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Physics of Life Reviews 25 (2018) 128-130

www.elsevier.com/locate/plrev

#### Comment

On the enjoyment of violence and aggression in music. Comment on "An integrative review of the enjoyment of sadness associated with music" by Tuomas Eerola et al.

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Received 28 March 2018; accepted 28 March 2018 Available online 29 March 2018 Communicated by L. Perlovsky

Keywords: Aggression; Death Metal; Emotion; Music; Violence

In the target article, Eerola, et al. [2] provide a valuable critical analysis of current research and theory on the enjoyment of sadness in music, and conclude that nominally negative responses to music may be converted into pleasure through a cascade of hedonic shifts at multiple levels of analysis. They also make reference to tragedy in other artworks, implying that the enjoyment of sadness in music may be an instance of a general phenomenon in which aesthetic depictions of adversity are enjoyed. By considering the enjoyment of music with aggressive and violent themes (termed hereafter "violent music"), as observed in a recent investigation of the experiences of fans of Death Metal music, we hope to contribute to this discussion and stimulate further investigation.

According to Schubert [5] and Menninghaus, et al. [3], people are capable of enjoying music with negative connotations because they disengage, or employ a process of "psychological distancing", which permits them to ignore negative qualities of the music and focus on the beauty within it, or on other positive outcomes such as nostalgic memories. In response to such explanations, Eerola, et al. [2] reason that if such an explanation were valid, then one might expect to find people who enjoy music that conveys other negative emotions such as fear or disgust.

In our research [7], we found that violent music can indeed result in highly enjoyable experiences, including feelings of empowerment, joy, peace, and wonder, but only for fans of this music. Fans and non-fans of violent music have subtly different personality characteristics, but strikingly contrasting experiences to this music, implicating an important role of learning in the enjoyment of violent music. Fans may acquire expert knowledge of the acoustic and lyrical attributes of violent music [4], and attend preferentially to attributes that promote psychosocial goals. Such a stimulus-oriented process may be combined with an inward-looking process whereby fans selectively attend to the

DOI of original article: https://doi.org/10.1016/j.plrev.2017.11.016.

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positive dimensions of their affective states, a process that may be termed *Positive Internal-State-Attending*. Fans and non-fans may not only attend to different aspects of the music itself; they may also experience the same affective states in different ways.

It may be instructive to acknowledge two dimensions of negative emotions: a cognitive dimension and an experiential one. The cognitive dimension consists of negative appraisals or cognitions about real or imaginary events and circumstances, and may include appraisals of violent lyrics. The experiential dimension comprises the physiological, embodied, and visceral experiences that accompany those negative appraisals. In most circumstances, cognitive and experiential dimensions of negative emotions are tightly intertwined. But when the triggers of a negative emotion are aesthetic artworks, the experiential dimension of affective states can be experienced and even enjoyed in their pure, detached form. That is, fans may engage in positive internal-state attending to the visceral dimension of their emotional experience, because that dimension is not burdened by any aversive real-life circumstances that would normally make up the cognitive dimension of the emotion. Because the experiential dimension of negative affective states is not inherently aversive on its own, there is no need to posit mechanisms of transformation, disengagement and detachment as an antecedent to enjoyment.

Violent lyrical content, in turn, may be appraised positively by fans because of its role in supporting two sources of enjoyment. First, the shocking content may fuel the visceral dimension of experience, amplifying feelings of energy and empowerment generated by the sonic features of the music. Second, the explicit violence may function as a familiar narrative landscape for fans, and an implied threat for non-fans, sharpening the boundary between fans and non-fans and enhancing group identity and solidarity.

The concept of aesthetic beauty is invoked in a number of discussions to account for the enjoyment of sad music. Can the same be said of Death Metal music? In qualitative research that we conducted with fans of violent music [7], aesthetic beauty did not arise as an explanation for the enjoyment that fans experienced for this type of music. Instead, fans reported feelings of empowerment and joy, and were more inclined than non-fans to use music for mood regulation, especially for discharging negative feelings. Such results suggest that different mechanisms may be needed to account for the enjoyment of sadness and violence in music.

For fans who use music as a tool for managing difficult emotions, it is possible that Death Metal music generates the same affective states that fans experience in response to difficult circumstances in their own lives. But as music presents no genuine threat, fans can re-experience these states as bodily sensations in their own right, detached from the negative real-life circumstances that may be troubling them. In that way, fans of Death Metal can reframe their abiding experiences in a positive way, and nurture resilience.

Eerola, et al. [2] observed that many explanations of the enjoyment of sad music settle for one level of explanation, bracketing other levels of analysis. We agree, and a full understanding of the enjoyment of violent music by its fans would need to incorporate explanations at different levels of analysis. At the biological level, high amplitudes, fast tempi, and acoustic non-linearities associated with violent music may elicit the release of cortisol and epinephrine [1]. These neurochemical changes may underpin feelings of positive energy and power reported by fans, and tension, fear and anger reported by non-fans.

At a psychosocial level, engaging with violent music may function to enhance wellbeing through mechanisms of mood regulation; specifically, to discharge difficult emotions. The violent lyrical content of Death Metal music may simultaneously function as an affirmation for fans and a deterrent for non-fans, defining a clear borderline between in-group and out-group members, and enhancing feelings of identity and belonging within the Death Metal community. We agree with Eerola, et al. [2] that music can be a form a social surrogacy, leading to a sense of belonging that accompanies the sharing of emotions with a mood-congruent other. Similarly, the mimetic hypothesis – that emotional meaning arises from mimetic participation or "being moved" – would seem compatible with the high degree of physical movement observed among fans at Death Metal concerts [6].

At a cultural level, fans of Death Metal construe their preferred music as a rejection of commercial genres such as glam and pop metal, and their enjoyment is intertwined with this cultural understanding. Similarly, depictions of extreme violence in Death Metal lyrics are appreciated by fans for crossing implied censorship lines, further reinforcing an identity that values being outside the mainstream.

## Acknowledgements

This research was supported by an Australian Research Council Discovery Project grant (DP160101470) awarded to the first author.

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