Creativity and the Position of Bipolar Disorder in Popular Culture

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20.1 Creativity

20.1.1 The Concept of Creativity

While the word 'creativity' is a word celebrated around the world and its essence is considered to be one of the most valuable properties of human nature, it is very difficult to define its meaning in an operationalized way. The word comes from the Latin verb *creo* (make, create, form) which in turn comes from the Greek word *χειρ* (khir = hand) and the verbs *χερεω* or *χρεω* (khereo or khreo = form or model with hands) (Jackson 1828). However, while the original meaning had to do with handcraft, the modern meaning has to do more with mental work.

There is not one specific universally accepted operationalized definition of creativity. There are many different approaches on the basis of different concepts, theoretical views and objective features. The earlier studies were based on the concept of 'genius' (Lombroso 1891; Ellis 1926; Galton 1892), but this is not the modern approach on the issue. The most reliable index of creativity would be 'creative accomplishments', but this idea is not practical since many ingenious people are not recognized as such until after many years or even after death. Although recognition is considered a key issue for the defining creativity (Csikszentmihalyi 1996), it is important to point out that recognition of creativity is not equivalent to creativity itself. Much debate is in place on this matter. At the end of the day, the common denominator of all definitions for creativity is novelty and originality, but they should be balanced against utility. Creativity in fact is considered as the development of novel solutions which are functional and not simply impressive (Runco 2004). The meaning of 'functional' is also open to interpretation since much creativity has to do with aesthetics and ideas rather than with practical solutions (Figs. 20.1, 20.2, and 20.3) (Andreasen 2008).

Important elements in this development of novel solutions are drive and motivation, but also external favourable factors including opportunities and resources are necessary. Central to creative thinking seems to be the ability for divergent thinking

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Fig. 20.1 An example of impossible geometry. Creativity demands unusual thought procedures and breaking of the rules of everyday life

Fig. 20.2 A modified version of the drawing 'reptiles' by Maurits Cornelis Escher originally printed in 1943

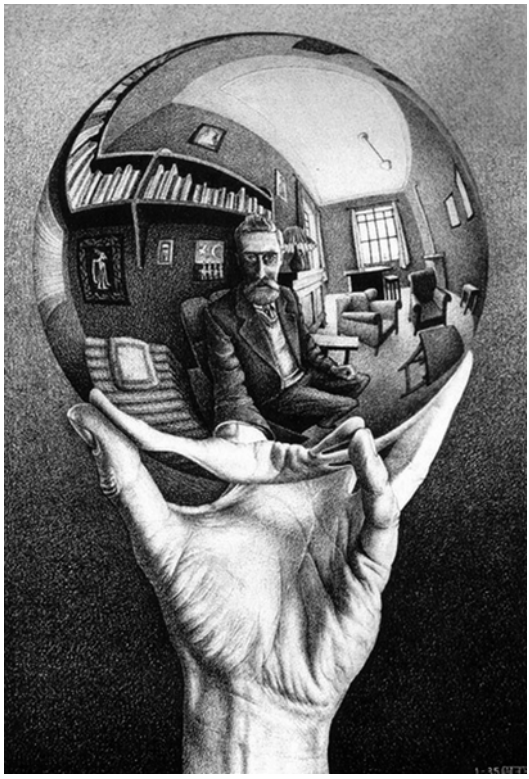

Fig. 20.3 Hand with reflecting sphere by Maurits Cornelis Escher (1935)

which refers to the ability to generate novel and variable solutions. On the contrary, convergent thinking refers to the ability to find the only one correct solution or answer. This is probably the reason why IQ scores are poor predictors of creativity (Terman et al. 1925–1959). In this frame, it is believed that creative thinking emerges from the ability to combine conceptually distinct associative elements in a novel manner (Mednick 1962) and from a willingness and flexibility to consider atypical and unusual associations (Eysenck and Furnham 1993), but at the same time from the coexisting ability to concentrate, complete the task and test the solution against reality. The presence of unusual combinations of talents might be an important factor in the way the concept of 'multiple intelligences' proposed (Gardner 1999).

Probably, the procedures which define creativity include both an insight-based 'unconscious' element and an analytical conscious element. The paradigms that can be found in the literature are often conflicting, but they seem to converge in the above.

20.1.2 The Philosophical and Journalistic Approach

The belief that there is a link between creativity and madness is so ancient that it is depicted in many myths of different cultures. A recurring theme in ancient myths is

the gifted individual persecuted by the Gods. The coexistence of mental illness and creativity is positioned in this frame. For the first time, it is systematically mentioned and supported in the teachings of Socrates and the writings of Plato, but it was Aristotle who made the most important contribution. Technique and skills alone were not considered sufficient for a man to be creative; the gift of a different way of thinking was believed to be the key. So it seems that the essence of creativity was well understood since antiquity. Aristotle suggested that this difference in the way of thinking should be so profound that melancholia and even madness were necessary conditions. Along this line of thought, the book 'On the Sacred Disease' which is part of the Hippocratic Corpus attributes genius and talent to people suffering from epileptic fits and considers epilepsy a gift by the Gods.

Since then, there was much controversy on the issue. Probably there was some kind of naïve romanticization involved in the overemphasizing of this relationship between creativity and madness, fuelled at least partially by the lives of several eminent people who were suffering from BD. It is difficult to be sure of the kind of their illness today, after centuries have passed since their deaths; however, it seems that the list includes Martin Luther (1483–1546), Sir Isaac Newton (Fig. 20.4; 1642–1726), Lord George Gordon Byron (Fig. 20.5; 1788–1824) and Friedrich Nietzsche (1844–1900), among others. It is important to note the prevalence of neurosyphilis during these times, before the era of antibiotics. Many of those eminent people who eventually developed some type of mental disease were most probably suffering from the late stages of syphilitic infection rather than BD or schizophrenia. A number of well-known people today have announced or indirectly let be publically known that they are suffering from BD. Most of them are people in the arts and also some journalists, but rarely other types of successful career people make similar announcements. The reliability of these announcements remains questionable in the majority of cases. Two historical cases are rather beyond dispute: Virginia Woolf (Fig. 20.6; 1882–1941) and Ernest Hemingway (Fig. 20.7; 1899–1961).

Virginia Woolf was suffering from repeated mood episodes and eventually during a depressive episode with psychotic features, as she revealed in a note she left behind, on 28 March 1941 she filled her coat pockets with stones and committed suicide by falling into the river Ouse near her home. Her father was probably suffering from cyclothymia, while her whole family from the side of her father seemed to manifest some kind of mental problems with her half-sister suffering probably from childhood schizophrenia and one of her cousins having probably manic depression insanity. They both died in an asylum. Virginia Woolf experienced her first manic episode at the age of 13 which later turned into mixed and lasted at least 2 years. The second episode came at the age of 22 after the death of her father, and the descriptions suggest it was an agitated psychotic mania which lasted for several months. Probably depressive features were also present since she attempted suicide for the first time by launching herself off a first floor window. A third episode and a second attempt occurred at age 31, but it seems that after that and until her death, no overt episodes happened, although some kind of chronic subthreshold depression was present. Some descriptions are also suggestive of hypomanic periods and

Fig. 20.4 Sir Isaac Newton (1642–1726)

cyclothymia. The symptomatology around the period of her death might suggest the presence of a hyperthymic episode, during which she completed writing her last book, followed by a major depressive episode with hallucinations which were giving her the command to kill herself (Koutsantoni 2012; Bond 1985).

Ernest Hemingway is a prominent figure in the international literature. He won the Nobel Prize in Literature in 1954. The study of his biography suggests that he was suffering from BD, alcohol abuse, traumatic brain injury and probably borderline and narcissistic personality traits. Biographies also suggest that his mother was dressing and treating him like a girl to a problematic degree and until he was relatively a grown kid (Fig. 20.8). Probably he experienced his first manic episode at the

Fig. 20.5 George Gordon Byron (1788–1824) 6th Baron Byron, commonly known simply as Lord Byron. Lord Byron took active participation in the Greek revolution (1821) and died during it. The statue with Lord Byron wearing a local costume is positioned in the Park of Heroes of the revolution in the city of Messolonghi, Greece

Fig. 20.6 Adeline Virginia Woolf (1882–1941)

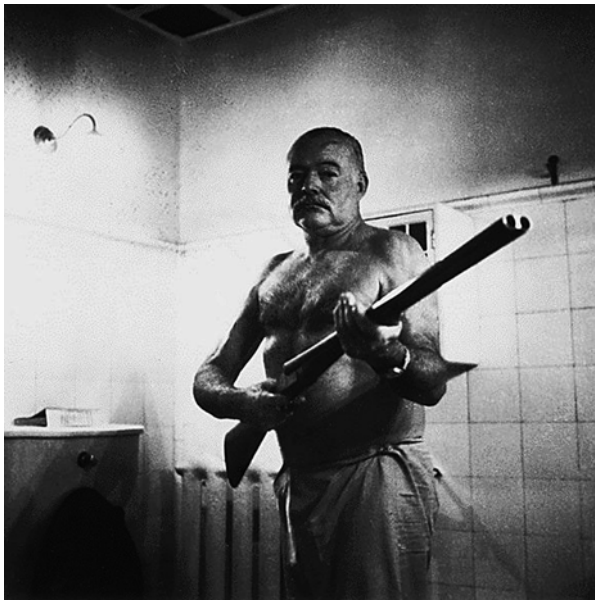

Fig. 20.7 Ernest Miller Hemingway (1899–1961) posing with the same rifle he used to take his life. One of the many photos in which Hemingway was posing in an extreme masculine way as hunter, fisherman or boxer

Fig. 20.8 Ernest Hemingway in a photo from 1901 at the age of 2. At that time, it was usual to dress also boys in girl's clothes with dress, probably for practical reasons. However, his mother went to extremes, specifically decorating him as a girl. Note the flower hat, unusual for a boy

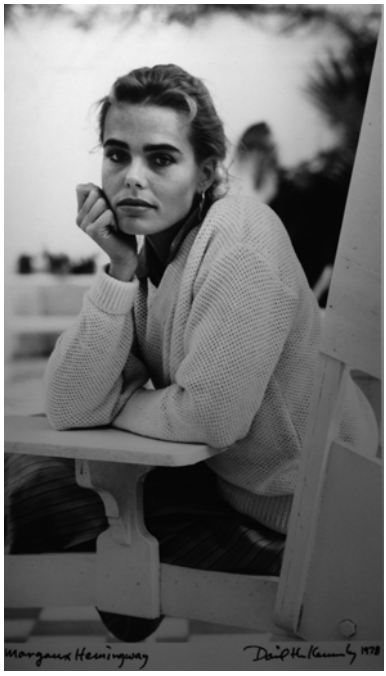

Fig. 20.9 Margaux Louise Hemingway (1954–1996)

age of 25 and the first major depressive episode (with mixed features) at the age of 36 although it is likely he was never free of subthreshold symptoms. A constant feature in his biographies is that his mood was continuously switching from megalomania to melancholy. Suicidal ideation probably arose in his late 20s. He suffered from concussion after a traffic accident at the age of 45. This was one of the two most severe in a number of head traumas he experienced in his life, due to a risk-taking behaviour but also due to alcohol abuse. The second one included skull fracture. Eventually at the age of 61, he developed severe depression with persecutory delusions and severe suicidal ideation. He was repeatedly hospitalized, tried repeatedly to commit suicide and treated with ECT. A few days after discharge, seemingly well, he woke up early in the morning and shot himself to the head. It is important to note that it is almost certain that during the last few years of his life, he was unable to write creatively (Martin 2006; Pearson 1997; Craig 1995; Yalom and Yalom 1971).

The impressive thing is that there have been five confirmed suicides in Ernest Hemingway's family over four generations, while another two are probable. These include himself, his father, two of his siblings (Ursula and Leicester) and his granddaughter Margaux (Fig. 20.9). One of his sisters, Marceline, was suffering from depression and although her death is considered to be due to natural causes, the family suspected suicide. Out of six siblings, three and possibly a fourth died of suicide. It is unclear whether his sun Gregory, who suffered from depression, had a sex change operation and died in 2001 as a transsexual named Gloria,

actually committed suicide. From his granddaughters, Muffet is suffering from schizophrenia and Mariel has repeatedly announced publically that she is dealing with a number of mental problems. The third granddaughter Margaux suffered from depression, epilepsy, bulimia and alcoholism. She committed suicide on 1 July 1996, 1 day before the anniversary of her grandfather's suicide. Alcohol and drug abuse and reported sexual abuse seem to be widespread within the family. Also Ernest's second wife Pauline Pfeifer Hemingway was the sixth confirmed suicidal victim in the family (but not from the same bloodline).

Overall, the biographical research, as well as studies of living artists and writers, has provided insight into the relationship between creativity and BD. It seems that Emil Kraepelin and William James were right in pointing out that only the milder forms of insanity could be related to creativity, while the more severe forms have a devastating effect on the mental abilities of the patients. However, the research based on biographical information is severely flawed and methodologically problematic. It is clear that the vast majority of bipolar patients are not creative and the vast majority of creative people are not bipolar. Biographies report selective parts of the lives of selected people and thus are prone to bias. Thus, they can give only some hints for further research which will demand the utilization of large and well-designed population-based studies (Jamison 2011).

20.1.3 The Scientific Approach

20.1.3.1 Rates of BD in Creative Individuals

The traditional approach in the study of the relationship between creativity and mood disorders is the systematic study of biographical information and so far has provided data confirming the high rates of BD in a wide range of creative individuals, from poets to jazz musicians (Jamison 1993; Schildkraut et al. 1994; Post 1994; Ludwig 1992, 1995; Ellis 1926; Juda 1949; Akiskal 2012). However, as mentioned above, this method the study samples are convenient rather than representative, and the information are probably biased, incomplete and often inaccurate. It is impossible to extract data concerning the diagnosis on the basis of modern classification systems from studies of this kind which took place before the 1960s, while the composition of the control group remains a challenge.

There are only a few studies that utilized a rigorous methodology and included highly creative individuals using personal interviews in comparison to a noncreative control group. The majority of these studies have examined writers. Overall the results suggest that the rate of both unipolar and bipolar mood disorders is higher in creative individuals in comparison to controls (Jones et al. 2014).

Research data suggest that the rates of mood disorder and alcohol abuse are extremely high in writers with 80 % suffering from any type of mood disorder and 30 % suffering from BD-I or BD-II (Andreasen 1987). According to another study, it seems that a significant percentage of writes had received some kind of treatment with playwrights having the highest rate (63 %). More than half had received psychotherapy rather than medication, and this might reflect one of the biases inherent

in this kind of studies because of the distinct preferences of the study participants. According to the same study, the poets was the subgroup which had the highest rate of medication treatment for mood disorder (33 %) and also the only group to have received treatment for mania (Jamison 1989). A third study reported high rates of both depression (56 %) and mania (19 %) in writers (Ludwig 1994).

Similar findings were reported concerning jazz musicians (Wills 2003), while an in-depth analysis of the lives and works of a number of jazz musicians from Memphis, Tennessee, suggested that the presence of cyclothymia was a decisive factor, while no overt BD was present in any of them. The suffering from all kinds of mood symptoms was clearly reflected in their songs (Akiskal 2012).

A large epidemiological study analysed interview data from the Epidemiologic Catchment Area Study and reported that individuals with BD were disproportionately concentrated in the most creative occupational categories. Of course having a creative occupation is different from being creative as a person; however, it should be considered a fair approximation (Tremblay et al. 2010). A more recent large, well-designed prospective population study also reported a disproportionately high rate of mental illness and especially BD in creative individuals (Kyaga et al. 2011), but further analysis restricted these findings to writers and not to persons with supposedly creative occupations (Kyaga et al. 2013).

20.1.3.2 Level of Creativity in BD Patients

From a different point of view, a study of non-eminent individuals, reported higher creativity scores in patients with BD and cyclothymia in comparison to controls (Richards et al. 1988). A second study confirmed the presence of these high creativity scores in BD patients (Rybakowski and Klonowska 2011), while a third one suggested these high scores are present even during an acute manic or mixed state at least in comparison to acute depression. This last study also suggested that creativity was correlated with executive function but not with IQ (Soeiro-de-Souza et al. 2011). However, since the validity of creativity scales is problematic, the meaning of these findings is open to interpretations.

The first study to show that children with BD or at high risk to develop BD have higher creativity than healthy control children was published in 2005 and reported that these children had an enhanced ability to experience and express dislike of simple and symmetric images, suggesting the presence of an increased access to negative affect. This trait could be both an advantage since it provides with affective energy for creative achievement, but it could also represent a vulnerability factor for the development of mood disorders (Simeonova et al. 2005). From a similar perspective, a prospective, 10-year, whole-population cohort study from Sweden reported that those who demonstrated excellent school performance were at a four times higher risk to develop BD in comparison to those who showed only an average level of performance. Persons with excellence in language or music were at a particularly increased risk. Interestingly, schizophrenia was associated with a decreased rate of excellence (MacCabe et al. 2010). Also, spirituality, empathy, creativity, realism and resilience were reported to be enhanced in BD patients (Galvez et al. 2011) as are sociability and verbal functioning (Higier et al. 2014).

It is interesting that the vast majority (82 %) of BD patients confirmed they were feeling being creative when hypomanic and were engaging in writing, painting, work or business ideas and art in general. The rates were similar for BD-I and BD-II. What is more interesting is that the effect of mania was not stable and often destructive, while hypomania was constantly correlated to improved focus and clarity of mind. All patients reported creative personality styles most often when free of major symptomatology (McCraw et al. 2013).

20.1.3.3 Creativity in Families of BD Probands

A number of studies support the concept that creativity and mental illness but especially BD co-segregate in families (Andreasen 1987; Richards et al. 1988; Jamison 2011).

The first study to report such a loading in families was published in 1987 and reported that the first-degree relatives of the writers were more likely to suffer from mood disorders, and they also were more likely to be creative in comparison to controls (Andreasen 1987). A second study reported higher creativity scores in the normal first-degree relatives of patients with BD or cyclothymia in comparison to controls (Richards et al. 1988) and another one reported that the children in bipolar families are more creative than control children (Simeonova et al. 2005).

Finally, Kyaga et al. reported that the non-affective first-degree relatives of people with BD and schizophrenia, but not of people with unipolar depression, were more likely than controls to hold creative jobs. The maternal or paternal type of relationship was not significant, but the familial distance was suggesting that a biological substrate is responsible for this cosegregation (Kyaga et al. 2011, 2013).

20.1.4 Possible Mediating Mechanisms Between Creativity and BD

As discussed in the respective chapters, mania especially when accompanied by psychotic features has a profound effect on the neurocognitive function. On the other hand, not only it is known that IQ and 'hard' neurocognition do not seem to strongly correlate with creativity, but also it is possible that in milder cases, the 'at the edge' lifestyle and peculiarities in thinking in combination with the experiencing of extreme emotions have a major role in the emergence and expression of creativity.

It is mild mania and especially hypomania which are related with creativity while the role of psychotic features is unknown. Just as a brief note, both Virginia Woolf and Ernest Hemingway were experiencing psychotic features. It is also important to note that most creative people do not suffer from any mental illness and most psychiatric patients are not creative. This holds true also concerning BD. The key issue is that the coexistence of BD and creativity is rather disproportional, especially in highly creative persons.

This puts forward the most vital question: Are some people eminent *because* they suffer from bipolar spectrum disorders? Or is the higher prevalence of the

bipolar spectrum in certain groups of creative people the result of some kind of selection, that is, are people suffering from BD and related disorders more likely to choose certain jobs and lifestyles? It is important to stress that in order for creativity to flourish and give fruits, it needs great amounts of hard work, ability to concentrate and discipline, and to say it in other words, it needs some kind of obsessive personality-type traits.

A second important question is whether BD or some of its endophenotypes constitute an evolutionary advantage. Since studies have shown that this relationship is probably neurobiologically based (McNeil 1971), it is possible that mood disorders constitute the extreme manifestation of a pool of genes which also determines genius and creativity (Akiskal and Akiskal 2007), with cyclothymic features playing a major role (Vellante et al. 2011; Srivastava et al. 2010; Akiskal and Akiskal 2005) but moderated by obsessional traits (Akiskal et al. 2005). Isolated features probably related to this gene pool have been detected in a number of studies. For example, creative Harvard students had much lower inhibition scores in comparison to less creative students (Carson et al. 2003), while impulsivity in general has been linked with creativity (Baas et al. 2008).

One possible explanation in terms of neurocognitive function is that mania and hypomania increase associational fluency, divergent and combinatory thinking in a loose but extravagant and elaborated way, as well as cognitive flexibility accompanied by humour, flippancy and playfulness (Guilford 1957; Christensen et al. 1957; Henry et al. 1971; Pons et al. 1985; Levine et al. 1996; Shenton et al. 1987; Solovay et al. 1987; Baas et al. 2008; Strong et al. 2007). Other features of manic states including risk-taking, grandiosity, restlessness and discontent, illness-induced introspection and a need to make meaning of, or to ameliorate, suffering could be the pathways linking BD with creativity possibly with the mediating effect of temperament (Jamison 1993; Santosa et al. 2007). Additionally, impulsivity and openness to experience seem to be of importance (Strong et al. 2007; Baas et al. 2008).

The problematic definitions make interpretations difficult. In this case, both the concept of 'creativity' as well as the definitions of many neurocognitive abilities including IQ and executive function, suffer from vagueness. Thus, the understanding of the interplay between neurocognitive, perceptual, mood and behavioural changes related to altered mood states are of prime importance (Parker 2014; Jamison 1989). Probably creativity is not a trait feature of BD but rather fluctuates in concert with mood changes (Lovejoy and Steuerwald 1995).

20.1.5 The Effect of Treatment and Other Ethical Considerations

If BD and its clinical manifestations are related with creativity, then the obvious next question is whether successful treatment kills creativity especially in highly gifted individuals. Where there be a Virginia Woolf or a Nobel Laureate Ernest Hemingway if proper modern treatment was available at that time? What about the future? At some time in the (not so) near future, there might be prevention of BD in terms of genetic engineering or very early treatment. Will this have a direct effect on human culture with the extinction of a subgroup of people with high creativity

but also suffering from BD? Is it ethical? Will treating or even eradicating one of the most devastating diseases human kind is currently struggling with come at a very high cost for humanity?

These are questions still open to debate, but the debate cannot be based on opinions or romantic assumptions in the dawn of the era of evidence-based psychiatry. On the other hand, such a debate will provide with valuable guidance on which aspects of treatment are especially unacceptable and problematic and which are those 'positive' features of bipolar disorders that should be preserved or protected.

One possible conclusion from the literature is that bipolar persons are most creative when their symptoms are under good control (Schou 1979; Jones et al. 2014; Andreasen and Glick 1988) and, as in the case of Hemingway, loss of creativity by passing the years and by accumulation of insults and eventually premature death can be avoided. Losing creative individuals is a tragedy for human society (Jamison 1993). The biography of Robert Lowell (1917–1977), which was a great American poet, suggests that he was more creative after he had started treatment with lithium (Andreasen 2008). However, some patients feel that medication blunts their neurocognitive abilities and destroys their creativity in addition to their longing for hypomanic or manic periods or even for their depressions (Pickering 1974).

It is of outmost importance that the therapist should be listening to the patients' worries and subjective experiences and should be willing and ready to work together with them to optimize the treatment effect and minimize the undesirable consequences (Murray and Johnson 2010).

20.2 The Place of BD in Popular Culture

BD together with schizophrenia has a prominent place in popular culture. On one hand, this has a negative face; the aggressive dark side of the disease is depicted and often issues like death and suicidality are used to provoke and stimulate (Fig. 20.10). On the other hand, BD has become together with depression some kind of fashion with many famous people declaring openly in the mass media that they suffer from these disorders. This is a status clearly better than that of schizophrenia which essentially is not yet accepted and carries a heavy negative stigma. Lists of famous people supposedly suffering from BD can be found in the internet, but for many of them, the information is weak and unreliable.

Below is a list of some of the most important films having BD as a main theme:

- *Running from Crazy* (2013) is a documentary film by director Barbara Kopple about the family of Nobel Prize-winning author Ernest Hemingway.
- Vincente Minnelli's *Lust for Life* (1956) starring Kirk Douglas and Anthony Quinn. The film is a biography of Vincent van Gogh, based on the novel by Irving Stone, with Kirk Douglas in the role of the tortured artistic genius.
- Graeme Clifford's *Frances* (1982) with Jessica Lange, Sam Shepard, and Kim Stanley. Jessica Lange has the role of the 1930s Hollywood star Frances Farmer who ended up in an asylum.

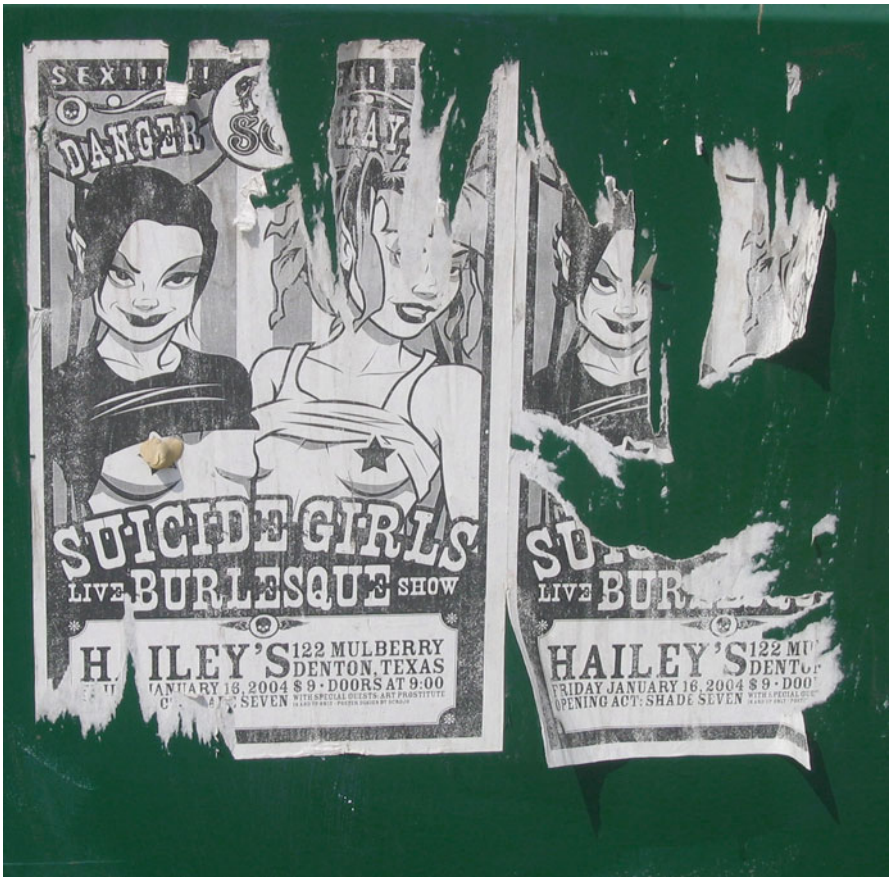

Fig. 20.10 Poster for a performance by 'suicide girls', an example of how a combination of sex, violence and death is used as stimulating cues for commercial reasons without depth

- Ron Shelton's *Cobb* (1994) with Tommy Lee Jones in the role of Tyrus Raymond 'Ty' Cobb, which was one of the greatest baseball player of all time and was treated with lithium
- Jeff Feuerzeig's *The Devil and Daniel Johnston* (2005) with Daniel Johnston, Matt Groening, Freddie Mercury and Thurston Moore. A complex documentary on Daniel Johnston's manic–depressive illness, creativity and family support.
- Irvin Kershner's *A Fine Madness* (1966) with Sean Connery and Joanne Woodward. Sean Connery has the role of genius poet Samson Shillitoe who is recommended lobotomy, in a movie full of pop culture clichés about 'madness' (Fig. 20.11).
- Mike Figgis' *Mr Jones* (1993) with Richard Gere, Lena Olin, Anne Bancroft and Bill Pullman. Richard Gere has the role of Mr. Jones who suffers from BD, and

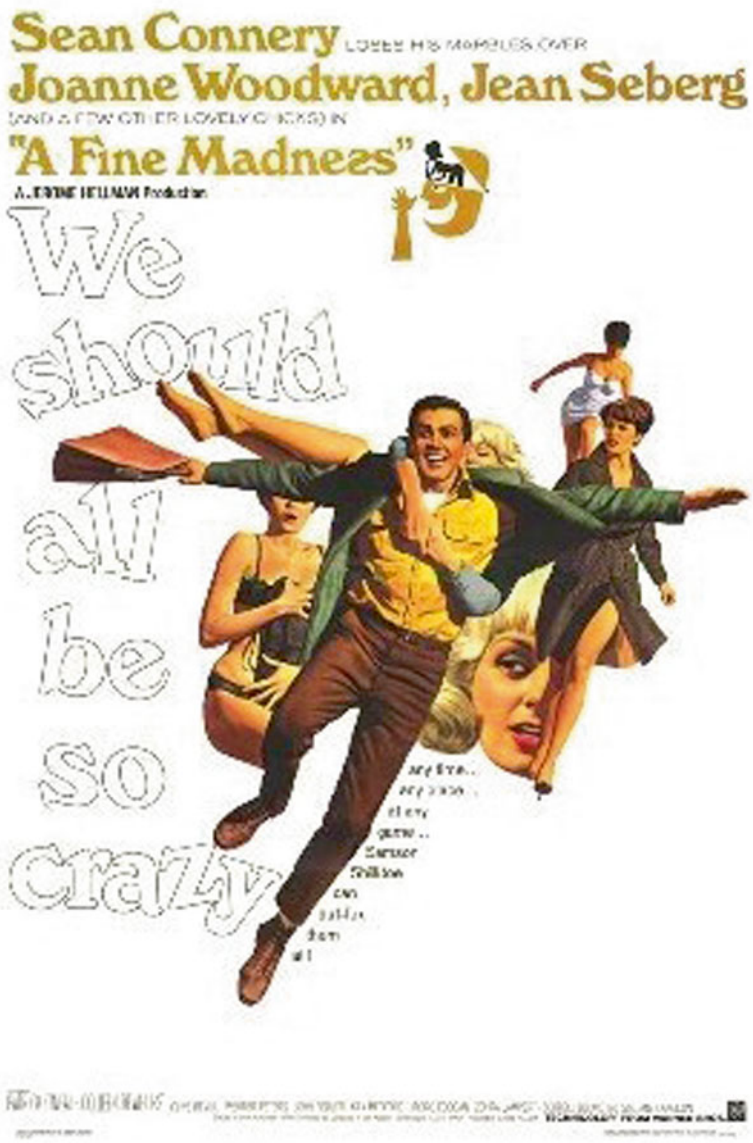

Fig. 20.11 The poster of the movie 'A fine madness' by Irvin Kershner with Sean Connery (1966)

Lena Olin has the role of the psychiatrist who eventually falls in love with him. Essentially, the film spins around a doctor–patient romance.

- Antonia Bird's *Mad Love* (1995) with Drew Barrymore, Joan Allen and Chris O'Donnell. Drew Barrymore has the role of Casey, who suffers from BD (though the film suggests only depression) with antisocial behaviour and severe suicidal thoughts. This is a film for teens, again full of clichés.

Fig. 20.12 The cover of the album 'Manic-depressive' by Jimi Hendrix (1967)

In music there are a number of songs and albums utilizing words denoting BD, and in some instances, the lyrics really refer to BD. The most impressive is the album 'Manic depression' by Jimi Hendrix (1967; Fig. 20.12). Other songs include *Cinderella Man* by Rush (1977), *Mania* by Throwing Muses (1989), *Lithium* by Nirvana (1992), *A Manic Depressive Named Laughing Boy* by Modest Mouse (1996), *Manic Depressive* by Insane Clown Posse (2004) and *Maniac Dance* by Stratovarius (2005).

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