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Familiarity and liking for music: The moderating effect of creative potential and what predict the market value

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ABSTRACT

The present study aims to understand better the determinants of music satisfaction, and its attributed market value. Previous studies have shown that exposure or familiarity with a piece of music influences satisfaction derived from listening to it. This effect seems to be moderated by personality variables, and particularly, openness to experience, a central aspect of creative potential. The purpose of this study is to replicate the moderating effect of openness to experience on the link between exposure and music satisfaction, and to examine the influence of exposure and satisfaction on market value. As expected, exposure predicted music satisfaction. This effect was moderated by openness to experience, even when controlling for other personality traits and components of creative potential. Individuals high on openness were less satisfied with familiar music than those low on openness. Moreover, exposure was positively associated with attributed market value; this effect was mediated by music satisfaction.

1. Introduction

Psychological studies on music satisfaction can be traced back to the emergence of psychology as a science (e.g., Meyer, 1903; Meyer & Thilly, 1901). However, research on factors influencing music satisfaction and purchasing behavior is quite scarce (Sluckin et al., 1983). This lack of research is surprising considering that music is an «activity that consumes so much time and resources and that is a key component of so many social situations that it warrants the attention of mainstream social and personality psychologists» (Rentfrow & Gosling, 2003, p. 1236). Thus, it seems valuable for psychology researchers to pay attention to the factors that influence music satisfaction. Moreover, in a context of an economic crisis for the music industry (Tschmuck, 2012), understanding the factors that determine music satisfaction and purchasing behavior appears to be an important and decisive challenge.

Scholars have mainly investigated the influence of exposure to a specific music piece on satisfaction toward this piece through studies about the so called "mere exposure effect" (e.g., Schellenberg et al., 2008; Szpunar et al., 2004). The influence of exposure seems to be different according to individuals' personality and is particularly influenced by openness (Hunter & Schellenberg, 2011). Regarding the psychological and economic implications of the study of music satisfaction, this paper aims to extend previous research on exposure to music and music satisfaction by investigating the moderating influence of creative potential on music satisfaction, and attributed market value.

We will first review evidence on the influence of exposure on music satisfaction and then we will examine the extent to which creative potential, particularly cognitive and conative aspects, could influence music satisfaction and market value.

2. Mere exposure effect: Music familiarity and music satisfaction

The first determining factors of satisfaction while listening to music were established by using the mere exposure effect paradigm (Zajonc, 1968, 2001). Based on research from the early century on music satisfaction (Meyer, 1903), Zajonc (1968) demonstrated that the exposure frequency to words was positively related to a positive attitude towards these stimuli. He concluded that: "mere repeated exposure of the individual to a stimulus is a sufficient condition for the enhancement of his attitude toward it. By 'mere exposure' is meant a condition which just makes the given stimulus accessible to the individual's perception" (Zajonc, 1968, p. 1). A considerable amount of literature has been published on the mere exposure effect, showing its pervasive and reproducible effect in different cultures and with a wide variety of stimuli (Bornstein, 1989; Zajonc, 2001). In the domain of music, this effect has been studied for various types of behavior, mainly concerning music satisfaction (Hargreaves, 1984; Hunter & Schellenberg, 2011; Schellenberg et al., 2008; Verrier, 2012), or affective response to music (Brentar et al., 1994).

Yet it appears that the influence of exposure frequency to music on music satisfaction has its limits. Indeed, if music satisfaction increases

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with the first exposures to a specific music, it seems that, beyond a certain frequency, music satisfaction starts to decrease (Zajonc et al., 1972). This specific effect is called an inverted-U curve and has been highlighted several times with different types of stimuli, including musical stimuli (e.g. Hargreaves, 1984; Hunter & Schellenberg, 2011; Schellenberg et al., 2008). These results are consistent with daily observation: if only familiar music was appreciated and positively evaluated, listening and purchasing behaviors would never evolve and would remain fixed on a single and static type of music. Creativity and innovation would thus be unnecessary, as well for the rest of the consumer goods industry (Hirschman, 1980).

The inverted-U curve effect previously described appears to be moderated by two different kinds of variables. First, the method used by researchers to present music seems to affect participants' music satisfaction. Indeed, when participants are constrained by the experimental conditions to continuously listen to music, satisfaction appears to decrease rapidly as the stimulus presentation is repeated. In fact, Schellenberg et al. (2008) noticed this phenomenon starting from the third listening for the same piece of music. However, when people were exposed to the same music pieces in an incidental way, music satisfaction did not decrease after the first two plays. These results may account for differences between results found in laboratory and naturalistic studies of exposure effect (Bornstein, 1989). Indeed, in laboratory settings, the experimenters control the exposure frequency, whereas in naturalistic studies, the exposure frequencies are obtained through different methods such as exposure indexes (word frequency in a language lexicon; e.g. Zajonc, 1968) or self-reported familiarity, closer to an incidental exposure. In the present study, to investigate the exposure effect, we chose the self-report method to assess familiarity.

Individual differences are the second kind of variables that ought to moderate the inverted-U curve relating exposure and satisfaction. Zajonc et al. (1972) observed that the classic pattern of response was only observed for one-third of their participants (Zajonc et al., 1972). They suggested that personal characteristics might affect the occurrence of such patterns. Among the characteristics that may modulate the classical mere exposure effect, personality traits have been identified as important moderators (Hunter & Schellenberg, 2011). Indeed, one of the Big Five personality traits, Openness to experience, was positively associated with satisfaction only in the case of initial exposure to music, and negatively as the exposure frequency increases. Thus, Openness seems to be an important moderator variable between exposure frequency to a musical stimulus and its related level of satisfaction. Interestingly, Openness also correlates with creativity in several domains (e.g., Feist, 1998), and is a central personality trait in creativity research. Thus, the present study aims to extend Hunter and Schellenberg's (2011) previous work by using a different operationalization of music exposure and investigating the moderating influence of personality traits, but also by examining the influence of other dimensions of participants' creative potential.

3. Creative potential and satisfaction with music

Creativity is defined as the ability to realize a production—whether a simple idea or a concrete realization—which is original (new or unexpected) while remaining appropriate (useful or valuable) to the context in which it occurs (Runco & Jaeger, 2012). The first research on creativity focused mainly on the study of eminent people or geniuses known to have exceptional talents or gifts (Runco & Albert, 2010). This approach to eminent creativity, sometimes labeled "Big C" creativity (e.g., Beghetto & Kaufman, 2007; Kaufman & Beghetto, 2009; Runco, 2007; Runco & Pagnani, 2011), has resulted in the identification of several personal characteristics associated with creativity. Nevertheless, since several decades, scholars have adopted a broader conception of creativity assuming that all humans can display creative behavior and thinking in their daily lives. Consequently, they examined everyday creativity in ordinary individuals, and have proposed various conceptions, such as 'everyday creativity' (Richards, 1999, 2010), 'personal creativity' (Runco, 2006), little 'c' creativity (Craft, 2001), and mini 'c' creativity (Beghetto & Kaufman, 2007; Kaufman & Beghetto, 2009).

Since the publication by Rhodes (1961) of the framework for organizing the various perspectives on creativity, called "the 4 Ps of creativity", multivariate approaches to creativity are widespread (Caroff & Lubart, 2012; Lubart, 1994, 1999; Runco, 2007; Runco & Pagnani, 2011; Sternberg & Lubart, 1999). Currently they offer the most comprehensive conception, which take account of psychological characteristics of individuals (Person), but also the characteristics of the environment or context in which a certain output must be achieved (Press), the type of mental operation conducted during the creation process (Process), as well as the type of expected production and the conditions of its reception (Production). From this approach, Runco (2007; Runco & Pagnani, 2010) argued for a clear distinction between creative performance (actual manifest creative performance) and creative potential which refers to the pertinent dimensions (person, process, press) that lead to creative performance not yet realized. According to this distinction, one can assume that the creative ability of a person in a certain domain depends mainly on his/her creative potential, in other words, a particular combination of personal characteristics (cognitive skills, personality traits, motivations, etc.). So each person has a unique profile on these factors. Within the cognitive components of creative potential, general intelligence and divergent thinking are the most examined. The latter appears to be a classical and central component of creative potential (Guilford & Hoepfner, 1971; Lubart, 2001; Runco, 2004; Runco & Pagnani, 2011), even though it is not synonymous with creativity (Runco & Acar, 2010). Divergent thinking can be defined as the cognitive ability to produce numerous responses in various directions for one task (Guilford, 1967; Runco & Pagnani, 2011). In a meta-analysis of 17 studies, Kim (2008) found a significantly higher relationship between creative achievement and divergent thinking test scores ($r = .216$) than with IQ test scores ($r = .167$).

Several studies have revealed that cognitive aspects of creative potential influenced the evaluation of a stimulus. For example, Hood (1973) was the first to postulate that creative potential may lead to individual differences when participants are asked to assess creativity. In his study, he assessed participants' level of originality based on a divergent thinking task (i.e. "unusual use" task) in. Then, participants assessed the originality of ideas produced by other individuals in a divergent thinking task. Results showed that less original participants were more sensitive to variations of ideas' originality than "original" participants. More recently, Caroff and Besançon (2008) confirmed the existence of an interaction between the level of originality of participants and their assessment of the creativity of advertisements. However, they found the opposite effect: the most original individuals in a test of divergent thinking were more sensitive to the advertisements' level of originality than less original individuals.

Very few studies assumed that cognitive aspects of creative potential are related to satisfaction regarding a specific piece of music. Nevertheless, in a study on the relationship between creative potential, aesthetic response to music, and musical preferences, Ziv and Keydar (2009) assessed participants' divergent thinking capacity with two tests. In the first test, they were asked to think of all possible uses of an object. In the second, they were asked to look at two simple graphic drawings and write down all possible interpretations of what the drawings may represent. For both tests, participants' productions were assessed on two criteria: fluency of ideas (number of uses or interpretations written) and originality of ideas (those mentioned by 5% or less of the sample). Results showed that both scores were significantly correlated with liking assessed by participants for three pieces of music from the classical repertoire. However, in this study, participant's familiarity to the music piece they had heard was not controlled (Ziv & Keydar, 2009).

Besides these cognitive aspects, individuals' creative potential is also characterized by some conative components, and particularly by personality traits. Some of these traits are systematically associated

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with creativity (Feist, 1998, 2010), such as openness to experience, which is partially defined by imagination, preference toward variety and curiosity (McCrae & Costa, 2003).

Most of the research published on the link between personality traits and music concerned musical preferences (Delsing et al., 2008; Dollinger, 1993; Ladinig & Schellenberg, 2012; Rawlings & Ciancarelli, 1997; Rentfrow & Gosling, 2003). Those studies adopted mainly the Big Five conception of personality: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (McCrae & Costa, 2003). Their conclusions are not easy to synthesize because of the heterogeneity of the correlations. For example, in the first published research addressing this issue, Rentfrow and Gosling (2003) examined the structure underlying music preferences and its links with personality. The results showed, in two different samples, that participants' scores on openness to experience correlated more frequently than the other personality traits with the dimensions underlying their musical preference: openness correlates positively with two musical dimensions, "Reflective and Complex" and "Intense and Rebellious", and negatively with the dimension called "Upbeat and Conventional" musical preference. Moreover, it turns out that Openness predicts interest for a wide set of music whereas Extraversion is related to a preference for energetic types of music (Ladinig & Schellenberg, 2012).

A few studies have examined the link between personality traits and satisfaction while listening to a piece of music, and they also yielded inconsistent results. Indeed, Ladinig and Schellenberg (2012) found that, while listening to an *a priori* unfamiliar music, individuals with higher score on Openness and on Introversion liked music that made them feel sad. Hunter and Schellenberg (2011) examined the influence of personality comparing high versus low scorers on each dimension; they did not find any main effect of personality traits on music satisfaction. However, as reported earlier, during the initial exposure to pieces of music, individuals high on Openness reported higher satisfaction than individuals low on Openness. Nevertheless, after three exposures to music, the reversed effect was observed.

4. Overview

In the present study, we aimed to understand better the determinants factors of music satisfaction, and the attributed market value. As suggested by the above review, exposure or familiarity with music influences satisfaction with it. Moreover, this effect is likely to be moderated by psychological variables, and particularly individual's creative potential. Several attempts have been made to highlight the effect of personality traits, verbal fluency, originality or problem solving on music satisfaction. However, most of the time these variables have been taken into account separately (Hunter & Schellenberg, 2011; Ziv & Keydar, 2009).

The purpose of this study is to replicate the moderating effect of openness to experience, while controlling other personality traits and divergent thinking scores, on the link between exposure (i.e. familiarity) and satisfaction. Also, we aim to extend previous research by exploring the effect of exposure and music satisfaction on the attributed market value of a piece of music. Indeed, literature on product satisfaction and willingness to pay showed inconsistent results (e.g., Homburg et al., 2005), and none of these studies focused on artistic and cultural goods.

In the present study, participants listen to three unknown pieces of music (belonging to the same style). For each piece, participants rate their satisfaction with it and its market value. As in "naturalistic studies" (Bornstein, 1989), exposure frequency was obtained through a self-report measure of familiarity. All the music pieces belonged to the same style of music; participants were more or less familiar with them, and thus more or less exposed. In this perspective, the use of self- reported evaluation of familiarity seems to be more ecological. Next, participants completed a divergent thinking measure, the Big-Five inventory and a self-report measure of creativity in the musical domain.

From previous studies, we predicted that familiarity with music style would positively predict music satisfaction. Consistent with Hunter and Schellenberg's (2011) work, we hypothesized that creative potential, and especially openness to experience, would moderate the link between familiarity and satisfaction with music pieces. No specific hypothesis was proposed concerning the attribution of market value; our analysis is only exploratory. Nevertheless, our objective is to investigate the influence of music familiarity and satisfaction on attributed market value.

5. Method

5.1. Participants

Participants were 106 adult volunteers (63 women and 43 men). They were recruited through snowballing technique and were not compensated for their participation. They were informed that they will participate in an on-line study, and that the researchers' aim was to understand music satisfaction. They were told that all the data collected would remain confidential and anonymous. After the study, participants were fully debriefed by reading a text describing the objectives, and hypothesis of the study. They had also the opportunity to obtain more details about the study. They were informed that they could stop the experiment at any time.

The mean age of the participants was 26.18 years ($SD = 6.42$, range 19–55). 57.5% were students, and 52.8% worked.[1] Concerning participants' highest level of educational attainment, 17% had a high school degree, 16% had an associate's degree (awarded after two years of university education), 23.6% have earned a Bachelor's degree, 34.9% had a Master's degree and 4.7% a Doctoral degree, and 3.8% had a degree obtained before high school (French degree such as a national diploma, professional competency certificate, or professional studies certificate).

Less than half of the participants (43.4%) self-reported listening more than 2 h of music per day, and half (50.9%) self-reported playing music as a past or present activity.

5.2. Materials

5.2.1. Stimuli

The stimuli were three different and non-commercial music pieces that came from sound design production, and that never had been broadcasted before. Thus, participant could not know these three stimuli. To choose these stimuli, a focus group was conducted with five research assistants, in order to choose three pieces that belong to the same musical style: dance or electronic music.[2] Both styles of music were chosen arbitrarily with the only constraint being to avoid choosing a music style very familiar to participants (R & B, Pop/Rock, Classical). Each participant had to listen to three different music pieces.

5.2.2. Music familiarity, music satisfaction and market value. familiarity

Music *familiarity* was assessed with two propositions: "*This music does not sound like what I usually listen to*" and "*This music is different to what I usually listen to*". Participants endorsed each proposition on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). As each music piece belonged to the same music style, we created a sum score that showed good consistency across the pieces of music ($\alpha = .82$). Higher scores mean that participants were not familiar with the music pieces.

Music *satisfaction* was also been assessed with two propositions: "*This music is pleasant to listen to*" and "*I appreciated to listen to this music*". Participants endorsed each proposition on a 7-point Likert

[1] Students can also have a part-time job.

[2] Stimuli are available following the link: http://www.jltavani.com/?page_id=64.

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scale ranging from 1 (totally disagree) to 7 (totally agree). We created a sum score that showed good consistency across the music pieces ($\alpha = .86$).

To reduce the halo effect, familiarity and musical satisfaction items were presented in a random order for each participant, and in a different order for each music piece. Two filler propositions about the sound quality were added that were also assessed by participants.

For *market value* evaluation, participants were required to assign a price to each music piece, using a visual analogical scale ranging from 0 to 2 euros, with an accuracy of 0.01 euro. We calculated a global score by summing the market values obtained for each music piece. This score showed good internal consistency ($\alpha = .84$).

5.2.3. Creative potential measures

Personality was measured using a French version of the 45-item form of the Big Five Inventory (BFI; John et al., 1991; Plaisant et al., 2010). This inventory measures standard personality traits: Neuroticism, Extraversion, Openness to experience, Conscientiousness and Agreeableness. In the present sample, the sub-scales of the BFI had satisfactory internal consistency (α ranged from .73 for Agreeableness to .87 for Extraversion).

Divergent thinking was assessed with a subtest of the TTCT-Verbal version (Torrance Tests of Creative Thinking, Torrance, 1996)—the "unusual uses" task (i.e. unusual uses of a cardboard box). In the present study, we focused on the fluency index (i.e. the number of different responses given by each participant).

5.2.4. Personality

As creativity might be domain specific (e.g., Baer, 1998; Lubart & Guignard, 2004), we used seven items from the Kaufman Domains of Creativity Scale (K-DOCS, Kaufman, 2012), those items specially related to the musical domain.

5.3. Procedure

The study was conducted on-line, using a survey design software: Limesurvey. Participants were required to listen to three music pieces. Each piece was presented during 30 s. Instructions clarified that participants needed to focus their attention while listening to music in order to answer a few questions after their exposure to music.

After each listening period, participants were asked to evaluate their familiarity with each music piece, and then their level of satisfaction while listening to these pieces. Finally, participants assigned a price for each piece of music. After this task, participants completed first the divergent thinking task, then the personality inventory, and finally the self-reported assessment of their musical creativity (i.e. items of the K-DOCS related to musical domain).

In this study, we decided not to use the classical stimuli presentation paradigm that consists of manipulating under laboratory conditions the frequency of exposure. Instead, we decided to assess the a priori participants' familiarity to musical stimuli. This decision is justified by the high frequency of daily exposures to musical stimuli. Thus, even if the present experiment uses unknown stimuli, participants can nevertheless refer to a super-ordinate category to which the stimulus belong. We assumed that participants familiar with a style of music might experience familiarity with the referent stimulus even though they never heard it before.

6. Results

Two analyses were conducted to investigate the relationship between self-reported familiarity (i.e. exposure), music satisfaction, and attributed market value to music pieces. First, we focused specifically on the moderating role of creative potential (openness to new experiences, divergent-thinking and self-assessed musical creativity) on the link between music familiarity and music satisfaction. Then, we investigated the influence of familiarity and music satisfaction on attributed market value. All the variables were standardized before the analyses.

Descriptive statistics obtained for all predictor variables (personality traits measurement, divergent thinking score, self-assessed musical creativity, and self-reported music familiarity) and criterion variables (music satisfaction and assigned market value) are presented in Table 1. Correlations between these different variables are presented in Table 2. From this table, it appears that between the three dimensions of creative potential, only Openness correlates significantly with self-assessed musical creativity ($r = .35$, $p < .01$). The divergent thinking score is independent from other creative potential dimensions. Furthermore, these three dimensions correlate neither with music satisfaction, nor with the attributed market value. In contrast, music familiarity (higher scores mean lower familiarity) correlates significantly with both criterion measures: $r = -.51$ ($p < .01$) with music satisfaction and $r = -.28$ ($p < .01$) with attributed market value. These patterns of correlations will be further investigated in the next sections by means of regression analysis in order to test the hypothesized effects.

6.1. Familiarity and music satisfaction: The moderating role of creative potential

We hypothesized that familiarity would predict music satisfaction. Results supported this hypothesis: familiar songs were preferred to less familiar ones ($\beta = -.514$, $Z = -6.18$, $p < .0001$). Furthermore, we hypothesized that this effect would be moderated by participants' creative potential (openness to new experiences, divergent-thinking and self-assessed musical creativity). More specifically, we hypothesized that creative individuals would tend to rely less on familiarity when appreciating songs.

Familiarity and its interactions with the three components of creative potential were entered as predictor variables in a regression using the R package lavaan (Rosseel, 2012)—music satisfaction being the outcome variable of this model. In line with the marginality rule (Nelder, 1977), the simple effects of openness to new experiences, divergent-thinking and musical creativity were also included as predictor variables in the model, despite the fact that we had no specific hypotheses regarding them. Finally, we used the four other traits of the Big Five as control variables. Maximum-likelihood (ML) was used to estimate the parameters. The standardized estimates of the model are reported in Table 3.

As hypothesized, familiarity was still a positive significant predictor of music satisfaction when controlling for the other variables ($\beta = -.61$, $Z = -6.39$, $p < .0001$). The other simple effects were non-significant: openness to new experiences ($\beta = -.003$, $Z = -0.03$, $p = .977$), divergent-thinking ($\beta = .12$, $Z = -1.38$, $p = .166$) and self-assessed musical creativity ($\beta = -.05$, $Z = -0.61$, $p = .544$) did not directly predict music satisfaction. Furthermore, none of the other personality traits significantly predicted music satisfaction.

The analysis of the interaction effects revealed that only openness to new experience was a significant moderator of the relationship

Table 1
Descriptive statistics for all predictor variables and outcome measures.

	Min.	Max.	Mean	SD
Extraversion	9	40	25.20	6.88
Agreeableness	27	52	42.20	4.92
Conscientiousness	14	45	31.03	6.31
Emotional stability	8	40	23.08	7.43
Openness	21	50	36.65	6.34
Divergent-thinking	1	21	7.57	3.91
Musical creativity	8	35	21.28	6.61
Familiarity	12	42	31.48	8.24
Music satisfaction	6	39	20.79	7.74
Market value	0	1.87	0.29	0.37

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Table 2
Correlation between predictor variables and outcome measures.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Extraversion	1									
2. Agreeableness	0.02	1								
3. Conscientiousness	0.27**	0.11	1							
4. Emotional stability	−0.22*	−0.24*	−0.33**	1						
5. Openness	0.24*	0.19	0.08	−0.11	1					
6. Divergent-thinking	0.24*	0.13	0.03	0.13	0.18	1				
7. Musical creativity	0.18	0.09	−0.05	−0.03	0.35**	0.13	1			
8. Familiarity	−0.08	0.16	0.21*	0.20*	−0.18	−0.02	−0.19*	1		
9. Music satisfaction	0.01	0.01	−0.07	−0.07	0.11	0.1	0.06	−0.51**	1	
10. Market value	0.15	−0.01	−0.20*	0.04	0.01	−0.05	0.18	−0.28**	0.52**	1

**Correlation is significant at the 0.01 level (two-tailed).
*Correlation is significant at the 0.05 level (two-tailed).

between familiarity and music satisfaction ($\beta = .21, Z = 2.29, p = .022$). As hypothesized, individuals with higher levels of openness tend to rely less on familiarity when appreciating songs. Contrary to our hypotheses, divergent-thinking ($\beta = -.02, Z = -0.25, p = .800$) and musical creativity ($\beta = .01, Z = 0.15, p = .878$) did not significantly moderate the effect of familiarity on music satisfaction.

6.2. Does familiarity predict the market value of music?

In order to illustrate the practical relevance of examining the influence of music familiarity and satisfaction in the context of music consumption, we investigated their role on attributed market value of music pieces. A simple regression with familiarity as the predictor and attributed market value as the outcome variable revealed that familiarity was a positive significant predictor of attributed market value ($\beta = -.28$, $Z = -2.99$, $p = .003$). The more familiar participants were with the music pieces, the higher was the attributed market value. Moreover, music satisfaction predicted positively the attributed market value ($\beta = .52$, $Z = 6.26$, $p < .0001$). Thus, the more satisfied participants were with the music pieces, the higher was the attributed market value.

As shown in the previous analysis, music familiarity predicted positively music satisfaction. Because music satisfaction also predicted positively the attributed market value, we hypothesized that the effect of familiarity on attributed market value would be explained by the mediating role of music satisfaction. In other words, familiar songs would be preferred to less familiar ones, which would in turn explain the higher price that one would be willing to pay for familiar songs. This hypothesis was tested with a mediation model. In this model, familiarity was the independent variable; attributed market value was the dependent variable; and music satisfaction was the mediator variable. We included also in this model the interaction term of familiarity with openness to experience because we showed in the previous analysis that it significantly predicted music satisfaction. We wanted to explore if it could also have an indirect effect on the price that participants would be willing to pay for less familiar songs. All the other variables concerning creative potential and the Big Five were introduced in the model as control variables. To conduct this analysis, we used the lavaan syntax to compute the relevant direct, indirect and total effects in line with our hypotheses. When samples are not very large, it is more likely that the distribution of the coefficients is not normal. Therefore, we followed Preacher and Hayes (2008) recommendation to use Bootstrapping to compute the confidence intervals for the estimates of the indirect effects. The standardized estimates of the model are reported in Table 4.

Table 3
Standardized estimates of the model predicting Liking.

	Estimate	Std. Err.	Z-value	P value
Familiarity	−.611	0.096	−6.392	<.001
Openness	−.003	0.091	−0.029	.977
Openness × Familiarity	.206	0.090	2.292	.022
Musical creativity	−.054	0.089	−0.607	.544
Musical creativity × Familiarity	.014	0.090	0.154	.878
Divergent thinking	.122	0.088	1.384	.166
Divergent thinking × Familiarity	−.020	0.081	−0.253	.800
Extraversion	−.053	0.091	−0.581	.561
Agreeability	.092	0.089	1.023	.306
Conscientiousness	.045	0.092	0.485	.628
Emotional stability	.065	0.096	0.677	.498

The analysis revealed that the total effect of familiarity on the attributed market value was significant ($\beta = -.26, Z = -2.57, p = .010$). Consistent with our hypothesis and our first analysis, the results revealed that familiarity was still positively and significantly associated with music satisfaction when controlling for the other variables ($\beta = -.61, Z = -6.63, p < .0001$). The results showed also that music satisfaction was positively and significantly associated with the attributed market value when controlling for familiarity ($\beta = .59, Z = 6.43, p < .0001$). Furthermore, familiarity was not anymore a significant predictor of attributed market value when controlling for music satisfaction ($\beta = .10, Z = 0.94, p = .348$). To test the significance of the mediation, we computed the bootstrap interval of the indirect effect of familiarity on attributed market value through music satisfaction ($\beta = -.36$, 95% Bootstrap Confidence Interval $= [-.49; -.20]$). Because this interval did not include 0, we could conclude that the mediation was significant: the relationship between familiarity and market value could be explained by the mediating role of music satisfaction.

Finally, we investigated whether we could find the same pattern regarding the effect of the interaction between familiarity and openness on attributed market value of songs but the results showed that this particular total effect was not significant ($\beta = -.01, Z = -0.08, p = .933$). The mediation analysis of this effect was therefore not relevant.

7. Discussion

The present article extended previous research on exposure to music in order to understand better its impact on music satisfaction, and its subsequent influence on the attributed market value (i.e. the fair price for a musical piece). We suggested that the link between music exposure and music satisfaction would be moderated by an individuals' creative potential, and particularly, by one of its core components: Openness to experience (Feist, 1998).

We conducted a study in which participants had to evaluate their familiarity and satisfaction with music pieces that had never been broadcasted and to attribute a price to those pieces. Participants' creative potential (Openness, Divergent Thinking and a self-assessed musical creativity) was assessed. Thus, we aimed first, to replicate the moderating effect of Openness (while controlling other for personality traits), of divergent thinking and self-assessed musical creativity on the link between exposure (i.e. familiarity) and satisfaction. Second,

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Table 4
Standardized estimates of the final multi-mediation model.

Effects	Predictor	Estimate	Std.err	Z-value	P value
Total effects on Price (outcome)	Openness	−.097	0.099	−0.982	.326
	Familiarity	−.263	0.103	−2.567	.010
	Openness × Familiarity	−.008	0.093	−0.085	.933
Direct effects on Price (outcome)	Openness	−.097	0.084	−1.151	.250
	Familiarity	.097	0.104	0.938	.348
	Openness × Familiarity	−.129	0.081	−1.583	.113
	Liking	.586	0.091	6.435	<.001
	Musical creativity	.150	0.082	1.832	.067
	Divergent thinking	−.212	0.083	−2.554	.011
	Extraversion	.267	0.084	3.181	.001
	Agreability	.050	0.083	0.598	.550
	Conscientiousness	−.185	0.086	−2.144	.032
	Emotional stability	.091	0.090	1.013	.311
Direct effects on Liking (mediator)	Openness	−.001	0.090	−0.011	.992
	Familiarity	−.615	0.093	−6.629	<.001
	Openness × Familiarity	.206	0.084	2.444	.015
	Musical creativity	−.050	0.087	−0.577	.564
	Divergent thinking	.121	0.088	1.378	.168
	Extraversion	−.058	0.089	−0.644	.519
	Agreability	.092	0.088	1.049	.294
	Conscientiousness	.046	0.092	0.496	.620
	Emotional stability	.063	0.096	0.662	.508
Indirect effects on Price (outcome) through Liking (mediator)	Openness	−.001	0.053	−0.011	.992
	Familiarity	−.361	0.078	−4.617	<.001
	Openness × Familiarity	.121	0.053	2.285	.022

we aimed to extend previous research by exploring the effect of exposure and music satisfaction and creative potential on the market value attributed to a musical piece.

As expected, exposure (indirectly operationalized though familiarity) predicted music satisfaction. In line with previous studies on the "mere exposure" effect (Ladinig & Schellenberg, 2012), the more individuals feel familiar with music pieces that they hear, the more satisfied they are. More importantly, this effect was moderated by openness to experience, even when controlling for the effect of other personality traits and other components of the creative potential. Thus, individuals scoring high on openness are less satisfied with familiar music than individuals scoring low on openness. These results replicate Hunter and Schellenberg's (2011) work using a different methodology. Indeed, in this study, exposure was assessed though self-reported familiarity with unknown musical stimuli. This operationalization of exposure is more ecological (Bornstein, 1989). As music is part of everyday life, participants have a previous experience with this type of stimuli (i.e. familiarity with music style). Moreover, even when controlling for the effect of other personality traits and other components of creative potential, the moderating influence of Openness on the link between music familiarity and music satisfaction remains significant. Thus, this effect appears to be pervasive.

Consistent with Ziv and Keydar (2009), we predicted also that other components of creative potential would influence music satisfaction, and more specifically divergent thinking. Nevertheless and despite our hypotheses, these components were not found to be related to music satisfaction and did not significantly moderate the link between familiarity and music satisfaction.

Our second main objective was to highlight effects of familiarity and music satisfaction on market value prediction. Indeed, the literature showed inconsistent results regarding the link between satisfaction and willingness to pay. Moreover, scholars have shown a link between brand familiarity and willingness to pay; but none of these studies were, to our knowledge, applied to musical goods. Our results showed that music familiarity and music satisfaction were positively related to the attributed price of a musical stimulus. Moreover, the positive link between familiarity and attributed market value was mediated, and thus determined, by music satisfaction. No significant effect of openness was found. Thus, we found no evidence of an influence of creative personality on the attributed market value for musical pieces.

The present study aimed to examine the influence of both conative and cognitive components of creative potential on music familiarity, satisfaction and attributed market value. We showed that (perceived) familiarity with musical pieces predicted music satisfaction with those pieces. Music satisfaction predicted in turn the attributed market value for those musical stimuli. Moreover, one component of creative potential, namely openness to experience, moderated the link between familiarity and satisfaction. The other components included in this study did not have a significant effect on those outcomes. The main explanation lies in our operationalization of the creative potential. First, several studies highlighted the existence of creative potential specificities depending on the domain (Baer, 1998, 2011). Thus, it would have been more relevant to use measures specific to musical creativity instead of general creativity in order to fit more with the stimuli evaluation task. Indeed, even if the K-DOC items we used were oriented towards musical creativity, they referred more to skills related to composition or musical creation. For this reason, this measure might be less relevant for the evaluation of creative potential, and might not be related to music satisfaction.

Thus, future research should develop and use measures of creative potential relevant to listening to music (Ryan & Brown, 2012). First, an adaptation of the classical divergent thinking task (Torrance, 1962) to music stimuli is needed. More precisely, it would seem relevant to develop a verbal listing task from musical stimuli. Second, beyond divergent thinking, other sub-processes might be involved in creative potential such as the ability to combine and integrate information, and in our case, musical stimuli (Lubart, 2001). Taking into account these processes might be interesting especially when evaluating this process using musical stimuli. Likewise, openness to experience is a broad personality dimension, comprising different facets. We can suppose that some facets might be more relevant creative potential characteristics while listening to music, such as Openness to aesthetics or Openness to feelings.

Finally, in this study, we have only considered the influence of individual factors. Future studies should include psychosocial variables such as social music identification and group membership, as these may influence music satisfaction (e. g. McCrary, 1993; Tarrant et al., 2001).

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