

Creative Method in the Madness:
The Connection between Creativity and Psychopathology

Dean Keith Simonton

University of California, Davis

Abstract

Ever since antiquity thinkers have associated creativity with psychopathology—the classic idea of the “mad genius.” The empirical evidence for this hypothesis is reviewed by looking at historiometric, psychiatric, and psychometric research. The three forms of data converge on the conclusions that (a) exceptional creativity is often linked with certain symptoms of psychopathology and (b) this linkage has some degree of genetic foundation. Nevertheless, this relationship is not equivalent to the claim that creative individuals necessarily suffer from psychopathology. A theoretical interpretation is offered in terms of the cluster of cognitive abilities and dispositional traits required for creative behavior and the impact of genetic and environmental factors in the emergence of this cluster.

Keywords: creativity, psychopathology, historiometric, psychiatric, psychometric

Creative Method in the Madness:

The Connection between Creativity and Psychopathology

The idea that creativity and psychopathology are somehow linked goes way back to antiquity—to the time of Aristotle. Centuries later this belief was developed and expanded by various psychiatrists, psychoanalysts, and psychologists. For instance, Lombroso (1891) argued toward the end of the 19th century that genius and madness were closely connected manifestations of an underlying degenerative neurological disorder. To be sure, this idea has not gone without challenge. On the contrary, humanistic psychologists were inclined to associate creativity with mental health. Nevertheless, the prevailing view appears to be that psychopathology and creativity are positively associated (Durrenberger, 1999).

But what is the scientific evidence supporting this association? And what does this evidence suggest is the basis for the relationship? It is to these questions that I now turn.

Empirical Evidence

Scientific data addressing this issue comes from three main sources: (a) historiometric studies of eminent creators of the past; (b) psychiatric studies of contemporary creators based on clinical diagnoses; and (c) psychometric studies of contemporary creators that depend on the application of established assessment methods.

Historiometric Research

In this approach, historical data are subjected to objective and quantitative analyses. In particular, the biographies of eminent creators are systematically analyzed to discern the presence of symptoms associated with various psychopathological syndromes. Such historiometric inquiries lead to four conclusions.

1. The rate and intensity of psychopathological symptoms appear to be higher among eminent creators than in the general population (Ellis, 1926; Raskin, 1936). Although the differential depends on the specific definition used, a reasonable estimate is that highly creative individuals are about twice as likely to experience some mental disorder as comparable noncreative individuals (Ludwig, 1995). Depression seems to be the most common symptom, along with the correlates of alcoholism and suicide (Goertzel, Goertzel, & Goertzel, 1978; Ludwig, 1990; Post, 1996).

2. On the average, the more eminent the creator, the higher is the expected rate and intensity (Ludwig, 1995).

3. The rate and intensity of symptoms varies according to the specific domain of creativity (Ludwig, 1992; Post, 1994). For example, psychopathology is higher among artistic creators than among scientific creators (Raskin, 1936; Post, 1994). Thus, according to one study (Ludwig, 1995), 87% of famous poets experienced psychopathology whereas only 28 percent of the eminent scientists did so, a figure close to the population baseline.

4. Those family lines that produce the most eminent creators also tend to be characterized by a higher rate and intensity of psychopathological symptoms (Jamison, 1993; Juda, 1949; Karlsson, 1970). Hence, even though there is some evidence that the life style of creative activity can have adverse consequences for mental health (Schaller, 1997), it remains the case that there may be a common genetic component to both creativity and psychopathology (Ludwig, 1995).

Psychiatric Research

This type of evidence depends on the incidence of clinical diagnosis and therapeutic treatment in samples of contemporary creators. Hence, the research does not require

retrospective analysis as in historiometric research, and the assessment of psychopathology reflects modern standards. Psychiatric studies also seem to find higher rate and intensity of symptoms among distinguished creators, especially those engaged in artistic creativity (Andreasen & Canter, 1974; Jamison, 1989). Depression, alcoholism, and suicide again appear to be the most common indicators. Furthermore, the evidence suggests that creativity and mental illness runs in the same family lines (Andreasen, 1987; Myerson & Boyle, 1941).

Psychometric Research

Here standard assessment instruments are applied to contemporary creators. The sampled creators either vary substantially in creative achievement or else they are compared to a control group of non-creative subjects who are otherwise comparable. The psychometric measures include the Minnesota Multiphasic Personality Inventory (MMPI) and the Eysenck Personality Questionnaire (EPQ). In general, highly creative individuals score above normal level on several dimensions associated with psychopathology (Barron, 1963). For instance, creativity is positive correlated with psychoticism scores on the EPQ (Eysenck, 1994, 1995). In addition, the higher the level of creativity displayed, the higher the scores tend to be on the clinical scales. Nonetheless, artistic creators still have more elevated scores than do scientific creators (Simonton, 2004).

The psychometric literature also provides some unique empirical results that can shed some light on the specific nature of the relationship between creativity and psychopathology. The following two sets of findings stand out.

First, although highly creative individuals tend to exhibit elevated scores on certain psychopathological symptoms, their scores are seldom so high as to represent bona fide psychopathology. Instead, the scores lie somewhere between the normal and abnormal ranges

(Barron, 1963; Eysenck, 1995). For example, although successful writers score higher than normals on most clinical scales of the MMPI, and highly creative writers score higher still, scores for both groups remain below those received by psychotic samples. At these moderate levels the individual will possess traits that can actually be considered adaptive from the standpoint of creative behavior. For instance, higher than average scores on psychoticism are associated with independence and nonconformity, features that lend support to innovative activities (Eysenck, 1995). In addition, elevated scores on psychoticism are associated with the capacity for defocused attention (e.g., reduced negative priming and latent inhibition), thereby enabling ideas to enter the mind that would normally be filtered out during information processing (Eysenck, 1995). This less restrictive mode of information processing is also associated with openness to experience, a cognitive inclination that is positively associated with creativity (Peterson & Carson, 2000; Peterson, Smith, & Carson, 2002).

Second, creative individuals score high on other characteristics that would seem to dampen the effects of any psychopathological symptoms. In particular, creators display high levels of ego-strength and self-sufficiency (Barron, 1963; Cattell & Butcher, 1968). Accordingly, they can exert meta-cognitive control over their symptoms, taking advantage of bizarre thoughts rather than having the bizarre thoughts take advantage of them. Furthermore, the capacity to exploit unusual ideas is supported by general intelligence. Although intelligence is not correlated with creativity in the upper levels of the intelligence distribution, a certain minimal level of intelligence is required for exceptional creativity (Simonton, 2004). That threshold level is in the gifted range, roughly equivalent to an IQ of 120 or above. Creators do not necessarily have genius-grade IQs, but they do have sufficient information-processing power to select, develop, elaborate, and refine original ideas into creative contributions.

Theoretical Interpretation

Do these results imply that creativity and psychopathology are intimately connected? Are genius and madness tantamount to the same thing? The answer to the first question is affirmative, but the response to the second is negative. The affirmation comes from the fact that various indicators of mental health appear to be negatively associated with creative achievement. This fact is demonstrated by historiometric, psychiatric, and psychometric sources. The negation emerges from the equally crucial reality that few creative individuals can be considered truly mentally ill. Indeed, outright psychopathology usually inhibits rather than helps creative expression. Even more significant is the fact that a very large proportion of creators exhibit no pathological symptoms, at least not to any measurable degree. Hence, psychopathology is by no means a sine qua non of creativity. Instead, it is probably more accurate to say that creativity shares certain cognitive and dispositional traits with specific symptoms, and that the degree of that commonality is contingent on the level and type of creativity that an individual displays. To be more specific, the relationship can be expressed as follows:

1. In general, creativity requires the cognitive ability and the dispositional willingness to “think outside the box,” to explore novel, unconventional, and even odd possibilities, to be open to serendipitous events and fortuitous results, to imagine the implausible or to consider the unlikely. From this requirement arises the need for creators to have such traits as defocused attention, divergent thinking, openness to experience, independence, and nonconformity. Let us call this complex configuration of traits the “creativity cluster.”

2. The higher the level of creativity displayed, the higher the likelihood that the individual manifests this cluster. In addition, some domains require this cluster more than others. For instance, scientific creativity tends to be more constrained by logic and fact than

artistic creativity. Accordingly, this cluster of attributes will be more apparent in artists than in scientists (Simonton, 2004). Still, some differences remain even with each of these general domains. For example, artists operating in formal, classical, or academic styles create under more constraints than artists working in more expressive, subjective, or romantic styles (Ludwig, 1998). The extent to which they exhibit the creativity cluster will reflect this stylistic contrast.

3. Because some psychopathological symptoms correlate with several of the characteristics making up the creativity cluster, moderate amounts of these symptoms will be positively associated with creative behavior. Moreover, more creative individuals will display these traits to a higher degree. Creators operating in less constrained domains will also exhibit these symptoms to a greater extent.

4. To the extent that these symptoms have a genetic foundation, then creativity can be said to be partly biologically determined. Nevertheless, psychopathological symptoms are not the only possible source for the cognitive and dispositional attributes underlying creativity. Many environmental experiences and conditions can also nurture the development of the same cluster. Although some of these developmental influences are also associated with psychopathology, others are not. Thus, on the one hand, creative development is frequently associated with traumatic experiences in childhood or adolescence, experiences that may also contribute to depression and suicidal tendencies (Eisenstadt, 1978; Goertzel & Goertzel, 1962). On the other hand, development is also linked to an enriched and diverse intellectual and cultural environment, an environment that is neutral with respect to psychopathology (Simonton, 2004). Yet growing up under such conditions fosters the emergence of many cognitive and dispositional traits that define the creativity cluster.

Implications

The theoretical interpretation just provided holds that creativity and psychopathology share a common set of traits. As a consequence, creators will commonly exhibit symptoms often associated with mental illness. The frequency and intensity of these symptoms will vary according to the magnitude and domain of creative achievement. At the same time, these symptoms are not equivalent to out-and-out psychopathology. Besides the fact that characteristics are normally at sub-clinical levels, their effects are tempered by positive attributes, such as high ego-strength and exceptional intellect. Moreover, many of the relevant components can be nurtured by environmental factors that lessen their dependence on any psychopathological inclinations.

Although some headway has been made toward understanding this ancient and complex question, more research remains necessary for the issue to be resolved completely. For instance, it would be instructive to use drug interventions to manipulate the concentrations of the neurotransmitters associated with psychopathic symptoms and then determine how these induced changes affect creative thought processes. Nonetheless, at present it seems safe to conclude that creativity is not incompatible with mental and emotional health.

References

- Andreasen, N. C. (1987). Creativity and mental illness: Prevalence rates in writers and their first-degree relatives. *American Journal of Psychiatry*, *144*, 1288-1292.
- Andreasen, N. J. C., & Canter, A. (1974). The creative writer: Psychiatric symptoms and family history. *Comprehensive Psychiatry*, *15*, 123-131. doi:10.1016/0010-440X(74)90028-5
- Barron, F. X. (1963). *Creativity and psychological health: Origins of personal vitality and creative freedom*. Princeton, NJ: Van Nostrand.
- Cattell, R. B., & Butcher, H. J. (1968). *The prediction of achievement and creativity*. Indianapolis, IN: Bobbs-Merrill.
- Durrenberger, S. D. (1999). Mad genius controversy. In M. Runco & S. Pritzker (Eds.), *Encyclopedia of creativity* (Vol. 2, pp. 169-177). San Diego, CA: Academic Press.
- Eisenstadt, J. M. (1978). Parental loss and genius. *American Psychologist*, *33*, 211-223. doi:10.1037/0003-066X.33.3.211
- Ellis, H. (1926). *A study of British genius* (rev. ed.). Boston, MA: Houghton Mifflin.
- Eysenck, H. J. (1994). Creativity and personality: Word association, origence, and Psychoticism. *Creativity Research Journal*, *7*, 209-216. doi:10.1080/10400419409534525
- Eysenck, H. J. (1995). *Genius: The natural history of creativity*. Cambridge, England: Cambridge University Press.
- Goertzel, M. G., Goertzel, V., & Goertzel, T. G. (1978). *300 eminent personalities: A psychosocial analysis of the famous*. San Francisco, CA: Jossey-Bass.
- Goertzel, V., & Goertzel, M. G. (1962). *Cradles of eminence*. Boston, MA: Little, Brown.
- Jamison, K. R. (1989). Mood disorders and patterns of creativity in British writers and artists. *Psychiatry: Interpersonal and Biological Processes*, *52*, 125-134.

- Jamison, K. R. (1993). *Touched with fire: Manic-depressive illness and the artistic temperament*. New York, NY: Free Press.
- Juda, A. (1949). The relationship between highest mental capacity and psychic abnormalities. *The American Journal of Psychiatry*, *106*, 296-307.
- Karlsson, J. L. (1970). Genetic association of giftedness and creativity with schizophrenia. *Hereditas*, *66*, 177-182. doi:10.1111/j.1601-5223.1970.tb02343.x
- Lombroso, C. (1891). *The man of genius*. London, England: W. Scott.
- Ludwig, A. M. (1990). Alcohol input and creative output. *British Journal of Addiction*, *85*, 953-963. doi:10.1111/j.1360-0443.1990.tb03726.x
- Ludwig, A. M. (1992). Creative achievement and psychopathology: Comparison among professions. *American Journal of Psychotherapy*, *46*, 330-356.
- Ludwig, A. M. (1995). *The price of greatness: Resolving the creativity and madness controversy*. New York, NY: Guilford Press.
- Ludwig, A. M. (1998). Method and madness in the arts and sciences. *Creativity Research Journal*, *11*, 93-101. doi:10.1207/s15326934crj1102_1
- Myerson, A., & Boyle, R. D. (1941). The incidence of manic-depression psychosis in certain socially important families: Preliminary report. *American Journal of Psychiatry*, *98*, 11-21.
- Peterson, J. B., & Carson, S. (2000). Latent inhibition and openness to experience in a high-achieving student population. *Personality and Individual Differences*, *28*, 323-332. doi:10.1016/S0191-8869(99)00101-4

- Peterson, J. B., Smith, K. W., & Carson, S. (2002). Openness and extraversion are associated with reduced latent inhibition: Replication and commentary. *Personality and Individual Differences, 33*, 1137-1147. doi:10.1016/S0191-8869(02)00004-1
- Post, F. (1994). Creativity and psychopathology: A study of 291 world-famous men. *The British Journal of Psychiatry, 165*, 22-34. doi:10.1192/bjp.165.1.22
- Post, F. (1996). Verbal creativity, depression and alcoholism: An investigation of one hundred American and British writers. *British Journal of Psychiatry, 168*, 545-555. doi:10.1192/bjp.168.5.545
- Raskin, E. A. (1936). Comparison of scientific and literary ability: A biographical study of eminent scientists and men of letters of the nineteenth century. *Journal of Abnormal and Social Psychology, 31*, 20-35. doi:10.1037/h0060483
- Schaller, M. (1997). The psychological consequences of fame: Three tests of the self-consciousness hypothesis. *Journal of Personality, 65*, 291-309. doi:10.1111/j.1467-6494.1997.tb00956.x
- Simonton, D. K. (2004). *Creativity in science: Chance, logic, genius, and zeitgeist*. Cambridge, England: Cambridge University Press.