (50%).

### Procedures

All subjects ( $N=47$ ) were asked detailed (open-ended and scaled) questions about history and type of treatment, if any, for affective illness; observed, if any, diurnal and seasonal patterns in their moods and productivity; behavioral, cognitive and mood correlates of their periods of creative work; and the perceived role of very intense moods in their work. Specific diagnostic criteria were not used in this study as the primary aim was to ascertain actual rates of treatment, a more stringent criterion for severity of affective illness. Extensive personality and attitudinal data, to be reported in a future paper, were also collected. As partial compensa-

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Table 1  
DEMOGRAPHIC CHARACTERISTICS OF SAMPLE  
AND SUBGROUPS

Group	N	Mean Age	% Male	% Protestant
Poets	18	50.8	89	94
Playwrights	8	48.5	88	75
Novelists	8	55.0	88	50
Biographers	5	61.6	80	80
Artists	8	56.5	88	63
Total Sample	47	53.2	87	77

tion for the considerable amount of time involved in participating, subjects were promised copies of all published reports resulting from the study.

RESULTS

*History of Treatment for Affective Illness*

The artists and writers were asked whether or not they had received treatment, and the nature of that treatment, for a mood disorder. The results are shown in Table 2. A very high percentage of the total sample, 38%, had been treated for an affective illness; three-fourths of those treated had been given antidepressants or lithium, or had been hospitalized. Poets were most likely to have required medication for their depression (33%) and were the only ones to have required medical intervention (hospitalization, electroconvulsive therapy, lithium) for mania (17%). Fully one-half of the poets had been treated with drugs, psychotherapy, and/or hospitalization for mood disorders. The playwrights had the highest total rate of treatment for affective illness (63%), but a relatively large percentage of those treated (60%) had been treated with psychotherapy alone. It is unclear whether this was due to a difference in severity of illness or in treatment preference.

With the exception of the poets, the subjects reported being treated for depression, not mania or hypomania; the design of the study did not allow systematic diagnostic inquiry into hypomanic or

manic episodes. As Table 3 shows, however, about one-third of the writers and artists reported histories of severe mood swings, essentially cyclothymic in nature, and one-fourth reported histories of extended, elated mood states. Novelists and poets more frequently reported the prolonged, elated states; playwrights and artists, on the other hand, were more likely to report severe mood swings. The relatively low rate of treatment for affective illness in those who are creative in predominantly nonverbal fields (painting and sculpture) is interesting and may be due to the fact that artists are less inclined than writers to seek psychiatric help (especially if psychiatric treatment is perceived of as primarily verbal in nature). It is as likely, however, that mood disorders may not convey to visual artists the same experiential and cognitive advantages that are useful to writers, and that neuropsychological differences between those with and without affective illness (i.e., greater difficulties with right hemispheric functioning; see Sackheim and Steif 1988; Goodwin and Jamison, in press) may make visual artists a lower risk group. Interestingly, the biographers—who provided a comparison group by being outstanding but perhaps less creative writers—reported no history of mood swings or elated states.

*Similarities Between Hypomanic and Creative States*

Virtually all subjects (89%) reported having experienced intense, highly pro-

Table 2  
HISTORY OF TREATMENT FOR AFFECTIVE ILLNESS IN  
TOTAL SAMPLE AND SUBGROUPS

	<i>% Treated for Bipolar Illness (Hospitalization with lithium, ECT, etc.)</i>	<i>% Treated with Antidepressants for Depression</i>	<i>% Treated with Psychotherapy Alone for Depression</i>	<i>Total % Treated for an Affective Illness</i>
Poets	16.7	33.0	5.5	55.2
Playwrights	0.0	25.0	37.5	62.5
Novelists	0.0	25.0	0.0	25.0
Biographers	0.0	20.0	0.0	20.0
Artists	0.0	12.5	0.0	12.5
Total Sample	6.4	23.4	8.5	38.3

ductive and creative episodes (100% of the poets, novelists, and artists; and 88% of the playwrights; but, consistent with the results reported earlier, only 20% of the biographers). The modal duration of these episodes was two weeks (35%); 55% of the episodes lasted 1-4 weeks and 25% continued for longer than a month. One-fifth of the episodes lasted 24 hours or less. The episodes were characterized by increases in enthusiasm, energy, self-confidence, speed of mental association, fluency of thoughts, elevated mood and a strong sense of well-being (see Figure 1). A comparison with *DSM-III* criteria for hypomania reveals that mood and cognitive symptoms showed the greatest degree of overlap between intensely creative and hypomanic episodes. Several of the more behavioral changes typically associated with hypomania (hypersexuality,

talkativeness, spending of money) were reported by only a minority of subjects.

Subjects were asked about changes in sleep and mood occurring just prior to these intense creative episodes. Almost all of the writers and artists (89%) reported a decrease in the need for sleep; 28% spontaneously reported waking abruptly at 3 or 4 A.M. and being unable to return to sleep. Changes in mood were profound. One-half of the subjects reported a sharp increase in mood just prior to the beginning of an intensely creative period: for example, "excited, anticipatory, energetic"; "I have a fever to write, and throw myself energetically into new projects"; "elated," "euphoric"; "ecstatic." Dysphoria preceded enhanced creativity in 28% of the subjects: for example, "more anxious"; "near suicide"; "fearfulness, general mood of distress and slight paranoia." Finally, approximately one-fourth (22%) of the sample reported mixed mood changes and psychomotor restlessness: "mixture of elation together with some gloominess, feeling of isolation, sexual pressure, fast emotional responses"; "restlessness"; "low ebb bordering on despair often precedes good phase when work will flow almost as though one is a medium, rather than an originator"; "restless, dissatisfied."

When the subjects were asked specifically about the importance of very intense feelings and moods in the development and execution of their work, 90% stated

Table 3  
HISTORY OF SEVERE MOOD SWINGS AND  
EXTENDED, ELATED MOOD STATES

	<i>Severe Mood Swings</i>	<i>Extended, Elated Mood States</i>
Poets	28%	33%
Playwrights	50%	25%
Novelists	13%	38%
Biographers	0%	0%
Artists	38%	13%
Total Sample	30%	26%

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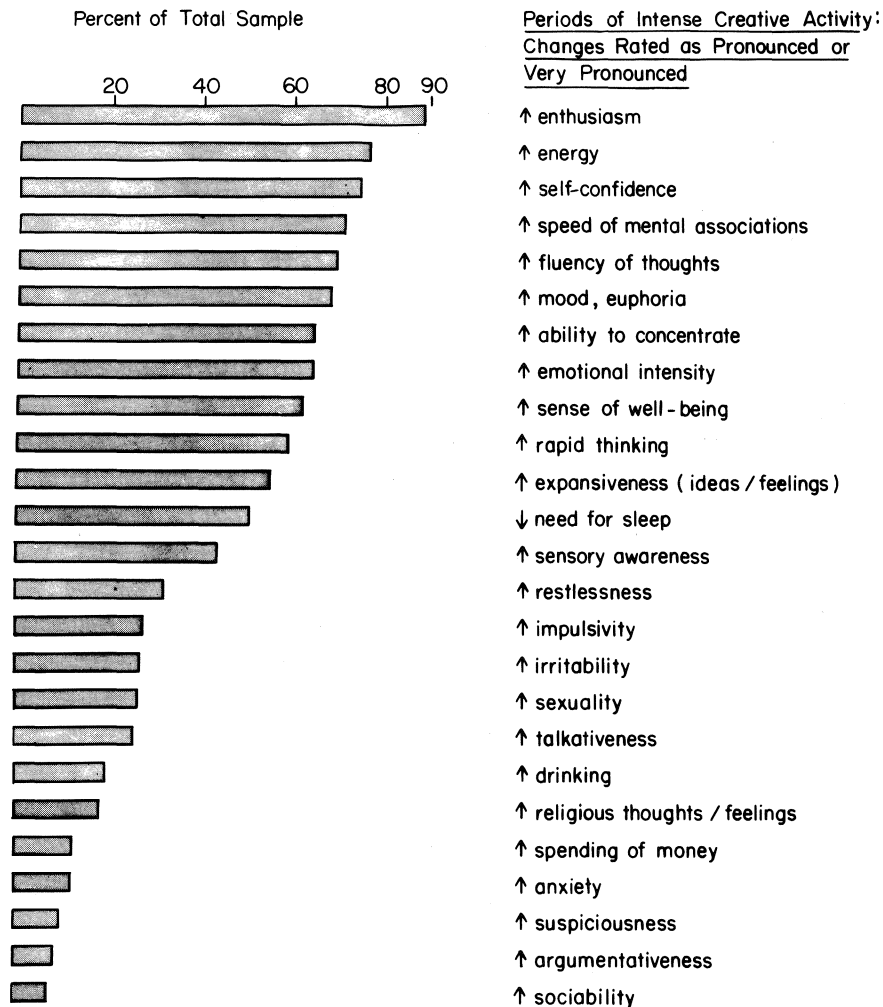


Figure 1.  
Mood, cognitive and behavioral changes reported during intense creative episodes.

that such moods and feelings were either integral and necessary (60%), or very important (30%). Consistent with their rate of treatment for affective illness, more poets than any other group regarded these moods as essential to what they did and how they did it.

### *Seasonal Patterns of Moods and Productivity*

Subjects were asked to rate their moods and productivity for 36 months. Many of

the writers and artists relied upon extensive notes and journals to assist them in making their ratings. Figure 2 presents the mood and productivity curves for those subjects reporting no history of treatment for affective illness; Figure 3 shows the curves for subjects with a history of treatment for affective illness. Very different seasonal patterns emerged. Those in the history of treatment group demonstrated inversely related curves for summer productivity and moods, while those in the no history of treatment group

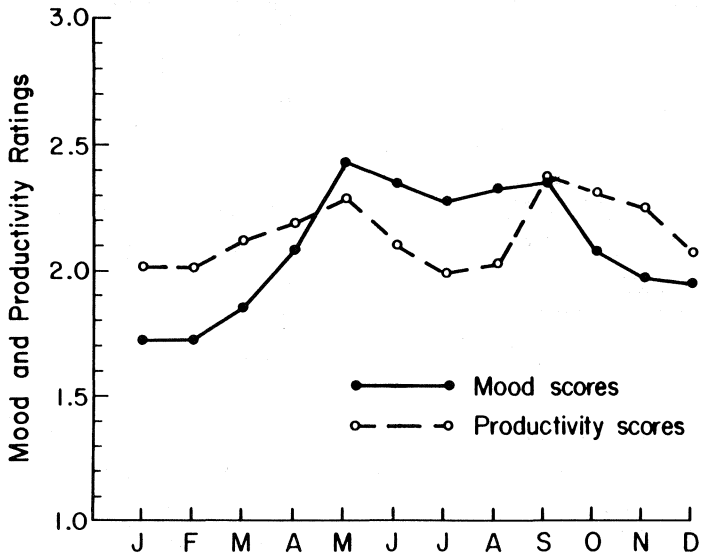


Figure 2.

Mean mood and productivity ratings (36 months) in writers and artists with no history of treatment for affective illness ( $N=32$ ).

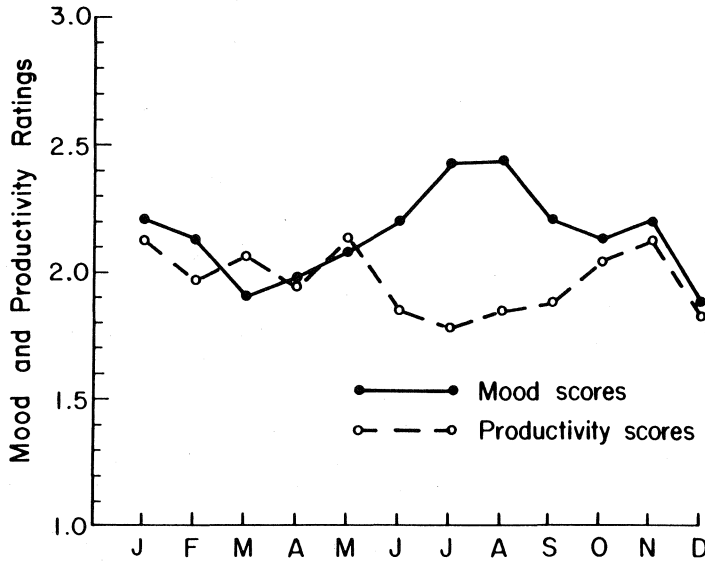


Figure 3.

Mean mood and productivity ratings (36 months) in writers and artists with a history of treatment for affective illness ( $N=15$ ).

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showed mood and productivity curves more directly co-varying. In the treatment group the peaks for productivity preceded and followed the mood peak by three to four months.

### DISCUSSION

#### *Rates of Treatment for Affective Illness*

The rate of treatment for affective illness (38%) was strikingly high in this sample of outstanding British writers and artists. Lifetime prevalence rates for bipolar and unipolar disorders in the general population are 1% and 5%, respectively. The proportion of individuals who actually seek or receive treatment, even though they meet the formal diagnostic criteria for affective illness, is far smaller. Therefore, rates in this study represent a conservative estimate of the actual prevalence of affective illness in the sample. Weissman et al. (1981), for example, found that only 20% of persons with a current psychiatric disorder had seen a mental health professional in the previous year, and Shapiro et al. (1984) concluded that only one-third of affectively ill patients actually make a mental health visit. Likewise, although lithium is the treatment of choice for a minimal 1% of the general population, utilization rates determined by McCreadie and Morrison (1985) were only 0.77 per 1000, and by Escobar et al. (1987), 0.15%; both studies clearly indicated a gross underutilization of lithium relative to the established prevalence of mania. Antidepressants, more frequently prescribed, were used by 2.5% of the Epidemiological Catchment Area community sample ( $N=14,998$ ) as reported by Escobar et al. These drug treatment figures are in marked contrast to the current sample of British writers and artists, 6.4% of whom reported the use of lithium (16.7% of the poets) and 23.4% the use of antidepressants. The contrast in rates is even more pronounced if one considers that antidepressant use is far more common in women than men, yet the sample of writ-

ers and artists was predominantly male (87%).

These surprisingly high rates of treatment for affective illness are, however, comparable to those reported by Andreasen and her colleagues. In an update of earlier work done with the well-known University of Iowa Writers' Workshop, Andreasen (1987) found that 80% of her sample of 30 writers (90% males) had experienced an episode of affective illness; 43% had had manic or hypomanic episodes. Possible explanations for the elevated rates of mood disorders in successful writers are discussed in detail elsewhere (Andreasen and Powers 1974, 1975; Richards 1981; Prentky, in press; Jamison et al. 1980; Jamison, in press) and can be only briefly reviewed here. Profound changes in mood, cognition, personality, sleep, energy and behavior characterize both altered mood and creative states. Cognitive changes occurring during hypomanic states—e.g., the increase in speed, associational fluency and flexibility of thought—are likewise critical to creativity. For writers and artists, who draw so deeply from their lives and emotions for their work, the wide range, intensity, fluctuation and variability of emotional experience brought about by mood disorders can work to the advantage, as well as disadvantage, of original composition. Too, what hypomania generates in enthusiasm and excess, the more critical and obsessive eye of depression often effectively judges and edits.

#### *Similarities Between Hypomanic and Creative States*

The study revealed many overlapping mood, cognitive and behavioral (especially sleep) changes between hypomania and intense creative states, despite the fact that questions about both states were asked independently of one another and in a manner designed to minimize possible effects of suggestion. Cognitive and mood changes shared far more overlap than behavioral ones, indicating, perhaps, that the milder forms of hypomania may repre-

sent the more productive phases of affective illness. The continuum that ranges from normal state to mildly (or, controllably) "hypomanic," to clinical hypomania and mania is an enormously important but poorly understood one. It remains unclear whether the overlap in cognitive and mood changes represents etiologically related syndromes or phenomenologically similar but causally unrelated patterns of expression. It also remains unclear the extent to which writers and artists are simply more sensitive than the general population to their own mood states and therefore more able to articulate and report them.

#### *Seasonal Patterns of Mood and Productivity*

There were significant differences in seasonal mood and productivity patterns between those writers and artists with a history of treatment for affective illness and those without; in the former group the peaks for productivity preceded, and followed, the mood peaks by 3 to 4 months; in the no-treatment group, the peaks for mood and productivity co-varied. Several explanations are possible. First, high productivity associated with elevated mood is less likely to lead to treatment-seeking behavior than low productivity associated with high mood. Second, the elevated mood of the treatment group probably reflects more "true" hypomania—i.e., greater distractibility and dysphoria, and increased stimulus-seeking behavior—which might well lead to less productivity in the acute phase. In the no-treatment group, the periods of increased mood and productivity may represent a milder spectrum form of hypomania, or intensified normal functioning, resulting in more simultaneous peaks for mood and productivity. For both groups the summer peak in moods is consistent with what is known about seasonal patterns for hypomania, mania and depression (Rosenthal et al. 1984; Goodwin and Jamison, in press).

#### *Implications*

Writers and artists frequently express concerns about the effects of psychiatric treatment on their ability to create and produce; these concerns are particularly pronounced around issues of taking medication. Clearly, not all of these fears are realistic, but some may be. Early researchers were well aware of problems created by lithium's effects on certain productive and enjoyable qualities of manic-depressive illness (Schou 1968; Polatin and Fieve 1971; Van Putten 1975); more recent studies demonstrate that missing certain positive features of hypomania is an important reason for lithium noncompliance (Jamison et al. 1979; Jamison and Akiskal 1983).

The short and long-term effects of lithium, carbamazepine, and the antidepressants on productivity and creativity remain unclear. Marshall et al. (1970) and Schou (1979) studied a total of 30 artists, writers and businessmen taking lithium. Three-quarters of the subjects reported no change, or an increase in their productivity while on lithium. One-quarter reported a decrease, and 17% refused to continue lithium because of its effect on their work and lives. Studies of lithium's effect on cognitive processing, which conflict in their findings, are reviewed elsewhere (Goodwin and Jamison, in press). Two studies of particular relevance for artistic creativity also conflict in their results. Judd et al. (1977) found no effects of short-term lithium treatment on creativity in normal subjects. A recent study using bipolar patients as their own controls, however, found substantial, detrimental effects of lithium on associational processing (Shaw et al. 1986). Differences in results may be in part due to the fact that lithium's effect on cognition is probably quite different in manic-depressive patients and normal volunteers (Pons et al. 1985). Individual differences in the severity, frequency and type of affective illness; sensitivity to cognitive side-effects; serum lithium levels; and clinical state also clearly affect the degree to which an indi-



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vidual will experience impairment in intellectual functioning, creativity and productivity. Artists, writers and the many others who rely upon their initiative, intellect, emotional intensity and energy for their life's work underscore the need for a reexamination of this problem.

Artists and writers represent a group at high risk for affective illness and should be assessed and counseled accordingly. Ideal treatment requires: a sensitive understanding of the possible benefits of mood disorders to creativity, as well as the severe liabilities, including the risk of suicide and of untreated depression and mania; use of available medications with awareness of side-effects potentially damaging to the creative process; minimization, whenever possible, of drug (especially lithium) levels; the recognition and sophisticated use of seasonal patterns in moods and productivity (for example, through self-charting of moods with a visual analogue scale); and sensitivity to the possible role of alcohol and drugs in inducing, maintaining, or exacerbating mood states.

Yet another implication stemming from the close relationship between mood disorders and creativity in the arts is a societal one. Genetic research is progressing to the stage where ethical issues will, in

due course, arise about amniocentesis and early identification and treatment of individuals at high risk for affective, especially bipolar, illness. It becomes particularly important under these circumstances, and especially when dealing with treatable disorders, to have at least some broad notion of the individual and societal costs and benefits of making such decisions. Meyerson and Boyle (1941), in a study of manic-depressive psychosis in socially prominent American families, discussed at length possible social consequences of sterilization, an extreme procedure but relevant in many of the issues it raises. In analyzing one prominent family they noted:

If sterilization had been done . . . two psychotic individuals would have been eliminated from the American scene, patients with manic-depressive psychosis, but there would have gone with them a man internationally known, whose writings still remain as a source of inspiration and life orientation for many people, whose school of thought is still to be reckoned with and who is frequently cited as a figure unique in America and uniquely American. The group who clustered around this man left their influence on the whole of America. His descendants are still extremely eminent and also still send patients to hospitals for mental disease. [p. 18]

## REFERENCES

- ANDREASEN, N. C. Creativity and psychiatric illness. *Psychiatric Annals* (1978) 8:113-19.
- ANDREASEN, N. C. Creativity and mental illness: Prevalence rates in writers and their first-degree relatives. *American Journal of Psychiatry* (1987) 144:1288-92.
- ANDREASEN, N. C., and CANTER, A. The creative writer: Psychiatric symptoms and family history. *Comprehensive Psychiatry* (1974) 15:123-31.
- ANDREASEN, N. C., and POWERS, P. Overinclusive thinking in mania and schizophrenia. *British Journal of Psychiatry* (1974) 125:452-56.
- ANDREASEN, N. C., and POWERS, P. Creativity and psychosis: An examination of conceptual style. *Archives of General Psychiatry* (1975) 32:70-73.
- BECKER, G. *The Mad Genius Controversy*. Sage, 1978.
- DELONG, G. R., and ALDERSHOF, A. Associations of special abilities with juvenile manic-depressive illness. *Annals of Neurology* (1983) 14:362.
- ELLIS, H. *A Study of British Genius*. London: Hurst and Blackett, 1904.
- ESCOBAR, J. I., ANTHONY, J. C., CANINO, G., et al. Use of neuroleptics, antidepressants, and lithium by U.S. community populations. *Psychopharmacology Bulletin* (1987) 23:196-200.
- GOERTZEL, M. G., GOERTZEL, V., and GOERTZEL, T. G. *Three Hundred Eminent Personalities*. Jossey-Bass, 1978.
- GOODWIN, F. K., and JAMISON, K. R. *Manic-Depressive Illness*. Oxford University Press, in press.
- JAMISON, K. R. Manic-depressive illness, creativity, and leadership. In Goodwin and Jamison (in press).

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- JAMISON, K. R., and AKISKAL, H. S. Medication compliance in patients with bipolar disorder. *Psychiatric Clinics of North America* (1983) 6:75-192.
- JAMISON, K. R., GERNER, R. H., and GOODWIN, F. K. Patient and physician attitudes toward lithium. *Archives of General Psychiatry* (1979) 36:866-69.
- JAMISON, K. R., GERNER, R. H., HAMMEN, C., and PADESKY, C. Clouds and silver linings: Positive experiences associated with primary affective disorders. *American Journal of Psychiatry* (1980) 137:198-202.
- JUDA, A. The relationship between high mental capacity and psychic abnormalities. *American Journal of Psychiatry* (1949) 106:296-307.
- JUDD, L. L., HUBBARD, R. B., JANOWSKY, D. S., et al. The effect of lithium carbonate on the cognitive functions of normal subjects. *Archives of General Psychiatry* (1977) 34:355-57.
- KOESTLER, A. *The Act of Creation*. London: Pan, 1975.
- LANGE-EICHBAUM, W. *The Problem of Genius*. Macmillan, 1932.
- LOMBROSO, C. *The Man of Genius*. London: Walter Scott, 1891.
- MCCREADIE, R. G. and MORRISON, D. P. The impact of lithium in Southwest Scotland. I. Demographic and clinical findings. *British Journal of Psychiatry* (1985) 146:70-74.
- MARSHALL, M. H., NEUMANN, C. P., and ROBINSON, M. Lithium, creativity, and manic-depressive illness. *Psychosomatics* (1970) 11:406-08.
- MEYERSON, A., and BOYLE, R. D. Incidence of manic-depressive psychosis in certain socially important families. *American Journal of Psychiatry* (1941) 98:11-21.
- NICOLSON, H. The health of authors. *Lancet* (1974) ii:709-14.
- NISBET, J. F. *The Insanity of Genius*. London: Stanley Paul, 1912.
- POLATIN, P., and FIEVE, R. R. Patient rejection of lithium carbonate prophylaxis. *Journal of the American Medical Association* (1971) 218:864-66.
- PONS, L., NURNBERGER, J. I., and MURPHY, D. Mood-independent aberrancies in associative processes in bipolar affective disorder: An apparent stabilizing effect of lithium. *Psychiatry Research* (1985) 14:315-22.
- PRENTKY, R. *Creativity and Psychopathology*. Praeger, 1980.
- PRENTKY, R. Creativity and psychopathology: Gambling at the seat of madness. In J. A. Glover, R. R. Ronning, and C. R. Reynolds, eds, *Handbook of Creativity: Assessment, Research and Theory*. Plenum Press, in press.
- RICHARDS, R. L. Relationships between creativity and psychopathology: An evaluation and interpretation of the evidence. *Genetic Psychology Monographs* (1981) 103:261-324.
- RICHARDS, R. L., KINNEY, D. K., LUNDE, I., and BENET, M. Creativity in manic-depressives, cyclothymes, and their normal first-degree relatives: A preliminary report. *Journal of Abnormal Psychology* (1988) 97:281-88.
- ROBINS, L. N., HELZER, J. E., WEISSMAN, M. M., et al. Lifetime prevalence of specific psychiatric disorders in three sites. *Archives of General Psychiatry* (1984) 41:949-58.
- ROSENTHAL, N. E., SACK, D. A., GILLIN, J. C., et al. Seasonal affective disorder: A description of the syndrome and preliminary findings with light therapy. *Archives of General Psychiatry* (1984) 41:72-80.
- ROTHENBERG, A. *The Emerging Goddess: The Creative Process in Art, Science, and Other Fields*. University of Chicago Press, 1979.
- SACKHEIM, H. A., and STEIF, B. L. Neuropsychology of depression and mania. In A. Georgotas and R. Cancro, eds., *Depression and Mania*. Elsevier, 1988.
- SCHOU, M. Special review of lithium in psychiatric therapy and prophylaxis. *Journal of Psychiatric Research* (1968) 6:67-95.
- SCHOU, M. Artistic productivity and lithium prophylaxis in manic-depressive illness. *British Journal of Psychiatry* (1979) 135:97-103.
- SHAPIRO, S., SKINNER, E. A., KESSLER, L. G., et al. Utilization of health and mental health services: Three epidemiologic catchment area sites. *Archives of General Psychiatry* (1984) 4:971-78.
- SHAW, E. D., MANN, J. J., STOKES, P. E., and MANEVITZ, A. Z. A. Effects of lithium carbonate on associative productivity and idiosyncrasy in bipolar outpatients. *American Journal of Psychiatry* (1986) 143:1166-69.
- SPITZER, R. L., ENDICOTT, J., and ROBINS, E. Research Diagnostic Criteria: Rationale and reliability. *Archives of General Psychiatry* (1978) 35:773-82.
- STORR, A. *The Dynamics of Creation*. Penguin, 1976.
- TSANOFF, R. A. *The Ways of Genius*. Harper, 1949.
- VAN PUTTEN, T. Why do patients with manic-depressive illness stop their lithium? *Comprehensive Psychiatry* (1975) 16:179-82.
- WEISSMAN, M. M., MYERS, J. K. and THOMPSON, W. D. Depression and treatment in a U.S. urban community - 1975-1976. *Archives of General Psychiatry* (1981) 38:417-21.
- WITTKOWER, R., and WITTKOWER, M. *Born Under Saturn: The Character and Conduct of Artists*. Random House, 1963.
- WOODY, E., and CLARIDGE, G. Psychoticism and creativity. *British Journal of Social and Clinical Psychology* (1977) 16:241-48.