

*Emotions That Constitute Daily Pleasure In Music And Pictures: Intensity And Modality Specific Features*

Johanna Maksimainen, University of Jyväskylä, Finland  
Suvi Saarikallio, University of Jyväskylä, Finland

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**Abstract**

Ideas, contentions, and life events are communicated ever increasingly through images, music, and audiovisual materials in various digital media, and are an extensive part of daily life. The online contents are constantly uploaded, downloaded, and shared in various platforms, raising the need to explore how such consumption of images and music are emotionally experienced. Both music and images hold power to evoke the perceivers' emotions for the use of the information provider. Yet, we are able to say little about the emotional, social or cognitive impact because there is a lack of theoretical understanding of the mechanisms through which these behaviors impact our experience. This study approached the complex issue of an individual's emotional engagement by exploring the experience of pleasure induced by daily auditory and visual objects. The main objective was to specify which emotions contained within the daily stream of visual and auditory stimuli engage us by inducing pleasure. Modality-specificity was also explored by comparing the object types of music and visual images. Participants (n=109) were asked to choose either a visual object or a piece of music that produces pleasure in their daily life, and then answer questions about particular emotions evoked by the chosen object. The analysis consisted of descriptive and correlational statistics. The results indicate that while both object types hold great potential in providing pleasure, they may typically do so in combination with slightly different emotional contents.

Keywords: Emotions, images, music, pleasure

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## Introduction

Pictures, including different types of visual materials as well as various audiovisual and music-based materials have become tools that are used to elicit specific emotional reactions in people who see or hear them. These stimuli are often created simply to give us pleasure. By appealing to our emotions, the information provider, such as a friend or an advertiser in social media, is able to affect how we direct our attention and make consumption decisions by selectively presenting emotion-evoking information. Visual and auditory stimuli work best at this attention-capturing and decision-guiding task when they are emotionally well saturated. Certain images or music pieces work as such stimuli because they are able to suggest stories or myths that we have absorbed from the surrounding culture. For example a landscape, or an image of a meaningful symbol, or a particular music piece representing personally significant contents, may elicit powerful emotions. This is because such stimuli are full of multiple, yet also often contradictory, meanings and associations.

Exploration of the subjective emotional constituents of daily pleasure thus constitutes the foundation of this study. This article presents the results of a recent study exposing a comparative view of emotional constituents of pleasure induced by music and visual objects. The aim is to investigate the differences in emotional contents in conscious, evaluative response (Scherer, 2004; Ellsworth & Scherer, 2003) induced by these different types of stimuli. The secondary aim is to look if the strength of pleasure, induced by the objects, correlates with particular emotional contents. The study is based on data collected with a pilot survey. A larger survey was developed based on the features of the pilot version, and it will engage in a deeper comparison between auditory and visual modalities.

## Methodology and Analysis

Participants' emotional engagement in daily art experiences induced by music and visual objects was investigated through an online-survey. The study was executed as a semi-structured online questionnaire (N=109) in order to provide a detailed description of the subjective experience and the engagement features related to the personally significant objects. Data collection was carried out over a three-week period in the first quarter of 2015. The questionnaire was delivered to potential participants through social media, such as Facebook, and student associations' mailing lists at the University of Jyväskylä. Those who volunteered to answer the questions did so online, using as much time as they wanted. Confidentiality and anonymity of participants was assured. Participants were not given any incentives. Respondents in all age groups were encouraged to respond to the questionnaire.

### *Measures*

Respondents were instructed to select one object they consider to induce pleasure and hold personal significance in their daily life. The object could be a) a music piece, or b) a particular visual object<sup>1</sup>. The object selection was not limited in any ways. Visual object could be, for example, an art object, picture, utensil, or urban or other constructed environment, natural or digital environment. The object selection was

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<sup>1</sup> A variety of different types of visual stimuli, whether they are images, digital environments or other, are discussed here, for clarity, by using the expression *visual object* covering different types of objects. Also music pieces are referred as objects when the specification of the object type is not necessary.

relatively equally distributed between visual objects and music: Visual object was selected by 55% (N=60) of respondents, while musical piece was selected by 45% (N=49) of respondents.

The questions after the object selection targeted the chosen object so that participants were asked to think about the object when responding to the questions. In the first set of questions, they were asked to evaluate the strength of the object-induced emotions through 53 emotion terms. Ratings were provided on a scale ranging from 1 to 7. The selection of emotion terms was influenced by a variety of research traditions and approaches in art-related emotion research (e.g. Juslin & Laukka, 2004; Zentner & Scherer, 2008; Russell, 1994; Silvia, 2005). However, the aim was not to strictly conform to any particular pre-identified model. Instead, the aim was to provide a novel, data-driven, and interdisciplinary basis for conceptualizing and measuring the phenomenon. For the analyses, and when reporting the results, the emotion terms were translated from Finnish to English using back-translation.

Respondents were also asked to evaluate the strength of emotions and the strength of pleasure induced by the chosen object, and about the perceived significance of the musical and visual environment in terms of pleasure. As the study was preliminary in nature, and did not seek to compare individual differences, the demographic questions were limited to define respondents' gender, age, and professional background, whether the respondents had continuous training or other affiliations in the fields of music or visual arts.

#### *Participants*

The sample (N=109) mostly represented young adults. Age of the participants ranged from 18 to 64. The gender distribution was 84 females (77%) and 25 males (23%). The mean age of male respondents was 30 years, and female respondents 28 years. Median age was 25.0 within both genders.

#### *Analysis*

Analyses were conducted in order to identify the most relevant emotional characteristics of pleasure in both music and visual objects, and also to identify possible differences in the emotional responses between music and visual objects. The data were first approached descriptively, and correlations were then calculated between ratings for pleasure and particular emotions, separately for music and visual objects, in order to find the most relevant emotional characteristics of pleasure within the object types.

#### **Results**

The distribution of the object types was relatively equal, although selection revealed a slight emphasis on visual rather than musical objects: Visual object was selected by 55% (N=60) of respondents, and music piece was selected by 45% (N=49) of respondents. The selected visual object was typically an image, an art object, or a broader visual environment, such as particular home environment. Within the music genre options, rock, alternative/indie, and pop genres were the most often selected singular genres.

Respondents were asked to evaluate the general level of strength of the emotions, and the strength of pleasure attached to the chosen object. The mean values of those

variables were high and didn't show much difference between the object types (see Table 1). The self-evaluations regarding the general intensity of emotions drawn from music pieces varied from 4 to 7, mainly falling between 6 and 7 on the scale of 1-7 (M=6.0, (S.D. .78)), indicating a generally high strength of emotional experience. For the strength of pleasure, self-evaluations varied as well, from 4 to 7 (M=6.0, S.D. .83)). The general intensity of emotions experienced to visual objects varied from 4 to 7 (M=5.8, S.D. .91), and for the strength of pleasure, from 4 to 7 (M=6.1, S.D. .78). No statistical differences were observed for either of these variables. Thus, overall, the perceived pleasure and intensity of emotions was equally high in musical and visual domains.

Table 1. Descriptive statistics concerning the strength of pleasure, strength of emotions in general, and the importance of visual and musical environments for inducing pleasure in daily life.

	<i>Mean/music</i>	<i>Std./music</i>	<i>Mean/visual</i>	<i>Std./visual</i>
<i>Strength emotions</i>	5.98	.78	5.77	.91
<i>Strength pleasure</i>	6.02	.83	6.07	.78
<i>Imp. visual env.</i>	5.96	1.1	6.50	.62
<i>Imp. music env.</i>	6.47	.94	5.65	1.29
N	49		60	

Participants were also asked to evaluate the general importance of both music and visual objects in inducing pleasure in daily life, and this revealed differences between participants (Table 1). For the participants who had selected a piece of music, the evaluations of the significance of visual environment as a source of daily pleasure varied from 3 to 7 (M=6.0, S.D. 1.1), and for music from 4 to 7 (M=6.5, S.D. .94). Within those participants who selected a visual object, the evaluations of the significance of visual environment as a source of daily pleasure varied from 5 to 7 (M=6.5, S.D. .62), and for music pieces from 2 to 7 (M=5.7, S.D. .129). Thus, participants who had selected a piece of music appreciated the significance of music over visual environment as a source of daily pleasure, and vice versa, suggesting, that the selection of an object reflects the participants' preference of one modality over the other. These differences were also observed to be statistically significant (for the importance of visual environments:  $t(72.56) = -.07$ ;  $p = .003$ ; for the importance of musical environments:  $t(105.73) = 3.84$ ;  $p = .000$ ).

Overall, then, respondents evaluated the strength of the emotions and the strength of the pleasure induced by the object they had chosen to be very strong. In addition, respondents who had chosen music as their object evaluated music to generally hold higher significance as a source of daily pleasure than a visual environment. Conversely, respondents who chose a visual object evaluated the visual environment as holding higher significance than music in inducing daily pleasure. Both object types thus appeared to hold strong potential in inducing pleasure and emotional experiences, but the results show that people are likely to have personal preferences about which modality better works for them.

Respondents were asked to evaluate the strength of the 53 particular emotions induced by the object they had selected. Table 2 shows the mean values and the standard deviations of the emotions induced by music and visual objects that reached a mean value of 5.0 or higher. The table presents the emotions ordered according to their

mean values from highest to lowest. Emotions that appeared within both of the object categories are in bold face.

Table 2. Highest rated emotions in music and visual objects (M > 5.0)

Emotion / Music	Mean	Std.D.	Emotion/ Visual	Mean	Std.D.
<b>Enjoyment</b>	5.8	1.5	<b>Positivity</b>	6.1	0.9
<b>Empowerment</b>	5.7	5.7	<b>Enjoyment</b>	6.0	1.1
Strength	5.4	1.6	<b>Happiness</b>	6.0	1.0
<b>Happiness</b>	5.4	1.4	<b>Joy</b>	5.9	1.0
Love	5.4	1.7	<b>Easygoingness</b>	5.9	1.2
<b>Freedom</b>	5.3	1.5	Relaxation	5.8	1.3
<b>Unconstrained feeling</b>	5.2	1.5	<b>Empowerment</b>	5.8	1.5
Cheerfulness	5.1	1.5	Calmness	5.6	1.5
<b>Positivity</b>	5.1	1.6	Tranquility	5.6	1.4
<b>Easygoingness</b>	5.1	1.7	<b>Unconstrained feeling</b>	5.6	1.4
Feeling blue	5.1	1.7	<b>Freedom</b>	5.5	1.5
Emotionally moving feeling	5.1	1.6	<b>Agreeableness</b>	5.4	1.4
Sensitivity	5.1	1.7	Warmth	5.1	1.6
<b>Joy</b>	5.0	1.7			
<b>Agreeableness</b>	5.0	1.6			

As regards the abovementioned list of different emotions, the results reveal several similarities between the emotions evoked by the object types. Common emotions strongly experienced to objects that induce pleasure within both categories were enjoyment, empowerment, happiness, freedom, unconstrained feeling, positivity, easygoingness, joy, and agreeableness. The emotions specifically evoked by pleasure-inducing music were strength, love, cheerfulness, feeling blue, emotionally moving feeling, and sensitivity. Regarding the pleasure-inducing visual objects, the characteristic emotions were calmness, tranquility, and warmth.

Overall, the emotions relating to the pleasure-evoking visual objects associate to general positivity and relaxation. Meanwhile, the pleasure-inducing music appears to be related – in addition to general positivity – to strength, but also to sensitivity and melancholy (see also Maksimainen & Saarikallio, 2015). Emotions induced by visual objects generally reached higher mean values and somewhat lower values for the standard deviation than the emotion ratings for music. This indicates that the emotions were experienced more intensively and uniformly between the participants when induced by the visual objects, while opinions of the emotional content were more widely spread in the context of music.

#### *Correlations between pleasure and particular emotions*

Table 3 shows correlations between the strength of pleasure and the particular emotions. The suitability of the data for running correlations was tested based on skewness and kurtosis, because we assumed that data could be negatively skewed for the pleasure ratings due to the nature of the design. However, the test results (-.497 Skewness, and -.297 Kurtosis for music, and -.328 Skewness and -.794 Kurtosis for

visual objects) indicated data to be acceptable in terms of providing normal univariate distribution.

Table 3. Correlations between pleasure and particular emotions in music and visual objects.

Emotion (music)	Pearson correlation	Sig	Emotion (visual)	Pearson correlation	Sig.
<b>Cheerfulness</b>	.446	.001	<b>Cheerfulness</b>	.380	.003
<b>Positivity</b>	.413	.003	<b>Positivity</b>	.523	.000
<b>Joy</b>	.559	.000	<b>Joy</b>	.399	.002
<b>Enjoyment</b>	.486	.000	<b>Enjoyment</b>	.432	.001
<b>Happiness</b>	.420	.003	<b>Happiness</b>	.468	.000
			Enthusiasm	.337	.009
			Warmth	.371	.004
			Calmness	.455	.000
			Easygoingness	.428	.001
			Tranquility	.458	.000
			Unconstrained	.507	.000
			Empowerment	.535	.000

The results showed that the strength of pleasure correlated statistically significantly (Sig. .01 level) with *cheerfulness*, *positivity*, *joy*, *enjoyment*, and *happiness* within both object types. In addition, regarding to visual objects, there were also correlations with *enthusiasm*, *warmth*, *calmness*, *easygoingness*, *tranquility*, *unconstrained feeling*, and *empowerment*. This indicates that there is more variation in terms of the core emotional contents of pleasure induced by visual objects, compared to the pleasure induced by music.

## Conclusion

Different visual and auditory environments, and the emotions they induced, appeared to hold high significance in inducing pleasure in people's daily life. The general experience of pleasure evoked by both object types was strong, but the results also suggested some differences between the object types regarding the emotional nature of the experience. Common emotions that were found to relate to pleasure within both object types included the following: enjoyment, empowerment, happiness, freedom, unconstrained feeling, positivity, easygoingness, joy, and agreeableness. Object-specific emotions relating to pleasure induced by music were strength, love, cheerfulness, feeling blue, emotionally moving feeling, and sensitivity; and in the context of visual object, characteristic emotions were calmness, tranquility, and warmth. Emotions relating to the experience of pleasure associate to general positivity and relaxation regarding visual objects. To the pleasure induced by music, also sensitivity and melancholy feelings were typical.

Pearson correlations were carried out in order to further elaborate the relations between the respondents' evaluation of the strength of pleasure and emotion attached to pleasure. Independent of object type, whether it is music or visual object, cheerfulness, positivity, joy, enjoyment, and happiness appeared to be common emotional contents constituting the core of pleasure. However, there was more variety in these emotional contents induced by visual object. Enthusiasm, warmth, calmness, easygoingness, tranquility, unconstrained feeling, and empowerment can be specified as such characteristics.

This examination of the respondents' pleasure-related emotional responses to music and visual objects provides new understanding concerning the emotional basis of pleasure, and allows elaboration of the emotional contents through which everyday stimuli engage us. Limitations of the study concern the issue of using self-report methodology on complex emotional experience. This study focused on emotions that were explicitly evaluated through self-report in a survey, revealing how the information, whether visual or auditory, is perceived when it is considered pleasurable through conscious evaluation. However, unconscious processes are also an integral part of performing the most complex functions, such as emotion regulation (e.g. Gross & Thompson, Hassin, 2013) and in order to understand how the unconscious processes determine the pleasure experience and direct how individuals, under certain contexts, to orientate towards the stimuli producing them, requires methodologies addressing both explicit and implicit (Gyurak et al., 2011) aspects of emotional experience.

Overall, this study provided preliminary insights into the emotional characteristics of pleasure obtained from both music and visual objects. The obvious contents of positivity, enjoyment and happiness were identified as core components, but more detailed shades like empowerment, freedom, or tranquility were also identified. The results indicate that while both object types hold great potential in providing pleasure, they may typically do so in combination with slightly different emotional contents and that there may also be individual differences in preference for modality. More comparative research on the object types and individual differences is warranted.

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