

Creative

Analogies between Heavy Metal Music and the Symptoms of Mental Illness

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Abstract: This paper builds a link between isolated domains within the arts and sciences, specifically between music and psychiatry. An analogous model is presented that associates heavy metal music with bipolar disorder, a form of mental illness. Metal music consists of a variety of subgenres with distinct manifestations of song, rhythm, instrumentation, and vocal structure. These manifestations are analogous to the symptomatology of bipolar disorder, specifically the recurrent episodes of (hypo)mania and depression. Examples of songs are given which show these analogies. Besides creating a subjective link between apparently unconnected knowledge domains, these analogies could play a heuristic role in clinical applications and education about the disorder and mental illnesses at large.

Keywords: auditory arts; music; psychiatry; heavy metal music; mental illness; bipolar disorder; analogous model; heuristic; creative thinking

1. Introduction

Models play a fundamental role in modern science and serve as vehicles for learning about the world [1]. A wealth of theoretical and empirical models exist for associating, describing and quantifying patterns in nature. Scientific research often uses models to ascertain facets about and discover features of a defined system the model stands for, which does not necessarily need to be a representation of reality itself [1]. Analogical models, for instance, often compare similarity but not necessarily sameness properties between objects. An example is the analogy between the earth and the moon: “both are large, solid, opaque, spherical bodies, receiving heat and light from the sun, revolving around their axes, and gravitating towards other bodies” [1]. Because of the possibility to keep them liberal, analogical models have played important roles in scientific research because they can give rise to questions and suggest new hypotheses. Specifically, the heuristic role that analogies play in theory construction and creative thought is recognized [2,3], and so is the cognitive functioning of models, because they allow for surrogative learning [4] and model-based reasoning [5,6].

This paper combines music and mental illness, specifically heavy metal music and the symptomatology of bipolar disorder, in an analogous model. Events like the full blown symptomatology of bipolar disorder can lead to emotional settings and perception of reality that are only experienced by the afflicted patient. It is a form of reality that is not accessible to the senses and/or perception of healthy people. In philosophical terms, the emotional state during episodes of mental illness is phenomenological (perceivable reality) for the patient but noumenological (intangible reality) to healthy individuals. The emotional state experienced during episodes is more than the sum of individual symptoms. It comprises an emergent phenomenon which can be metaphorically personified in an imaginative creature [7], and which, in a Kantian sense, may arguably embody a form of the unknowable and much debated “thing-in-itself”, the object that is independent of observation.

This is not to say that healthy individuals, while not being able to perceive the emotional state of bipolar individuals during episodes themselves, may not be exposed to and affected by their behavior.

The goal of this paper is to use an analogous model to connect heavy metal music with the phenomenological (healthy, symptomfree periods) and noumenological (expressed mania and depression symptomatology) aspects of mental illnesses. The model's function is to use heavy metal to portray the symptoms of bipolar disorder artistically through the integral song architectures that manifest in distinct subgenres. In this model, heavy metal serves as a heuristic that connects the emotions bipolar people experience through episodes and the sentiments the music might inspire in the listener. Like potentially many musical genres, heavy metal seems a potentially suitable heuristic because the attributes of the music could be perceived as analogous to the nature of emotions experienced during episodes. The heuristic does not become a representation of the "thing-in-itself" but rather an object for surrogative learning [4]. Specifically, the model emphasizes the artistic component of heavy metal [8] and builds on its use as an education and critical thinking tool [9–11] to spur thought about and increase awareness of mental illnesses that are frequently stigmatized.

In the graphical representation of the analogous model, heavy metal music and bipolar disorder symptoms are linked to emphasize the heuristic role of the music (Figure 1). The bidirectional link shows that heavy metal might have potential to represent the symptoms of psychiatric conditions. It also shows a potential reciprocal influence whereby mental illnesses can inspire music, likely including heavy metal. The model also shows how the heuristic role of music in the analogous model can inform science (theory) and application (music therapy, public education) and their reciprocal link.

This paper will be structured in three parts. The first part characterizes heavy metal music and bipolar disorder as the objects of the analogous model. The second part presents the conception of the idea on which the creation of this analogous model is based, and it then uses heavy metal songs from different subgenres to draw analogies between their song architecture and a range of symptoms of bipolar disorder. Specifically, heavy metal subgenres and songs are used as a heuristic that artistically represents the symptomatology of bipolar disorder. The paper concludes with an overarching discussion about the utility of the analogous model and discusses implications for theory development and potential practical implications.

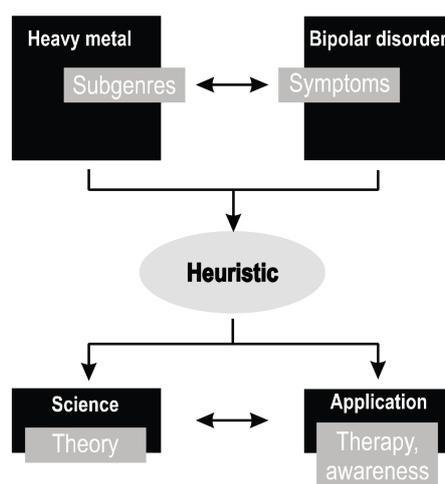


Figure 1. Analogous model showing the heuristic value of heavy metal to portray the symptoms of bipolar disorder. Shown is also the potential of this analogous model to inspire theory development in science and its applied value for clinical therapy and increasing public awareness of mental health disorders. The model also shows that heavy metal and bipolar disorder and theory and application can potentially inform each other (bidirectional arrows).

2. Heavy Metal Music and Bipolar Disorder

Heavy metal music is a genre of rock music that arose *ca* 50 years ago mainly in the USA and the UK, and which has rapidly diversified into more than 20 subgenres out of traditional or classic heavy metal, which continue to develop at a fast pace [11]. These subgenres, which are primarily characterized by dense and distorted instrumentation, resounding rhythms, and persuasive vocals, cover a broad spectrum of song structures, lyrics, and instrumentation and vary in their degree of harshness [10]. Heavy metal music has led to the formation of a subculture by supporters and fans that have developed a strong sense of group membership. This is epitomized in the quote that attending live concerts is the “holiest of heavy metal communions” [12]. The metal scene has been characterized as a subculture of alienation, with its own code of authenticity [13]. This code reflects transgressive cultural and political norms and values [8]. It promotes the opposition to established authority, and separateness from the rest of society [14–17].

This paper suggests a novel way to connect heavy metal music with mental illness, specifically bipolar disorder. Bipolar or manic–depressive disorder is a chronic debilitating mental illness with substantial morbidity and mortality due to suicide. The disorder is characterized by pronounced mood fluctuations with recurrent cycles of (hypo)mania and severe depression episodes that manifest with high variability among patients. As is the case with many systems of people and nature [18–23], the disorder is highly complex and emerges from the interaction of genetic, psychological, environmental, clinical, and personality factors [20]. Between 3% and 8% of the human population are estimated to fall within the bipolar spectrum [24,25]. The numbers may even be higher given diagnostic problems and difficulties differentiating between unipolar and bipolar depressions [26]. Thus, a significant number of people may suffer from the illness.

Many possible analogies can potentially be drawn between heavy metal and mental illnesses, including bipolar disorder. For instance, similarities and sameness can be assessed at societal and cultural dimensions of bipolar disorder and the music. That is, both heavy metal, which doesn't meld well with cultural, religious and ethical belief models in some societies, and mental illness, are often stigmatized [27,28]. They are similar in facing rejection in some spheres of society. However, individuals with bipolar disorder can contribute through their creative artistic and scientific endeavors to cultural benefits [29], thereby serving a similar purpose as metal music. The analogous model presented in this study focuses on the analogies at the level of songs of distinct subgenres in heavy metal and the symptoms of bipolar disorder. Specifically, the analogies are drawn between the structure of the illness and the structure of the subgenres, rather than between the illness and the genre in general. It is a model that presents a hitherto inexistent link between both the music and the disorder and which was identified serendipitously by the author. This will be explored in the next section.

3. Manifestation of Analogies

The association between heavy metal and bipolar disorder has been made serendipitously and resulted from the author's personal acquaintance with the music and affliction with the disorder. The links made might be perceived as being very subjective, but this claim can be made for the expression and perception of art and qualitative inquiry in general. In the present context, this subjectivity is used heuristically to compare similarities, based on associative, creative thinking, according to an analogous model [2,3].

Selected examples showcase the potential of heavy metal music to inspire people about bipolar symptoms (Table 1). Of primary importance for symbolizing these symptoms is the song architecture (e.g., harshness, speed, rhythm patterns) and vocal quality (e.g., grunting, growling, screaming, squealing) inherent in the songs. Heavy metal has socially constructed meanings and functions (transgressive cultural and political values and norms) [8,30]. In the present context, the examples demonstrate a further function; that is, its heuristic role for describing bipolar symptoms. Although I use descriptors of heavy metal subgenres that are used in online sources and the scientific literature [11], I acknowledge that these descriptors are subjective, and often value-laden. In the present context

these descriptors need to be understood as relative heuristic thinking blocks rather than absolute categorical identifiers. They are vague on purpose, partly because sentiments experienced by patients during episodes are difficult, if not impossible, to comprehend, for a healthy person. However, healthy human subjects might be inspired by the music through its heuristic value about the sentiments bipolar patients experience during episodes, which might facilitate thinking about mental illness. In this sense, it is arguably the emergent sound structure of the music per se rather than the supportive verbal descriptors of the music that are meant to elicit emotions.

Although the songs were not composed to explicitly make the connection to bipolar disorder, it is possible to highlight similarities between the sound structures and lyrics of the music with the emotions bipolar people experience during episodes. The lyrics of some of the song in Table 1 contain shocking explicit aggression and violence, including rape. Idealizing such aggression must clearly be rejected in all circles of society. However, such songs can exemplify the severity of bipolar symptomatology, manifested in, for instance, extreme aggressiveness, violence, harmful behavior and anger during episodes. In the examples below, emphasis is placed on showing analogies between metal genres and specific symptoms of (hypo)manic and depressive phases, and the cyclicity of the illness. Some metal genres seem especially suitable for characterizing bipolar disorder because many of their song characteristics (harshness, aggressiveness, vigorous energy, speed, sexual connotations, chaos, doom, despair) mirror much of the symptomatology and recurrence of the episodes. In the next sections I will describe parallels between clusters of symptoms of bipolar disorder and subgenres of heavy metal, each of which are associated with a prominent musical feature.

3.1. Mania and Hypomania Episodes

Manic episodes, and lighter versions of them (hypomania), are characterized by a spectrum of symptoms that affect bipolar individuals in distinct combinations and express with distinct degrees of severity [24,26]. These symptoms are manifested in increased energy levels, a decreased need for sleep, racing thoughts, pressure of speech, frequent agitation, confusion and distraction, heightened libido, and in extreme forms hallucinations and delusions (Table 1). Heavy metal songs from different subgenres are analogous to these symptoms. Most of the songs belong to generally harsh and aggressive subgenres. These include death metal and speed metal with fast tempos, features which are analogous to heightened energy, racing thoughts and pressured speech during (hypo)manic episodes. The unrhythmic song structure of mathcore and grindcore is analogous to distractibility and confusion. Thrash metal and other screamed genres are analogous to agitation, and the sex ideology in porngring becomes allegorical to heightened libido. The psychedelic nature of stoner metal and alien metal might be associated with substance abuse and psychosis symptoms, respectively. Power metal, which aims to inspire joy and courage, may serve to symbolize grandiosity and self-esteem. Some metal songs may also help envisioning the onset and intensification of manic episodes by increasing intensity and complexity in instrumentation and singing (Table 1). Brief characteristics of these subgenres and their potential to symbolize symptoms of bipolar (hypo)mania are summarized in Table 1. A detailed description of these subgenres can be found in [11].

3.2. Bipolar Depression Episodes

In sharp contrast to the (hypo)manias, bipolar depression is usually characterized by a significant slowing or decrease in almost all aspects of emotion and behavior. Individuals with bipolar depression experience a combination of chaos, emotional emptiness, despair, doom, anhedonia, and so on (Table 1). They generally perceive their mental and physical world as monochromatic and agonizing, with a strong sense of worthlessness and self-guilt. Patients often develop morbid thoughts and a suicidal ideology, and in severe depression states become hallucinatory and delusional, as is the case with mania [24].

Table 1. Examples of metal songs and genres symbolizing selected aspects of bipolar disorder. Note that the examples are not exhaustive and meant for demonstration only. Note also that several metal analogies apply to different aspects of bipolar disorder highlighting their wider application for expressing the disorder.

Bipolar Disorder	Symptoms	Analogies in Heavy Metal	Song or Album (Band/Artist)
<i>Episodes</i>			
(a) Mania and hypomania	Inflated self-esteem, grandiosity	Joy/empowerment conveyed in power metal	March of Time (Halloween)
	Heightened energy, decreased need for sleep, racing thoughts, pressured speech	Agility inherent in speed metal and velocity changes in death metal; intelligible vocals symbolizing incoherent speech	Hammer smashed face (Cannibal Corpse) You can't stop me (Dying Fetus)
	Distractibility, confusion, incoherence	Rhythmic complexity and unpredictability in mathcore and grindcore	Spirit of Poison (Car Bomb)
	Agitation	Harshness and screamed vocals in thrash metal, death metal and other subgenres	Sacred Words (Suicide Silence)
	Increased sex drive	Sex explicitness across genres; Pornographic ideology in pornogrind	Animal (W.A.S.P.)
	Psychosis and substance abuse	Hallucinations, delusions symbolized with elements from space and invasions in alien metal; Psychedelic elements in stoner metal	Lugal Ki En (Rings of Saturn) Stoned Jesus (Black Woods)
(b) Bipolar depression	Onset and development of manic episodes	Intensification, culmination of song elements/complexity in deathcore	Leeloo (Veil of Maya)
	Chaos, uncertainty, emotional turbulence, anxiety	Aggressiveness, cacophony and chaos in war metal songs	Crush, Kill, Destroy (Sarcófago)
	Slowed activity, emptiness, lethargy	Slowness and repetition of sustained notes or chords in drone metal	Dead (Khanate)
	Despair, doom, anhedonia, pessimism, monochromatic view of mental and physical world, agony	Slower tempos, low-tuned guitars and heavy sound in doom metal evoking a sense of despair, dread, and impending doom	Bewitched (Candlemass)
(c) Mixed states	Overlap of manic and depression symptoms	Dirge music combined with very slow rhythm creating ambient darkness in funeral doom	Frowning (Murdered by Grief)
		Slow tempos and pessimistic, depressive mood combined with speed of double kick drumming in death doom (e.g., agitated depression); rhythmic speed combined with monotonic, deep, unintelligible growling in brutal death metal (anxious mania)	At the bottom (Odium) Call me God (Syphilic)
<i>Recurrence</i>			
Cycling between episodes	Course of episode manifestation, cyclothymia	Notable, lasting song transitions (breakdowns) and recurring song elements in metalcore and deathcore	Resistance (Veil of Maya)
<i>Symptom free periods</i>		Melodic aspects of symphonic metal	Amaranthine (Amaranth)

It might at first sight be surprising that heavy metal music, which is generally perceived as a fast and energetic form of music, can be associated with depression. However a range of metal subgenres with slow tempos, thick sounds and low-tuned guitars exist that have potential to capture the diversity of depression symptoms. These genres include doom metal, which are analogous to despair, dread, and impending doom. The structure in drone metal songs can be associated with slowed activity, emptiness, and lethargy symptoms. The ambient darkness evoked with funeral doom may represent heuristically the suicide ideology and morbid thoughts about death. Additional symptoms, including chaos, uncertainty, emotional turbulence, and anxiety are manifested in war metal (aka bestial black metal) in which songs are generally characterized with unpredictable, abrupt guitar solos, downtuned power chords, and markedly increased speed, often punctuated with abrupt bursts of tempo.

3.3. Mixed states

Symptoms of bipolar depression frequently overlap with those of mania to produce “mixed states” (Table 1). Such mixed states often manifest in heightened psychomotor activity coupled with typical depression symptoms, such as inhibition of thought, anxiety, and pessimism (agitated depression) or manic symptoms (racing thoughts, pressured speech) with despairing anxiety, absent-mindedness and senseless pressure of activity (anxious mania) [24].

There are songs from heavy metal genres that combine singing, rhythm and instrumentation in ways that the emergent song structures are analogous to the co-existence of manic and depressive symptoms in such mixed states. For instance, death doom combines slow tempos and pessimistic, depressive mood with speed of double kick drumming that are analogous to agitated depression. Anxious mania can be associated with the rhythmic speed combined with monotonic, deep, unintelligible growling inherent in brutal death metal.

3.4. Recurrence

In addition to the symptoms of (hypo)manic and depressive episodes, a further hallmark of bipolar disorder is the recurrence of these phases, although the cycling patterns can vary substantially, ranging from cycling at a daily basis (ultra-rapid cycling) to forms that have longer recurrence patterns (Bipolar I and II). Heavy metal songs from the metalcore and deathcore genres have potential to symbolize these cycling patterns in musical terms (Table 1). These genres are characterized by “breakdowns”, which interrupt the beat of the main verse and chorus of a song by spontaneously slowing the rhythm. During a breakdown the drums play a steady beat and the guitars open strings with a chugging rhythm. After breakdowns, songs generally revert to the previous beat and chorus structure.

Inherent to bipolar cycling are phases where patients are symptom-free, states that can be clinically fostered and/or prolonged with pharmacological and therapeutic treatment. Such “normal” periods are attained after bouts of episodes when cognitive, physical and social dysfunction is improved. Such periods of amelioration of depression symptoms are analogous to the harmonic and melodic aspects of symphonic metal (Table 1).

4. Synthesis

The analogous model presented here focuses on heavy metal as a heuristic of bipolar disorder. The analogous model connects the structure of the illness and structure of subgenres rather than the illness and the features generally. The diversity of subgenres has the necessary diversity for representing the wealth of emotions bipolar people experience during episodes of (hypo)mania and depression. The analogous model allows for conveying the complexity of a mental disorder with a wide range of heavy metal subgenres that have reached the necessary diversity for representing this complexity. Because symptoms of bipolar disorder manifest along a spectrum of severity and recurrence [26], the model covers the diversity of symptom manifestations among patients.

Although the analogous model focused on heavy metal and bipolar disorder, it may serve similar purposes for drawing analogies with other mental illnesses; for instance, schizophrenia in

which depression and psychosis are also inherent. Mania and depression are also features of other mental disorder and some of the metal analogies drawn here could serve as a heuristic of their symptomatologies. Examples for depression are unipolar depression, panic disorder, social phobia, substance abuse and anxiety disorder, and examples of psychosis are delusional disorder, drug-induced psychosis, schizophreniform and schizoaffective disorder. All these disorders could be compared not only with a selection of the examples of metal analogies shown here but also with potentially other forms of music. For example, dirges, several forms of instrumental music or types of sentimental ballads can represent emotions inherent in depression (e.g., [31]). Another example is music from the new complexity genre in which the inherent chaotic, atonal, dissonant and highly abstract song structure can be associated with a lack of connection in a person's thoughts, memory and sense of identity, features which occur in dissociation and dissociative disorder. This genre could also be potentially associated with symptoms occurring in disorders with psychosis. These few examples show that different musical genres can individually serve as a heuristic to represent specific phenomena that are broadly studied within the psychiatric sciences.

Similar to heavy metal, other musical genres also have the necessary diversity to allow for drawing analogies between music and the symptoms of bipolar disorder. For instance, classical music spans a wide range of genres (medieval, renaissance, baroque, romantic, modernist, contemporary classic, postmodern music) that might capture symptoms ranging from depression (e.g., Mahler–Symphony No. 9 in D; Shostakovich–Symphony No. 5 in D minor, Op. 47) to (hypo)mania (Sorabji–Opus Clavicembalisticum; Stockhausen–Helicopter String Quartet). Similarly, electronic music, jazz, rock, and flamenco among many other genres may serve a similar purpose. Because people have different affinities for and acquaintances with distinct styles of music, a wide range of analogies between music and mental illness can potentially be drawn. However, heavy metal may be especially suitable for portraying mental illness relative to other musical genres (e.g., classical music) because of the added shock value of the lyrics and the harshness of the music. This could make the experience more uncomfortable or immersive for an audience, which is trying to imagine and understand the experience of bipolar individuals during the manifestation of symptoms. Also, because there are many parallels in the structure between metal subgenres and bipolar symptoms, heavy metal might be more suitable to connect the music with the illness compared to other musical genres that lack such parallels.

The model presented here can have potential theoretical and applied implications. From the practical side there is a long history in the use of music for therapeutic purposes in the health sciences (e.g., [32–34]). Music therapy uses physical, emotional, mental, social, aesthetic, and spiritual features for improving the physical and mental health of patients. Music therapy is applied in many domains, including cognitive functioning, motor skills, emotional development, social skills, and quality of life, and uses active and passive music experiences (free improvisation, song, dance, listening, and discussion of music) to achieve treatment goals. There is a wide qualitative and quantitative literature on clinical therapy, psychotherapy, biomusicology, musical acoustics, music theory, psychoacoustics, embodied music cognition, aesthetics of music, sensory integration, and comparative musicology [35]. There is also clinical evidence that music therapy can be used as an alternative therapy in treating depression, autism, schizophrenia, dementia, agitation, anxiety, sleeplessness, and substance misuse [36]. The analogous model presented here could potentially be used in psychotherapy or cognitive behavioral therapy to provide the patients with a novel opportunity to assess if and how representative the music reflects their sentiments during depression or (hypo)mania episodes. This could provide opportunities for self-reflection and model-based reasoning [5,6]. Further research could expand on this assumption for the potential application of this analogous model in clinical therapy.

The model exemplifies the heuristic value of music and its use for increasing the public's awareness about mental illness. It builds on the use of music over thousands of years as an art form to express sentiments about and show emotional responses to phenomena in nature [37]. Music is used in a wide range of societal contexts with the aim to increase public awareness. In the case of the

health sciences, the benefits of public knowledge of physical diseases are widely accepted; however, knowledge about mental disorders has been widely neglected [38]. The general public often cannot recognize specific disorders. This highlights the need for an improved public mental health literacy to overcome the hurdles of public acceptance and facilitate community support [38]. Analogous models, as the one presented in this paper, may have potential for surrogate learning [4]. They may be useful for mental health literacy because they may metaphorically “mirror” the soul of the suffering patient. The lines of inquiry in this paper show that metal as an art form has potential to stimulate thinking about the complexity of mental illnesses.

The following quote, attributed to Heraclites, “A hidden connection is stronger than an obvious one” (quoted in Kastner [39]), leads to the theoretical implication of the analogous model. Exploring apparently inexistent links between different areas of scientific inquiry and art movements, such as surrealism and quantum physics [40], or mental illness and political leadership [41], provide research possibilities that are beyond the academic mainstream. However, such lines of exploration open novel ways for a broader understanding of the complexity that characterizes all realms of nature and humanity. These examples and the analogous model presented here exemplify how our ability to understand, predict, and cope with the dynamic structure and change of our complex world can be informed. They lay the foundation for thinking about unifying models in which “hidden” links may become visible and inspire further examination of similarity and sameness properties at different levels ranging from individuals, to groups, to societies and cultures. Ultimately, simple models may help us navigate through the known unknowns and unknown unknowns of societies’ fast-changing complexity.

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