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Full Length Research Paper

Reviewing the link between creativity and madness: A postmodern perspective

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Researchers on creativity and psychology have long been fascinated with the high incidence of psychotic behavior amongst geniuses and individuals of exceptional creativity. The aims of this paper are first, to review the existing findings for a better insight into the socio-contextual factors underpinning the mad genius conundrum, and secondly, to discuss how the development of postmodern thoughts and beliefs have influenced our perception and understanding of the emotional fabric of highly creative, though mentally-ill individuals. While one cannot ignore the substantial body of evidence in support of the relationship between genius and madness, it is likely that many of the factors inducing psychosis in geniuses are no different from those achieving the same effects in ordinary people. Furthermore, the unique features of post-modern times may have contributed to erasing the fine line between creativity and insanity, in ways that would not have been possible a century earlier.

Keywords: Creativity, genius, madness, mental illness, psychotic behavior, postmodernism.

Introduction

'No great genius has ever been without some divine madness', proclaimed Aristotle more than two thousand years ago. The notion that there might be a link between genius and madness has been in existence since the times of the ancient Greeks. It has been recognized that there was an uncanny and mystifying coincidence between insanity and creativity; that the occurrence of 'mad geniuses' throughout history is significant enough to warrant repeated investigations in that area. However, despite the numerous studies carried out to investigate the existence of a link between genius and madness, there is to date, no clear explanation of a direct correlation between the two.

This paper begins with a discussion on the existing literature on possible links between creativity and psychiatric disorder. It then considers some of the reasons for the perceived correlation between the two, before finally exploring the relevance of the mad genius conundrum in post-modern times.

Defining Creativity

Shalley (1991) suggests that creativity comprises three major components: the required ability or expertise in a particular field, the innate or intrinsic motivation towards further exploration or development, and the cognitive processes to conceive and synthesize novel ideas or products. Weisberg (1992) and Wallace & Gruber (1989), posit that Creativity is the capacity to produce an output that not only has an element of novelty and originality, but is of positive value and purpose to mankind. The purists would reserve the term 'creative' to a product that has some 'transformative element' that causes it to be a 'major departure from what was known at the time' (Weisberg, 1992: 4). Eysenck (1995:13) summarizes the major aspects of genius in Plutarch's description of Archimedes as being a combination of 'natural endowment (intelligence), hard work, divine inspiration (creativity)'. He then adds on: 'a personality which indul-

ges in behavior which is distinctly unusual…. in anyone lacking in the achievements of Archimedes, we might be tempted to call it *mad*.'

Defining Madness

Madness is commonly described as an 'altered, abnormal, deviant state of mind or consciousness'. The various forms of mental disorder are generally of two kinds. The first being the condition of neurosis, which describes the milder forms of mental disorders such as phobias, depressions, obsessions, compulsions and hyperchondriasis. The second type of aberrant mental condition, psychosis, includes severe forms of mental illnesses, whereby the patient loses contact with reality and shows irrational and irresponsible behavior. Psychotic afflictions include delirium tremens, manic depressive disorder and schizophrenia.

Evidence in support of a link between Creativity and Madness

Plato advocated that poetic inspiration had its source in 'divine madness.' The concept of 'madness' as defined by the Greeks was however, very different from ours. To them, madness means more of an inspiration from the Gods and was perceived as a positive influence, an enabling factor, without its current pejorative connotation. In one of the earliest studies on the topic, Lombroso (1891), working with a number of mentally disturbed geniuses, concluded that there was a close relationship between genius and madness. The link between creativity and mental illness is reaffirmed when one considers the high incidence of psychosis amongst the plethora of creative luminaries.

In the literary domain, one would note the cases of Virginia Woolf, Sylvia Plath and Ernest Hemingway – all three endured episodes of profound depression before eventually committing suicide. Also known for their creative eminence being marred by psychotic afflictions were the artist Vincent van Gogh, scientists Michael Faraday and Isaac Newton, composer Robert Schumann. Even psychologists are not spared: Lawrence Kohlberg, who attained eminence for his work on moral development, suffered from depression and eventually took his own life.

Woody and Claridge (1977, 241-248) referred to two hypotheses on the link between creativity and psychoticism:

> that creativity and psychopathology share a similar origin, hence the biological link; that creative individuals and psychotics have some common personality traits and thinking styles, hence the behavioral and cognitive links.

The Biological/Genetic link

The view that there is a common genetic origin for creativity and psychosis, as speculated by Hammer and Zubin (1968) and Jarvik and Chadwick (1973) is supported by the work of three authors. Heston (1966) found that amongst children of schizophrenic mothers, half showed psychosocial impairment while the other half grew up to become highly successful in life and showed exceptional traits of creative talent. Karlsson (1968) found that among relatives of schizophrenics in seven generations of an Icelandic family, there was a sizeable number of highly creative individuals. McNeil (1971) found a positive and significant correlation between the creativity level of a group of adoptees and the incidence of mental illness in them and their biological parents. The link between creativity and manic depressive disorders was further discussed by Richards et al. (1988). Recent work by Simeonova, Chang, Strong, & Ketter (2005) further supports the genetic link between mental illness and creativity. The study compared the creativity test performance of children born of parents suffering from bipolar disorder, with that of children born of healthy parents. The authors observed that children of bipolar parents had significantly higher creativity scores than children of normal, healthy parents.

However, whereas the evidence for a genetic link between psychosis and creativity seems to be fairly substantial for a number of mental conditions, one would hesitate to posit that this assumption is valid for all other forms of psychotic afflictions. While there is a substantial number of highly creative children born of psychotic parents, there is certainly a higher incidence of mentally healthy, highly creative children born of mentally healthy, highly creative parents, just as there are cases of low creative, psychotic children born of low creative, psychotic parents.

The Cognitive link

The view that creative individuals and psychotics have common thinking styles is supported by studies on cognitive processes following the seminal work of Guildford (1950). In addition to the three main thinking styles (acceptance of ambiguity, convergent thinking and divergent thinking), he identified the main primary cognitive traits related to creativity. Some of these traits include fluency and flexibility of thinking, originality, redefinition and elaboration.

McConaghy (1961) identified two modes of thinking

reflecting a predisposition to psychosis but bearing a close resemblance to some of Guildford's cognitive traits. One of them, referred to as ' allusive' thinking is characterized by vague, highly intuitive thought processes and imprecise and inappropriate speech. It has been suggested that allusive thinking is indicative of a predisposition to schizophrenia. McConaghy and Clancy (1968) working on the performance of schizophrenics in object sorting tests found that the 'allusive' thinking pattern of schizophrenics could be found in a milder form in normal people.

Prentky (1989) suggested a marked resemblance between the creative cognitive styles of flexibility referred to by Guildford (1950) and Cattell (1971) and McConaghy's allusive thinking, but the argument for this apparent similarity can only be carried on as far as the 'loosening of boundaries' of thought processes is concerned. Prentky himself stressed that creative thinking can be differentiated from psychotic thinking by the level of *control* exerted by the individual over the thought processes. Whereas creative thinking is purposeful and rational with clear-cut objectives, psychotic thinking is capricious, haphazard and nonsensical. Creative thinking is deftly managed by its originator, whereas psychotic thinking overpowers its originator.

A recent study by Carson, Peterson and Higgins (2003) provides a possible explanation between the link between madness and creativity. These researchers explored the relationship between creativity, mental illness and degree of latent inhibition, which they defined as 'the capacity to screen from conscious awareness stimuli previously experienced as irrelevant' (Carson, Peterson, & Higgins, 2003:499). Individuals with low latent inhibition have a higher susceptibility to mental illness since they are not able to filter off the irrelevant stimuli that constantly interfere with focused thought processes. However, low latent inhibition also enables a person to have the exceptional cognitive flexibility that engenders creative achievement. Carson et al. found that high creative achievers had significantly lower levels of latent inhibition than their low creative peers.

Personality Links

Barron (1972) reported apparent similarities in character and experiences between creative normal individuals and schizophrenics, namely in terms of their impulsive nature and restlessness, their inclination towards solitude and their tendency to reject common values. In addition, Woody and Claridge (1977) suggested that creative individuals have a tendency to be of solitary disposition, poor in social skills and indifferent to social norms. They are likely to be dominant and aggressive, imposing their views and tenaciously defending them. More recently, Berenbaum and Fujita (1994) explored the relationship between schizophrenia and personality. Though they found that schizophrenia is associated with high levels of peculiarity and introversion, traits that are equally common amongst geniuses and highly creative individuals, the two researchers did not find any clear association between schizophrenia and creativity.

Eysenck (1977, 1994) reported that although there is no conclusive evidence for a link between creativity and psychosis, there is, nevertheless, a close relationship between creativity and 'psychoticism', which he later defined as 'a hypothetical dispositional trait…a genetic predisposition to develop psychosis under appropriate stress'. In an attempt to produce more conclusive evidence for Eysenck's hypothesis, Woody and Claridge (1977) conducted a study on 100 university students from Oxford. The students were chosen from diverse fields of specialization and it was assumed that, coming from one of the most prestigious universities, they were of above average IQ and highly creative. In addition to undertaking personality and creativity tests, the subjects carried out the Nufferno speed test to investigate possible links between creativity and schizophrenia.

The results revealed that there is positive and significant correlation between psychotism (Eysenck's P factor) and creative indices indicative of divergent thinking in the Wallach-Kogan tests. However, the Nufferno speed test showed that individuals with high 'P' (psychotism) factor did not demonstrate the cognitive slowness observed in schizophrenics, hence suggesting that there is no direct link between psychotism and psychosis. The results of the Nufferno speed test also challenged the suggested link between schizophrenia and creativity in the earlier work of McConaghy & Clancy (1968), Dykes & McGhie (1976) and Barron (1972). Lastly, there was no conclusive link between personality traits such as extraversion/introversion and neuroticism/stability and thinking styles that are either convergent or divergent.

Woody and Claridge's study thus corroborated Eysenck's suggestion that creative individuals have a predisposition toward psychotic behavior but are not necessarily insane. In his book entitled 'Genius: the natural history of creativity', Eysenck (1995:205) defined high psychoticism as characterized by the following traits: aggressive, cold, egocentric, impersonal, impulsive, antisocial, unempathic, creative, tough-minded. There was no mention, however, of the selective process whereby these traits have been associated with psychoticism. There also seems to be an over-generalization of the fact that all highly creative individuals would show the traits associated with high psychoticism. On the contrary, far from being 'cold, unempathic, impersonal', many eminent creative writers and artists owe their genius to their ability to empathize with people and their sensitivity to human suffering and

oppression. Writers Victor Hugo, Charles Dickens and William Shakespeare centered their work on the human condition and prevailing social injustices. Vincent van Gogh, who went beyond psychoticism to become a true psychotic, clearly expressed his empathy to the working class in one of his masterpieces, the 'Potato Peelers'. Ironically for some of these creative individuals, their unusually high level of sensitivity not only enabled their work to transcend beyond the ordinary, but it also led to their downfall.

Both Jamison (1985) and Ludwig (1995) noted that the highest rates of mental disorders occur among poets, writers, musical composers and performers, artists and actors as compared to scientists, politicians and architects for whom the rate is lower. It is likely that writers, musicians and artists who are by nature more sensitive and make use of their emotional experiences to achieve their creative products, are liable to become victims of their own sensitivity, allowing them to be overwhelmed by hopelessness and melancholy. Kaufman (2002) observed the higher incidence of mental afflictions amongst poets and an even higher tendency towards neurosis or psychosis amongst female poets than amongst their male counterparts. Scientists on the other hand, achieve their goals by means of logical and rational deductions, and hence are less likely to be overpowered by their emotions. Jamison (1985:4), however, argues that it is psychosis that precedes and makes way for greater sensitivity for enabling creative achievement. She wrote: 'How might a major mental disorder such as bipolar illness be linked to creativity?' First, the illness itself may influence creativity by its cyclical nature and the long-term changes in mood and behavior it causes. Second, the experience of having bipolar illness may make a person sensitive to a wider range of emotions and perceptions.' Hence, we may be facing here a chicken- and-egg issue; whether sensitivity engenders psychosis or vice versa is a matter of interpretation and it is likely that they mutually reinforce each other.

The Mad Genius: Controversy, Conundrum or Co-existence?

The link between genius and madness was considered by some researchers as a controversy due to the paradoxical argument on how two opposing and seemingly mutually exclusive conditions could really coexist in a single individual. Yet others were greatly perplexed by their very existence and often regarded them with deep puzzlement and awe.

Whereas no one would argue that geniuses stand out from the norm because of their special giftedness or superior talent or intellect, it is likely that they are driven to madness by the same factors that would similarly affect ordinary people. In the first place, the traits of genius usually (but not always) develop and are expressed early in the life of the individual. French writer, Jean Paul Sartre learned to read at the tender age of three and was writing novels by the time he was seven. The development of mental illness, on the other hand, follows a different course. One may be a born-genius but one is not born-mad. Psychosis rarely manifests itself in childhood, except for schizophrenia which can be diagnosed as early as pre-school years (Beeman, 1990: 62-64). The earliest manifestation of mental disorder is usually during adolescence, as in the case of the poet, Sylvia Plath, who made her first suicide attempt while she was in her teens. In both geniuses and non-creative individuals, the symptoms of psychosis only manifest themselves later in life and often as a result of the encounter with negative, unfortunate and traumatizing life experiences. For Sylvia Plath, the untimely death of her father proved to be the first traumatic disturbance of her early years. Eventually, the separation from her husband shortly after the birth of her second child culminated in her second suicide attempt.

Furthermore, the creative productions of the so-called mad geniuses were achieved either before they turned psychotic or when they were in remission from their aberrant mental state or at least during periods of relative well-being, but not when they were at the peak of their insanity. Poet Sylvia Plath (1982) was in agreement with this when she said: 'When you are insane, you are busy being insane – all the time …When I was crazy, that was all I was.' Likewise, the acclaimed mathematician, Nobel laureate John Nash, was only twenty-one when he wrote his seminal work on game theory in the early '50s. Shortly after, at the peak of his career, he spiraled into severe paranoid schizophrenia, a condition that would deprive him of his creative prowess and keep him in a state of delusional thinking for almost two decades. However, in between periods of hospitalizations, attempts at recovery and relapses, Nash (1995) experienced intervals of greater lucidity and what he later called 'enforced rationality'.

Rothenberg (1990) further argues that although there are definitely cases of creative persons known to be psychotic, these people could not have been psychotic 'at the time they were engaged in a creative process'. He identified two types of thinking processes employed by geniuses:

> The 'Janusian' process which he defines as a creative cognitive sequence, both conscious and rational, which involves the ability to conceive multiple opposites or antitheses simultaneously either as coexisting or equally valid, enabling the bounds of ordinary logic to be surpassed. Rothenberg claims that this thinking process occurs in the early phases when ideas are genera-

ted and is the basis of major creative breakthrough. The 'homospatial' process, which functions later to further develop the Janusian formulations and generate other ideas. It is defined by Rothenberg as the 'conception of two or more discrete entities occupying the same space, a conception leading to the articulation of new identities.' In short, such fusion of multiple sensory perceptions such as auditory, tactile, visual and olfactory sensations, culminate in the generation of new experiences in the conscious mind.

Rothenberg claimed that the Janusian and homospatial processes employed in creative endeavors, are healthy, active and intentional, targeted at achieving specific goals, unlike the haphazard, disorganized, allusive occurrence of psychotic thoughts. He argued that both Janusian and homospatial processes show considerable demarcation from the common everyday type of thinking and thus may be mistakenly taken for psychotic thinking and behavior. He ascribed the tendency to link creativity with madness as due to the confusion between the Janusian process with Freud's primary process cognition, which involves substituting opposites for each other and fails to distinguish between contradictions. The primary process is thought to be present in psychotic experiences such as delusions and hallucinations. Since the Janusian process employed by creative people appears to be illogical on the surface, it has often been confused with psychosis. Rothenberg tested his hypothesis by subjecting Nobel laureates, talented undergraduates and psychiatric patients to a standard word association test: He observed that Nobel laureates and highly creative students made use of the Janusian process during the test while psychotics, like the less creative students did not. This supports his claims that mental illness does not engender creativity since psychotics are unable to carry out thought processes involved in creative activity and achievement.

It is observed that one distinct characteristic of geniuses and highly creative people, is the persistence and tenacity with which they strive to attain their goals. Rothenberg (1990:5- 9) observes that what distinguishes creative people from non-creative ones is the high degree of motivation that continuously drives them to work and to produce. Rothenberg disagrees with the concept of 'genius' as being something one is born with rather than something one can acquire. He acknowledges that geniuses have an above average proficiency in their areas of specialization but he upholds the fact that even geniuses need to undergo learning and training and that most of them put in hours of hard work towards creation rather than merely wait for inspiration. This is in agreement with Edison's description of genius as 'one percent inspiration and ninety-nine percent perspiration' and Disraeli's perception of 'patience as a necessary ingredient of genius'.

Furthermore, Rothenberg attributed the incidence of psychosis amongst highly creative people to the consequences of their creative endeavors. He added that the creative thought processes employed by geniuses, were not easy to conceive and might have inflicted considerable mental and emotional strain on their creative users. The highly creative person is thus comparable to an Olympic athlete, both being unafraid to repeatedly test the limits of their abilities and stretch their boundaries. Gore (2000:12), in a special report on elite athletes, admitted that 'the human body did not evolve to swim laps - or to kick a soccer ball or to do somersaults off a ten-meter platform…..yet we have invented ways to push our anatomy to its limits.' He further added that 'elite athletes take human performance to a notch we lesser mortals can only imagine.' In a similar way, the geniuses, being elite thinkers, have perhaps invented ways to push their mental capacity to its limits. The flip side of the intense mental exertion that creative thinkers and geniuses undergo is no different from the physical exertion experienced by their athletic counterparts. The only demarcation is that, whereas, the symptoms of overtraining are clearly visible and hence can be easily confined, those of mental over- taxation are usually not as tangible and well defined. The creative thinkers thus run a higher risk of being overwhelmed by the mental tension they experience, propelling them into the nebulous realm of psychosis.

If the pursuit of greatness is in itself a risky endeavor, it is understandable that once greatness has been achieved, as for the acclaimed geniuses, the pressure to live up to its expectations is even harder to sustain. Greatness is sweet, but it may become an addiction for those who have tasted it. There are those who, once catapulted into the heights of eminence and public adulation, are in constant fear of criticism and rejection. Virginia Woolf was known to have a neurotic fear of criticism rooted in an equally morbid fear of failure and her bouts of nervous breakdown were prompted at least partly by the impending publication of her work and its exposure to public scrutiny. There is also the case of William Shockley, Nobel Prize winner, inventor of the transistor and solid-state physicist. An outstanding scientist in his own right; he was nevertheless reported to be 'a very competitive and sometimes infuriating man' (Moore, 1999). During the period when he supervised research on silicon semiconductors, he was known to have developed paranoid traits, becoming highly suspicious of his young staff and constantly fearing that his project be deliberately undermined or stalled. Clearly for him, the fear of loosing out became an obsession that was to ruin his reputation.

Just as there are the unfortunate ones who succumb to madness as a result of their persistence in creative

endeavors, there are those with psychotic dispositions who use their creativity to keep madness at bay. Beeman (1990:16) affirmed that 'by finding a healthy creative outlet, a person is learning to release emotions in a positive way. Sharing what we feel by words, pictures, movement, portrayal becomes a way of connecting with others that brings greater self -esteem and promotes learning and growth'. For writer Virginia Woolf, creative activity seemed to have on one hand, brought solace to her severely disturbed life but on the other, precipitated her death by suicide. She wrote in her diary (Woolf, 1969:39-140):

'The only way I keep afloat is by working…directly I stop working I feel that I am sinking down, down'. Yet, the physical and emotional demands of her writing imposed sufficient strain on her to trigger the many psychotic attacks that would plague her life. For Sylvia Plath, putting her feelings into words was an attempt to exert control over the troubling emotions that she knew were destroying her. Thus she wrote in her journal (Plath, 1982:110) : ' I justified the mess I made of life by saying I'd give it order, form, beauty, writing about it; I justified my writing by saying it would be published, give me life'.

Whereas Sylvia Plath attempted to use her creative power to keep illness at bay, John Nash was in the opinion that madness could be to some people a form of escape from mundane reality. He recalled his own craving for recognition and his consuming desire to be at the top of his profession, all of which drove him into harboring irrational thoughts of his own grandeur. Thus, it is likely that individuals who are egocentric and overly ambitious (attributes characterizing many geniuses) would be inclined to recede into a delusional world, where their dreams and aspirations could be fulfilled.

McCurdy (1957) attempted to find the root of psychosis in significant aspects of the childhood pattern of geniuses. Using biographical information from twenty men of genius, the author observed that there is a high degree of attention focused on the child prodigy by adults. A significant number of the prodigies were isolated from other children, specially those outside the family, and hence grew up in the company of adults rather than children. Consequently, many of the prodigies experienced a high degree of fantasy and lived in a world of their own imagination. McCurdy suggested that the high degree of fantasy and isolation from reality and the influence of contemporaries was a double- edged sword. On the one hand, the creative behavior of the child was enhanced but on the other, the isolation and dissociation from reality might also lead to the prodigy's downfall into psychosis. McCurdy quoted the case of the British poet Chatterton who was 'swallowed by his own imagination and had no link with the real world.' Though he lived the mundane life of an antiquarian, Chatterton's genius existed, not as his own self, but as his non-acknowledged other self, the deeply emotional but highly acclaimed 15th Century poet Rowley. Overcome with disappointment with the real world, Chatterton took his life before he turned eighteen.

Finally, there is the explanation of the genius-madness link advanced by Becker (1978), who suggested that the mad genius controversy arose as a result of the role played by a number of French *'hommes de lettres'* in bringing about the French Revolution of 1789. These French writers were perceived as the instigators of social, political and intellectual dissent which culminated in revolutionary unrest. They were therefore, considered as 'dangerous' and of potential threat to the established institutions of their times. According to Becker, the latter thus retaliated by 'attempting to control or monitor the direction of intellectual change and innovation' by alleging that the tendency of the creative non-conformist to indulge in provocative thoughts and actions was somehow rooted in psychopathology. This is in support of George Bernard Shaw (1908:19) who observed that since the nature of genius is such that it is usually in conflict with some institution that is 'far behind the times', 'it is necessary for the welfare of society that genius should be privileged to utter sedition, to blaspheme, to outrage good taste, to corrupt the youthful mind, and, generally to scandalize its uncles…'

The other reason proposed by Becker for the association of genius with madness, is that, far from being passive victims of their stigmatization, the servant themselves deliberately engineered and perpetuated the 'mad genius' label. The purpose for doing this is firstly, to create an identity for themselves and to affirm it, and secondly, to break away from convention and from their dependence on the past. Hence, to 'stand out in the crowd', the creative person would tend to accentuate his eccentricities and individualism.

The Rise of Postmodernism

Throughout this study, we have been looking at geniuses of the modern era, many of whom are no longer around to give us a true account of their predicament. It was up to us to make our own interpretations of their stories. This study would be incomplete without discussing the narratives of present- day geniuses, in the context of the current postmodern epoch. To what extent has postmodernism influenced society's current interpretation of the mad genius? Are earlier conclusions about the issue still applicable?

In order to answer these questions, it is necessary at this point, to review the salient aspects of postmodernism that would be of relevance to our study. Postmodernism is most commonly referred to as the widespread changes in thinking and new philosophies arising in the mid 20th century and persisting to date. The postmodern condition is thought to have been spurred, at least in part, by wide-

spread disillusionment with political ideologies of the 1950's. The emerging movement is later reinforced by the rapid expansion and dominance of mass-media and digital communication, followed by the profound influence of the latter on existing social and cultural matrices. Since the insurgence of postmodernism, a number of influential thinkers have contributed to refining the key elements of the phenomenon. Thus, postmodernism is characterized by the rejection of metanarratives and ideologies (Lyotard, 1984; Bell, 1988), belief in pluralism, disunity, fragmentation of identity and self, decentralized control and knowledge distribution, deconstruction of the fundamentals of knowledge (Derrida, 1976), skepticism towards fixed values and certainty, double- coding (Jencks, 1989), transnational consumerism and globalization (Jameson, 1992), erosion of distinction between high culture and popular (pop) culture (Jameson, 1984), the emergence of 'simulacra and simulation' and the role of media in transforming and recreating reality (Baudrillard, 1983, 1988).

The Postmodern Genius

Of the great minds of postmodern times, there are four that deserve amongst others, to be called geniuses, judging by the impact of their achievements at the turn of the century and into the new millennium. The choice goes to scientists Watson and Crick for their discovery of the DNA structure, network designer Tim Berners-Lee who single-handedly designed the global hypertext known to all as the World Wide Web, and finally, Bill Gates who is indisputably, the world's most influential business genius and technopreneur. Like the geniuses of the past who have been mentioned in this study, all four of them have been highly acclaimed for having changed the world in unprecedented ways. However, unlike the psychotic geniuses of the past, all of them seem to be taking their successes in their stride and have managed, as far as is publicly known, to keep insanity at bay.

They seem to reflect a new image of the genius, one that is less mystifying, portraying the creative person as more human, more understandable. This is perhaps a consequence of the new era of digital information, whereby new knowledge and breakthroughs are made public almost instantaneously, and hence the genius no longer stands alone in the pinnacle of his elitism. As the creative individuals of today are constantly exposed to mass media and public scrutiny, there is perhaps a more stringent process of natural selection going on, that those who achieve greatness are those who are not only endowed with the gift of creativity, but have the emotional baggage to survive the repercussions of their achievement.

That the modern geniuses should differ from those of the past can be attributed to the influence of public schooling and mass education in our present school systems. Clearly, compulsory mass education would undoubtedly diminish McCurdy's isolation and fantasy factors which are thought to contribute, at least partly, to a predisposition for mental aberration. Child prodigies are therefore forced to interact with their less intelligent peers or with other equally gifted children, giving them a greater chance to develop into emotionally and socially balanced individuals. McCurdy argues that this could have the effect of suppressing the occurrence of genius, but on the flip side, it might also reduce the onset of maladjusted behaviour and mental disorder.

It is also likely that recent breakthroughs in modern medicine and psychiatry have led to a better understanding of the various forms of mental disorders, resulting in earlier detection and diagnosis and better prognosis for the patients. Hence there is a more supportive environment for creative individuals with psychotic tendencies. That support is instrumental in prolonging creative lifespan and delaying insanity, is clearly shown in the contrasting cases of Virginia Woolf and Sylvia Plath. The manifestation of mental illness occurred early in the life of both writers. Both made multiple attempts at suicide, but whereas Sylvia Plath took her life at 32, Virginia survived her numerous mental crises except the very last fatal one at age 59. What precipitated Plath's suicide was the separation from her husband upon whom she had staked her very existence as she admitted in her journal (Plath,1982:156): 'I get quite appalled when I realize…my whole being has grown and interwound so completely with Ted's that if anything were to happen to him, I do not see how I could live'. Virginia Woolf, on the other hand, was in a sense more fortunate as she found in Leonard Woolf a devoted husband who not only was a tower of strength and support throughout her difficult life, but cared and nursed her back to health after each crisis. In fact, were it not for Leonard Woolf who defied medical opinion and refused to allow his wife to be locked up in an asylum, Virginia the acclaimed writer would never have existed and her literary work never produced. In her final letter to Leonard Woolf, she wrote: 'What I want to say if I owe all the happiness of my life to you. You have been entirely patient with me and incredibly good. If anybody could have saved me it would have been you. Everything has gone from me but the certainty of your goodness.'

The 21st Century would probably not see any considerable change in the incidence of mental disorders but the postmodern endorsement of multiplicity, non-conformity, hybridity and conflicting identities, would offer a greater acceptance and a deeper understanding of geniuses and their peculiarities. In the musical realm, icons such as Elvis Prestley, the Beatles and more recently, Elton John did for 20th Century pop music what Mozart and Beethoven did for the classical genre. Elton John, acclaimed for his versatility and talent as a musi-

cian, composer and performer, is equally known for his eccentric lifestyle. Yet, postmodern societies seem to have acquired a greater tolerance of the idiosyncrasies of those they champion. One would smile at the mention of Elton John's colorful wardrobe and respect his homosexuality, an issue that was formerly frowned upon, if not, severely condemned as recently as three decades ago. One would remember the case of mathematician Alan Turing who is credited for his conception of the 'thinking machine', the blueprint for the modern electronic digital computer. In 1952, at a time when homosexual acts were still punishable by law, he was tried and convicted of 'gross indecency' after admitting to the police that he was having an 'affair' with a man. Two years later, Turing committed suicide by cyanide poisoning. For Turing, the loosening of ideologies to accommodate for a wider acceptance of social differences came too late, but fortunately for another eminent mathematician, the postmodern changes in social norms proved to be instrumental in not only staging his return to sanity and a normal productive life but also, in re-instating his position as a leading academic figure. I am speaking of none other than John Nash, whose Nobel Prize award in 1994, while in remission from schizophrenia, was a clear statement of society's growing sympathy and acceptance of those who would have been called 'social misfits' in modern times.

Finally, this discourse would not be complete without considering the impact of the mass media and Baudrillard's simulacra and simulations. As mentioned earlier, John Nash, having survived years of mental illness, recalls his psychotic experience as a means of escape from reality. The world of simulacra, whereby the images (simulacra) are copies with no real originals, has the effect of superseding reality and of becoming more real than the real. The emergence of the 'hyperreal' (Baudrillard, 1983), either electronically-mediated or physically constructed models of reality, may indeed provide hyper-creative individuals with an outlet for their unfulfilled ambitions or pent-up emotions, without having recourse to delusional thinking. There is, of course, the counter-argument that over -indulging in the hyperreal may lead to a condition akin to delusional behavior in the sense that the individual spirals off into a fantasy world, living there happily ever after, but never coming out of it. This adverse outcome has already manifested itself in the display of addictive behavior, especially amongst young people, towards computer games and cyber-communications. It is not uncommon to encounter worried parents fretting over their children's habits of spending hours on end at the computer, playing those games to the exclusion of everything else. Other forms of cyber-communications, such as internet chat and web logs or 'blogs', though originally designed with the good intention of encouraging intercultural exchange and global communication, pose unique threats to users, who could easily fall victim to emerging forms of cybercrime, such as internet porn, on-line sexual predation and internet scams. The virtual arena could accentuate delusional psychotic tendencies, by offering a platform for the subject to further develop his/her fantasies. Chat 'posers' for instance, are often males who assume a female persona and visit female chat rooms in order to befriend female users and victimize them.

Conclusion

The aim of this study is to gain better insight into the relationship between creativity and mental illness. From the review of existing literature, it seems likely that the high incidence of mental disorders amongst creative people is a fact that cannot be denied. However, there is to-date, no conclusive proof of a genetic link between creativity and mental illness in general. On the other hand, one can offer a fairly large number of plausible explanations for the correlation between the two. That a sizeable number of geniuses eventually develop neurotic or psychotic tendencies later in life can be attributed, at least in part, to the consequences of their creative endeavors and to a combination of contextual, developmental, social and psychological factors.

The advent of postmodernism has resulted in pervasive changes that include a higher tolerance of ambiguity and heterogeneity. I posit that generally, this has benefited geniuses, madmen and those who are both, by virtue of the wider social acceptance and understanding of their predicament. Thus, instead of locking mad geniuses up in asylums where they are likely to spend what should have been their most productive years, allowing their creativity to go to waste, there is now greater provision for the mentally ill to lead a quasi-normal life, while undergoing medical treatment, and to engage in productive endeavors as deemed appropriate. There is also a growing acceptance of the patients' ability to willfully manage their mental condition, thereby keeping their illness at bay. As in the case of John Nash, although the latter recognized that his remission from schizophrenia may not be totally complete, he is able to control his illness by intellectually rejecting the delusional thinking that plagues him, and so maintain in his twilight years, a somewhat peaceful co-existence with his mental condition.

And yet if we were to accept the definition of the genius as ' an innately gifted individual with an extraordinary capacity for imaginative creation, original thought, invention and discovery ' (Becker, 1978:107), are we, 'lesser mortals', in a legitimate position to assess the mental fabric of these exceptional individuals who are the subjects of our studies? This study began with a quote from Aristotle, it seems fitting to end it with one from Salvador Dali: 'The only difference between me and a

madman is that I am not mad.' The way we, lesser mortals, perceive geniuses may be quite different from what geniuses make of themselves and of their equals. To carry out a study on geniuses, we may well need a genius for the job. But then, if Becker (1978) is right, the two geniuses may well conspire to perpetuate the mad genius myth, for they might just prefer to be known as mad and remembered for posterity rather than be known as sane and sinking into oblivion. John Nash (1995) puts it so aptly: 'For example, a non-Zoroastrian could think of Zarathustra as simply a madman who led millions of naïve followers to adopt a cult of ritual fire worship. But without his "madness" Zarathustra would necessarily have been only another of the millions or billions of human individuals who have lived and then been forgotten.'

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