

Creativity and “Madness”: Insanity and Mental Health

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Abstract—This paper will discuss the historical and scientific relationships between madness/insanity and creativity, both as an expression of neurological and psychological diversity and as a tool for expressing and healing a wounded psyche. Both present and prior research will be used to illuminate the connection between mental health and the expressive arts. The paper will also briefly discuss the authors’ current study that examined the interrelationships between mental health measures, demographic variables, and measures of creativity. Insights gained from how the concept and production of creativity relate to multidimensional mental health variables may provide further directions for assessment and treatment of mental health issues.

Keywords—Madness, Insanity and Mental Health.

I. INTRODUCTION

‘Madness’ and its connection to creativity is often a stigmatized, even in its more modern edifices of medicalization, psychiatrization, and is even criminalized; with the Diagnostic and Statistical Manual (DSM) as the current mythology to explain human behavior. Historically, this represents only one means to explain and understand “madness” and its complicated relationship with creativity.

II. Defining Terms

A. “Madness”

The definition and depiction of madness can greatly alter the opinion on whether or not creativity and madness are related. Typically, today “madness” or “insanity” are often seen as synonyms for mental or psychiatric illness. Currently, if one is diagnosed with a mental illness they are stigmatized. In the early 19th centuries, this was not the case. In the 19th century, the thought of madness “could serve as a distinguishing factor, one that could mark a person as separate, unique and even divinely chosen,” (Becker, 2001, p. 48). Becker (2001) found the relationship between creativity and madness has been a subject of controversy in Western society from about the 19th century to the present. “Although speculations regarding the mental state of creative individuals predate this period by centuries, they typically fell short of the verdict of clinical insanity” (Becker, 2001, p.45).

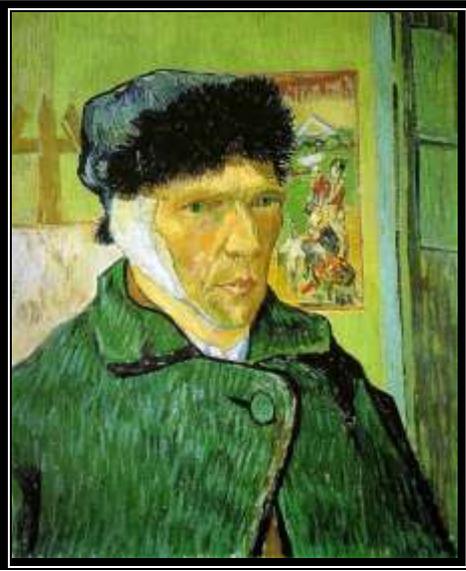
We have all been exposed to the view of the tortured artist. Salvador Dali’s and Vincent van Gogh’s bizarre behaviors or Sylvia Plath’s depression have been well documented. A possible link between mental illness and creative output has been documented throughout history. As far back as the 4th

century B.C., the connection between “divine” inspiration and altered mental state had already been made, prompting Plato to declare in the dialogue to Phaedrus: “Madness, provided it comes as the gift of heaven, is the channel by which we receive the greatest blessings... Madness comes from God, whereas sober sense is merely human.” In fact, some researchers even declare that creativity and mental illness are almost the exact states of mind. Sussman, (2007) notes:

The list of afflicted artists is staggering, and spans all areas of art. Many of the most iconic figures in the modern Western canon, including the poet T.S. Eliot, the composer Irving Berlin, and the painter Georgia O’Keeffe were formally institutionalized at some point in their careers. Others, including the writer Virginia Woolf and the artist Vincent van Gogh, actually ended their own lives because of mental illness. It seems almost impossible that so many central figures in the arts could be connected in such a specific way serendipitously – merely listing the artists who have suffered from mental illness suggests that mere chance isn’t responsible, that a scientific explanation for the link must exist, (Sussman, 2007, p. 21).

B. “Creativity”

Creativity has been defined as “the production of something both new and valued” (Neihart, 1998). During the period of the Italian Renaissance individuals who possessed superior ability in creativity were called “genio” or what we call “genius” (Becker, 2001). Genio had the definition of being an “imitation of established masters of nature” (Becker, 2001). While, there may be some relationship between genius and creativity --they are not necessarily the same thing. Creativity may have a thinking function, such as novel and divergent problem solving; it also possesses a production of creative artifacts. Modern research has focused on the multidimensional nature of both creativity and madness, but both these definitions remain in flux as they are socially constructed.



Some believe that Vincent van Gogh's mental disorders may also have been the key to his creativity (Picture: public domain)

III. RESEARCH INTO PREVALENCE

Anderson (1987) compared average business professionals to creative writers and found that 80% of writers have experienced manic depressive disorder or prolonged periods of depression while only 30% of the business professionals have experienced one of these mood disorders. Another study found that 38% of poets, playwrights, sculptors, and painters, who had received distinguished honors in their field, had been treated for depression or manic depressive disorder (Bi-polar) in opposition to the general population's treatment of only 6%. (Jamison, 1993). Other researchers have concluded that bipolar disorder is around 10 and 40 times more common among artists than among the general public" (Somasundaram, 2011). Jamison (1989) found that creative individuals, especially poets, reported that their mental and physical states during periods of great creative productivity were very similar to those during manic episodes.

Ludwig (1995) researched and diagnosed 1,004 eminent professionals, by reading biographies, which had made significant contributions to society throughout human history. In his results, he found that creative artists had a much higher chance of having a severe mood disorder than did any other professional. He also found that as adults, anywhere from 59-77% of the prominent artistic field could be diagnosed with a mood disorder (Ludwig, 1995). Andreasen (1987) notes "affective disorder may be both a 'hereditary taint' and a hereditary gift." (p. 1292).

IV. BIOLOGICAL FACTORS

One powerful fact that shows how madness and creativity may be influenced by biological factors is that Einstein, Newton, and James Joyce all have close relatives or offspring that may have had schizophrenia. This may indicate creativity and madness may have a genetic and/or biological link (Hare,

1987). Mental illness can be viewed as a biological disease of the brain. Research is beginning to indicate that creativity is neurologically linked to mental illness. Some mood disorders are even listed with the side effects of heightened and creative thoughts in the Diagnostic and Statistical Manual of Mental Illness (Sussman, 2007). A clue in the possible link between creativity and mental illness may be found in the brain's frontal lobe. This brain region holds the parietal and temporal lobes--locations where knowledge, meaning, and mental concepts are stored. Researchers find that people with mental illness commonly have abnormalities in this lobe. There is research that indicates that those with schizophrenia, depressive disorders, and substance abuse are most likely to see a dysfunction in these brain regions. Hyperactivity, found in the parietal and temporal lobes, may cause one to make strange connections between unrelated ideas, thoughts, and emotions. These thoughts may seem abstract and bizarre to the average person, making an artist's expressions of their mind seem creative and unusual (Sussman, 2007, p. 22).

The brain of a mentally ill individual also shows imbalances in neurotransmitters which can adversely impact the normal functioning of the frontal and temporal lobes. Those with schizophrenia have high levels of dopamine that can cause hallucinations, delusions, and scattered or tangential thought processes. Many with bipolar disorders have cycling levels of norepinephrine in the frontal lobe that result in hyper or low thought levels and unusual, creative ideas (Sussman, 2007). Neurotransmitter variations may alter perception and cognitive thoughts (Sussman, 2007). These imbalances can allow the mentally ill to draw, paint, hear, and think differently from the average individual (Sussman, 2007). These hallucinations and delusions can be expressed through a person's art, literature, or musical expression. Activities in the brain from atypical neurotransmitter variations allow combining of information in the parietal and temporal lobes in overwhelming ways states Dr. Kenneth Helman at the University of Florida (Sussman, 2007). Distorted images created by artists, such as those by Pablo Picasso, Salvador Dali and Vincent van Gogh, have a powerful impact on the normal human, because that many are not able to imagine these distortions in their heads.

Recent research has also made an intriguing link between creativity and schizophrenia (Flaherty, 2011; Kéri (2009). This line of research indicates that a genetic mutation linked to psychosis and schizophrenia may also influence creativity. Szabolcs Kéri, a geneticist at Semmelweis University in Budapest, Hungary, who carried out a genetic study on schizophrenia notes that biological research could help to explain why mutations that enhance a person's risk of developing mental illnesses such as schizophrenia or bipolar disorder have been preserved, even selected, during the course of human evolution.

Kéri (2009) recently studied a gene called neuregulin 1, which has been discovered to be involved in brain development. Prior research has linked this gene mutation to vulnerability towards schizophrenia and psychosis. Kéri looked at the relationship between these gene variations and creative thinking. He found that individuals with two copies of the neuregulin 1 mutation were much more likely to score higher on measures of creativity compared to subjects with one or no copy of the mutation. Those with one copy were also judged to be more creative, on average, than subjects without the mutation (Keri, 2009). How exactly neuregulin 1 impacts the link between creativity and mental illness isn't entirely clear. It is noted that the subjects with two copies of the mutation were no more likely than others to also possess traits, such as paranoia, odd speech patterns, inappropriate emotions, or other features associated with psychosis. This may suggest that the mutation's connection to mental illness is likely mediated by other variables.

V. PSYCHOLOGICAL FACTORS AND CREATIVITY

Psychological models suggest that factors of intelligence, cognitive flexibility, communication, and openness may be associated with creativity.

Intelligence, cognitive flexibility, and communication may mediate with biological factors to produced different outcomes. Keri notes:

My clinical experiences often reveals that high-IQ people with psychosis have more intellectual capacity to deal with psychotic experiences, it's not enough to experience those feelings, but you have to communicate them (quoted in Callaway, 2009).

It may be the process of communication and expression of divergent or novel thought processes that holds a critical role in increasing coping and healthy adaptation, in the mentally ill. This certainly has implication for understanding the conditions associated with constructions of 'madness' and the links with creativity support the notion that the gene's impacts are probably influenced by cognitive and personality factors, including intelligence (Hall, et al., 2006). Carson (2011) sees cognitive flexibility as a protective factor. Cognitive flexibility is the ability to shift thoughts or actions as demanded by the situational context. This includes the ability to shift attentional focus from one stimulus to another with conscious control.

The Psychological variable of "Openness to Experience" (OE) appears to be a consistent and robust variable that is associated with creativity (Li, et. al, 2014). OE includes the following factors: inventive/curiosity (vs. need for consistency/cautious); appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience. Openness reflects the degree of intellectual curiosity, creativity and a preference for novelty and variety a person has. OE also describes the extent to which a person is imaginative or independent, and depicts a personal preference for a variety of activities over a strict routine. Some disagreement remains

about how to interpret the OE construct, which is sometimes called "intellect" rather than "openness to experience". Cognitive flexibility is also associated with the personality trait of openness to experience, which is the psychological trait also most often linked with creativity. But the openness and sensitivity of creative people can expose them to much suffering and pain, which can be debilitating. As Sylvia Plath said, "When you are insane, you are busy being insane—all the time ... When I was crazy, that's all I was" (quoted by Flaherty, 2011, p112).

Research does show that those who have tendencies towards depression are highly linked to creativity, and those with depression can express these heavy emotions through their art (Keynes, 1995, 139). An artist who is "mad" allows his work to spring from the periods of intellectual brilliance and flashes of insight that he/she may get during very emotional stages of their life (Are creativity and mental illness linked?, 1996) (Hare, 1987, 1589). Research also shows that mentally ill artists usually encountered highly emotional childhoods which they latter embrace and show through their work (Ludwig, 1992).

"While it remains unclear that emotional instability is usually detrimental to creativity, it may also be valuable. It may provide the intense motivation, the conviction, imagination and the inspiration necessary for future discoveries and breakthroughs" (Schulberg, 2001, p.106).

Creativity or Madness may also allow the artist, poet, writer, composer, and scientist to escape the powerful social and cultural constraints that we face in today's society. Schulberg noted that conformity is what we face in today's society that hinders our ability to facilitate the amount of madness or creativity we need develop tomorrows new breakthrough and next week's discoveries.

Thus, certain personality traits and/or brain functioning of creative individuals may overlap with clinical syndromes of mental illness. This space does appear to intersect—but does not provide a one-to-one correspondence. This correspondence may serve to illuminate both constructs of creativity and madness. Research needs to cast light on the issue of why potentially debilitating conditions like schizophrenia have not succumbed to evolutionary pressures. In that, the same cognitive mechanisms that give rise to schizophrenia are those which lend themselves to creative cognition (Eysenck, 1993; Green & Williams, 1999).

Madness may also mean sometime else than merely "bad" biology (although it may be very helpful to describe these associations), bizarre thinking, or "emotional problems." We suspect that the current picture may be incomplete. Human beings exist on multiple dimensions and this need to be examined, assessed and understood on all these dimensions. (Bio-psycho-social-spiritual systems model if you will). As one continues to study mainstream mental health models as well as alternative models, one must be informed by solid

multi-method research (both subjective and the objective views).

VI. A PILOT STUDY: THE RELATIONSHIP BETWEEN MEASURES OF CREATIVITY AND MENTAL HEALTH

With the background research in mind, the authors also developed a current study to determine the extent to which multidimensional mental health measures predict measures of creativity, as assessed by self-rated creativity, a measure of the creative personality, and an inventory of creative behaviors. The data in this study were obtained from 183 participants, non-clinical population, and they were solicited as volunteers. Age of subjects ranged from 18 years old to 57 years old (mean = 26.8 years old); Females - 81.49% & Males - 18.51 %.

The ethnic background was as follows:

Caucasian (68%),
African American (24.6%)
Asian Americans (3.3%)
Latino-Hispanic (2.5%)
Native Americans (1%)
“Mixed race” (.6%) representing smaller proportions of the sample.

Many of the subjects were regularly involved or studying music or some other form of artistic expressions (painting, ceramics, etc.).

If creativity is in part a combination of intellectual and personality variables (Amabile, 1996; Eysenck, 1993) and individuals have insight into their own intelligence and personality, it follows that individuals should be able to recognize their own creativity to a certain degree. Additionally, “creative” is a popular term, therefore individuals may be hypothesized to have received feedback throughout their development as to how creative they are perceived to be. Self-rated creativity has been used in recent studies (Furnham & Bachtiar, 2008) and this methodology is replicated in the study.

A. Creative Personality

For this study, “creative personality” was measured by Gough’s (1979) Creative Personality Scale (CPS) for the Adjective Checklist (Gough & Heilbrun, 1983). The administration of the scale was untimed. Scores for the CPS can range from 12 to 18. The CPS was validated by comparing self-reported adjectives with ratings of creativity by faculty on over 1000 students. (Gough, 1979). The CPS is a reliable and valid test for the identification of creative personality (Carson et al., 2005; Gough, 1979; Kaduson & Schaefer, 1991; McCrae, 1987). It purports to assess aspects of the creative personality that have been demonstrated to relate to rated creativity (Gough, 1979). It is more commonly employed as a criterion of creativity than as a measure of personality (Carson et al., 2005; Wolfradt & Pretz, 2001).

B. Creative Production

A brief measure of creative production or achievement were obtained through an inventory of self-reported behaviors.

Self-report inventories of achievement have been used in studies of creativity (Carson et al., 2005; Furnham et al. 2008). Hocevar and Bachelor (1989) contended the self-report inventory of creative achievement to be the most defensible measure of creativity. The current study utilized a 34 item checklist of everyday creative achievements. There are numerous studies that have demonstrated that self-reported creativity is related to performance measures of creativity like divergent thinking (DT) and ratings of creativity (Barron, 1955; Batey & Furnham, 2006; Carson et al., 2005; Gough, 1979).

C. Everyday Creativity

To measure everyday creative behaviors, we used a version of Hocevar’s Creative Behavior Inventory (CBI) that was abbreviated by Dollinger (Dollinger, Burke, & Gump 2007). This 28-item scale asks people to report how often, in their —adolescent and adult life, they have done various creative behaviors, such as wrote a short story, designed and made a costume, wrote the lyrics to a song, and built a hanging mobile. On the whole, the items capture the domains of arts, crafts, and creative writing. For most of the items, people are instructed not to count behaviors done to meet a course requirement. This measure used a 4-point ordinal scale: A = Never did this, B = Did this once or twice, C = Did this 3 to 5 times, and D = More than 5 times.

D. Mental Health Measures

Mental Health Variables (Symptoms) were measured using the Brief Symptom Inventory (BSI). The BSI (Derogatis & Spencer, 1993) is comprised of 53 items and represents the brief form of the Symptom Checklist-90-R (SCL-90-R) (Derogatis & Savitz, 2000). The BSI is a highly structured self-report instrument that helps informants’ express inner feelings and thoughts that cannot be easily elicited in interviews (Derogatis & Spencer, 1993) (see Figure 2). Individuals respond to the items using a 5-point scale that has anchors from not at all (1) to extremely (5). The BSI takes 8-10 minutes to complete and has a sixth- grade reading level.

E. Personality Measures

From a personality perspective psychological function can be localized into the “Big Five” traits. The Five-Factor Model (FFM) is an empirically supported multidimensional personality model that specifies that most stable individual differences in emotions, cognition, and behavior can be described by five independent domains: Neuroticism, Extraversion, and Openness to Experience, Agreeableness, and Conscientiousness. These factors are described as follows (Wiggins, 1996; http://www.powershow.com/view/14cf1c-NmJhM/Raymond_Cattell_powerpoint_ppt_presentation):

- (1) Extraversion; people high in extraversion are often talkative, passionate, active, dominant, & sociable. Those scoring high have more interactions with others than those scoring low. Extraverts tend to develop more social relationships during college, are more

likely to fall in love, & are more responsive to pleasure.

- (2) Agreeableness; Agreeableness refers to how “likable” we are. People scoring high on agreeableness tend to be good-natured, soft-hearted, and trusting. Those low on the factor are irritable, ruthless, and suspicious. People who score high on this factor report little conflict in their relationships. They are less likely to assert power when they do experience conflict as well.
- (3) Neuroticism; Describes people who frequently are troubled by negative emotions such as worry & insecurity. People high on neuroticism can be described as those who worry, those who emotionally unstable, they are often anxious, & have low self-esteem. People who score low on this factor report being much happier than people scoring higher on this dimension.
- (4) Conscientiousness; Describes someone who is hardworking, dependable, ambitious, responsible, & is tenacious. People scoring high on this dimension value cleanliness, & ambitiousness. They tend to be organized, punctual, do well academically, are well liked by their superiors, & dedicated to their significant others.
- (5) Openness (to Experience); Refers to how cultured, intelligent, & receptive a person is to new ideas, places, & interests. Those who score high in openness are more likely to be artistic, curious, imaginative, insightful, and intuitive.

These ‘traits’ are seen through the intrapersonal lens as residing within the personal (but may be expressed at other levels, such as the interpersonal) and are empirically related to individual personality and overall global stability. Research shows that the five-factor structure of personality in some sense transcends language/culture and may indeed be universal (McCrae, & Terracciano, 2005). The Big Five structure does not imply that personality differences can be reduced to only five traits. Rather, these five dimensions represent personality at the broadest level of abstraction, and each dimension summarizes a large number of distinct, more specific personality characteristics (Appel, Kim-Appel, 2010; John & Srivastava, 1999). The intrapersonal level is also reflected within Freud’s concept of ego, and Jung’s concept of ego and persona. It is the most “visible” aspect of individuals, and is reflected in cognition and in the development (or lack) in an integration of rational and emotional functions.

The “Big Five” Personality Traits were assessed in the pilot with the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003). The test has been extensively validated (Gosling et al., 2003).

VII. RESULTS AND DISCUSSION OF PILOT STUDY

A. Methods

Numerous statistical regression models of the mental health measures (variables) and big 5 personality factors were run (in

all combinations) to determine their predictive power for the outcome measures of creativity.

The first set of regression models were used to examine the basic relationship between the mental health and personality variables (BSI, Big 5) and the measurement of creative personality (CPS).

The second set of regression models examined the mental health and personality variables (BSI, Big 5) and the production of creativity behaviors (CBI ~Creative Behavior Inventory).

B. Creative Personality

For prediction of “Creative Personality” (CPS) the best regression model included the variables, emotional stability (EMS) (being stable), openness to experience (OPE), agreeableness (AG), but also increased with levels “somatization” (SOM) present within individuals in the sample. (Somatization is a penchant to experience and convey psychological distress in the form of physical symptoms (Derogatis & Spencer, 1993).

EMS, OPE, AG, SOM = CPS
F = 12.485, $p < .001$; $R^2 = .230$

C. Creative Behavior

For prediction of “Creative Behavior” (CBI) the best regression model included the variables:

- Somatization (SOM)
- Obsessive Compulsive (OC)
- Anxiety (ANX)
- Global Symptom Distress (GSI)
- Agreeableness (AG)
- Openness to experience (OPE).

SOM, OC, ANX, GSI, AG, OPE = CBI
F = 9.91, $p < .001$; $R^2 = .265$

D. Personality and Mental Health Measures (Big 5) and Creativity

This Study confirmed association with Creativity and “Openness to Experience.” Associations between creativity and agreeableness were also found in this sample. This is associated with friendly/compassionate personality.

The Outcome Variables of CBI (Creative Behavior Inventory) and CPS (Creative Personality) were also significantly associated with the following clinical and personality mental health variables (significant correlations at .05 level unless otherwise stated):

CBI and Openness to Experience ($r = .401$) Moderate association [.001]

CBI and Anxiety ($r = .190$) mild association.

CBI and Somatization ($r = .357$) moderate association [.001]

CBI and Obsessive Compulsive ($r = .283$) mild to moderate association.

CBI and Agreeableness ($r = .276$) mild to moderate association.

E. Discussion

While for this sample, overall better mental health (emotional stability and low psychoticism) appears associated with creative personality increased levels of anxiety, obsessive compulsive and somatization were associated with the creative activity (products). A strong association between the mental health symptom measure of somatization (at near clinical levels) and creativity stood out as the most salient symptom in this sample across measures of creativity. Somatization, the physical expression of psychological distress. But the distress is seen arising from perceptions of bodily dysfunction. Complaints often focus on cardiovascular, gastrointestinal, respiratory, neurological and other systems with strong autonomic mediation. Pain and discomfort of the gross musculature and other somatic equivalents of anxiety are also possible components of Somatization (Derogatis & Spencer, 1993). Nothing found in the literature that makes the linkage between creativity and somatization. Some follow-up interviews examined this issue and some subjects identified having high “body-embodied awareness,” which may represent the artist tendency to experience and process experience in more emotional and visceral areas of the brain/body, rather than through language and verbal brain structures. Although one may need to screen for actual medical issues in the population, there were no overt indications major physical illness was present in this sample. It did appear that the sample that used the production of art as a means to express and perhaps control anxiety.

VIII. SUGGESTIONS FOR INTERVENTION

Expressive therapy may be effective intervention (entry point) for individuals experiencing mental health issues (including but not limited to anxiety and somatization) as part of counseling/therapy—moving towards making connections from the body towards meaning and language – (what we call “Bottom up” integration).

Creative expressiveness as a counseling intervention to increase creativity (particularly with overly intellectualized clients) then may also offer an improvement in some qualities as compassion, tolerance, cognitive flexibility, emotional awareness, and openness as well as increased coping (what we call “Top down” integration).

IX. CONCLUSION

Thus, certain personality traits, cognitive flexibility, and/or brain functioning of creative individuals may overlap with clinical syndromes of mental dysfunction. This overlap does appear to intersect—but not with a one-to-one correspondence. This area of overlap may serve to illuminate constructs of both creativity and “madness” as well as mental health. The connection between “madness” and creativity may be found in the shared biological, cognitive, or personality features, related to the presence of cognitive and social disinhibition, and divergent thinking and brain processing patterns (Glazer, 2009). Hence, “madness” or “insanity” may mean something more than merely bad biology, or cognitive variations

(although it is helpful to describe these associations). We suspect that the current picture may be incomplete. The study of human behavior, including madness and creativity, involves numerous biological, psychological, and social substrates-- and perhaps can best be illuminated by a truly multidisciplinary inquiry. This multi-lens examination may offer a way forward, using creativity, not as means to blindly associate creativity with “madness,” but an understanding of creative expression as a means to optimize mental health.

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