Mood: Does it Influence Emotions During Aesthetic Experiences?

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Abstract

Aesthetic experiences have been found to be an integrative part of everyday life, ranging from ordinary experiences of pleasure to ones of the sublime (Slobodan Marković, 2012). This qualitative and exploratory diary study examines the influence of mood on the emotions during aesthetic experiences. Data from 61 students from the Netherlands was collected, and each participant completed a pre-entry for primary insights and subsequently wrote up to five diary entries, reflecting on their aesthetic experiences, ending with a post-entry. Each entry included assessments of prior mood using the Pick-a-Mood questionnaire (Desmet et al., 2016) and emotions regarding the aesthetic experience using the Geneva Emotion Wheel (Sacharin et al., 2012). Mood was categorized as either positive or negative, and, exploratory analyses looked into the subsequent valence, complexity, and distribution of emotions. Additionally, looking at mood and awe, which was reported with negative emotions during negative moods, whereas it was associated mainly with positive emotions during positive moods. Mood and emotions were significantly correlated. Positive mood was associated with complex and positively valenced emotions, while negative mood was found to be associated with mixed positive emotions. These results indicate a partial influence of different mood states on emotions during aesthetic experiences. The positive emotions can be explained by the aesthetic experiences inherent positive associations, and differences in complexity can be based on varying abilities to process emotions during different moods. This gives rise to opportunities for future research in emotion regulation strategies and complexity, investigating moods role for well-being and emotional resilience.

Keywords: aesthetic experience, mood, emotions, complex emotions, emotional valence, awe

Mood: Does it Influence Emotions During Aesthetic Experiences?

Introduction

Aesthetic experiences (AEs) surround us in all living situations (Saito, 2023), and are essentially a part of everyone's daily lives but are nevertheless often underestimated in their impact (Saito, 2023). They can be shaped by a multitude of factors, including the individuals, environments, and stimuli that surround us, thereby consequently influencing the individuals, environments, and stimuli we continue to surround ourselves with (McManus & Furnham, 2006). Research has consistently shown that aesthetic experiences bring a sense of pleasure and wonder with them, even when the initially evoked emotions may suggest otherwise (Wassiliwizky & Menninghaus, 2021). They enrich our lives, adding a deeper level of appreciation and opportunity for creativity (Welke et al., 2023), engaging nuanced emotions from, but not limited to, amusement, awe, pride, shame, guilt, and compassion (Wassiliwizky & Menninghaus, 2021).

Research in this domain of aesthetics has important implications for well-being (Seresinhe et al., 2015), heightened empathy towards the people we are surrounded by (Mar & Oatley, 2008) and can also help with therapeutic settings (Clow & Fredhoi, 2006), aiding with emotional balance, intelligence, and overall quality of life (Abbing et al., 2019; Rudd et al., 2012)**.**

Aesthetic Experiences

The term "aesthetic" comes with the connotation that almost everyone has some understanding or subjective interpretation of it**.** Especially in pop culture, the term is frequently used to characterize the overall appearance and personal style of an individual or object (Cambridge University Press, n.d.). However, this perception diverges from the interpretations within the fields of psychology and philosophy.

"A perceptual experience that is evaluative, affectively absorbing, and engages comprehension (meaning) processes" (Vessel, 2020, p. 1) is the general description of an aesthetic experience. This definition ranges from common stimuli and experiences evoking simple pleasantness to experiences described by Slobodan Marković (2012) as unlike ordinary life. This includes aesthetic experiences emerging from unattractive stimuli, resulting in negative aesthetic experiences and emotions (e.g. anger, compassion), which nevertheless are experienced as pleasant altogether (Menninghaus et al., 2019). In this research, any range of aesthetic experiences will be looked at.

Mood, Emotion and Affect

Everyday context often uses the terms mood, affect, and emotion to express the same cognitive experiences (Niven, 2013). For the sake of this study, it is important to differentiate as they will be assessed independently.

Affective states are best explained via the circumplex model of affect by Posner et al., (2005). This model shows that we interpret stimuli we encounter based on the pleasant or unpleasant affective states they elicit. These states consequently lead to either indulging, when experiencing a positive affective state or avoiding the stimuli when the affective state is experienced negatively (Panksepp, 2005). These affective states are represented within a dimensional model consisting of two axes: arousal (activated-deactivated) and valence (pleasant-unpleasant). Here each combination represents an emotion consisting of arousal and valence (e.g. high arousal/low valence, high valence/low arousal, low arousal/low valence, and high arousal/high valence). The resulting combinations make up the spectrum of our experienced emotions and, therefore, affective states (Posner et al., 2005).

Moods emerge from the cumulative impact of varying stimuli, often persisting for days at a time while being of mild intensity (Scherer, 2005). They are essentially permanently

present in our lives and tend to influence our experiences but not our behaviors (Scherer, 2005).

Emotions, as described by Scherer (2005) are caused by specific stimuli, which can include environmental or self-caused stimuli, holding personal value. Given emotions relatedness to stimuli, their adaptive value can cause swift changes as a response, allowing for higher intensity but shorter persistence of the emotion. Hereby often influencing subsequent behavior (Scherer, 2005).

Emotion-Related Theories

One of the most influential theories on emotions stems from Paul Ekman (1992), who states that all humans have six basic emotions: anger, surprise, disgust, enjoyment, fear, and sadness. He categorizes these emotions as basic, as they have evolved based on evolutionary needs and are characteristically different from each other but can be combined to form more complex emotions (Ekman, 1992).

In this study, emotional complexity will be defined as the variability and abundance of experienced emotions (Quoidbach et al., 2014). This conceptualization is based on emodiversity (Quoidbach et al., 2014) and emotional covariation (Berrios, 2019) to gain deeper insight into how emotions are experienced and whether they are influenced by preceding moods. The benefits of emotional complexity include enhanced well-being and balanced adjustment to life challenges (Grühn et al., 2013). Investigating the possible mediating effect of mood could yield further insight into increasing emotional complexity, which would allow for enhanced health (Grühn et al., 2013).

The aforementioned concept of emodiversity is important when determining experienced emotional dimensions. Research by Quoidbach et al., (2014) found emotional diversity to be an indicator of better mental and physical health. Their findings suggest a

correlation between the amount and distribution of complex emotions in everyday life and higher emotional flexibility for navigating life's highs and lows.

A further indicator of emotional complexity is emotional covariation, defined as the ability to simultaneously and independently experience emotions of opposing valences (O'Toole et al., 2020; Berrios, 2019). However, this concept has been controversial, with some studies labelling mixed feelings as 'mutually exclusive' (Russell & Carroll 1999; Watson et al., 1999) or due to 'meaning errors' (Young, 1918).

As of now, research has shown that individuals can be biased towards aesthetic stimuli that align with their current mood, as such stimuli are more likely to catch one's attention (Becker & Leinenger, 2011). Specifically, research suggests being in a positive mood leads to preferring positive stimuli due to an increased receptiveness to rewards in one's surroundings (Tamir & Robinson, 2007), while being in a negative mood results in a preference for sad stimuli as they offer a sense of emotional connection and rumination (Lee et al., 2013; Tice et al., 2001). Contrary to this, some studies in emotion regulation have shown that individuals in a negative mood tend to seek out pleasant stimuli as a means to lessen negative feelings (Helregel & Weaver, 1989; Knobloch & Zillmann, 2002). Consequently, research can currently be considered somewhat inconclusive but could hold important findings for future mood research, offering new ways of improving health and resilience.

In this study, the concept of aesthetic emotions will be partially explored. The analysis will investigate whether the experience of awe, which most commonly consists of feelings of wonder, pleasure, and elevation (Keltner & Haidt, 2003; Shiota et al., 2007) but can also have properties of negatively valenced emotions (Menninghaus et al., 2019) is influenced by mood. Awe is an emotion that is predominantly felt in relation to aesthetic experiences that

are vast and conjure the impression of being a small part of a big world (Keltner & Haidt, 2003). This often causes the need to interpret and readjust personal worldviews to fit the experienced stimuli (Shiota et al., 2007). Furthermore, it can modify the experience of time passing, oftentimes making it appear to go by slower (Rudd et al., 2012).

Awe is mostly researched in relation to aesthetics but remains infrequently researched in relation to mood. Therefore, the present study seeks to supplement research in this domain by providing novel insights into the possible influence mood has on aesthetic emotions. The aim is to possibly gain some new implications for mood and awe and how they can be incorporated into future research.

Present Research aim

This research will focus on mood in relation to emotions during aesthetic experiences. While plenty of research exists on aesthetic experiences and emotions, the association with different moods has so far not been thoroughly explored. As such, the overarching aim is to explore if and how mood influences emotions, including their valence and complexity, when having an aesthetic experience. More specifically, this will be explored on the basis of two hypotheses:

Hypothesis 1: Does positive mood increase the amount of positive emotions during aesthetic experiences?

This hypothesis is based on prior findings from Tamir and Robinson (2007) who suggested the occurrence of an attentional bias toward positive stimuli when experiencing a positive mood, as well as the findings by Bradley et al., (1997) & Becker and Leinenger, (2011), which indicated an attention-congruent bias for mood and the consecutively attended stimuli and emotions.

Hypothesis 2: Does negative mood increase the amount of negative emotions during aesthetic experiences?

Previous findings indicate mixed results, showing both a tendency to be more receptive toward positive as well as negative stimuli when in a bad mood. To make the hypotheses more harmonic, they were based on the same theoretical background. Basing both hypotheses on the aforementioned general attention bias, suggesting attended stimuli to be in line with the prior mood (see Becker & Leinenger, 2011; Bradley et al., 1997)

The Present Study

The general research interest is to explore how aesthetic experiences are emotionally perceived in our everyday lives based on the moods we experience. Mood will be differentiated into either positive or negative. The subsequent reported emotions will be analysed exploratively based on their complexity, valence, and combinations. These relationships will be investigated via a diary study, asking participants to provide multiple entries about their aesthetic experiences. The entries include a pre-entry to obtain some initial information with informed consent, as well as a guarantee of anonymity and confidentiality. Further entries ask to recall and reflect in detail on the aesthetic experience. Lastly, conclusive information will be collected in the post-entry. This research will use quantitative and exploratory analyses to investigate mood and emotion variables. Each entry includes the Pick-a-Mood (PAM) (Desmet et al., 2016) scale to investigate the participant's mood prior to their diary entry. Additionally, the Geneva Emotion Wheel (GEW) (Sacharin et al., 2012) will be used to document either one or two emotions that were experienced during each aesthetic encounter. A Chi-Square test of Independence will analyse the general relationship between mood and emotion in relation to aesthetic experiences. The participants will be

mainly sampled from first-year psychology, with predominant origins from the Netherlands and Germany.

Methods

Based on a checklist developed by the EC-BSS at the University of Groningen, the study was exempt from full ethical review (PSY-2324-S-0031).

Participants

A total of $N = 236$ participants were recruited, of whom 61 met the final criteria (52 female, 7 male, 1 non-binary, 1 aged 16-18, 2 aged 30-40, 58 aged 18-24), and voluntarily participated in the study. Respondents who failed to fully complete the experiment by December 10, 2023, were excluded from the analysis. The study required participants to be at least 18 years old and to be fluent in Dutch, English, or German (21 Dutch, 5 German, 35 English). Each participant submitted at least two entries to the diary study, excluding pre- and post-questionnaires ($M_{entries} = 3.72$, $SD_{entries} = 1.08$), accumulating to a total of 227 individual journal entries about aesthetic experiences (AEs).

Recruitment methods included – i) targeted advertisement via the research panel website Sona Systems (https://www.sona-systems.com) aimed at first-year psychology students at the University of Groningen, Netherlands; ii) public advertisement on the communication and social media platforms (e.g.: Facebook, Instagram, LinkedIn, Twitter, Whatsapp group chats); and iii) flyer distribution at local centers for leisure, culture, and educational activities (e.g.: Dat Bolwerk Museum in Zutphen, USVA, bookstores, literary cafes, etc.).

Chi-Square Analysis

A Chi Square Test of Independence was conducted to measure if there is a relationship between mood and emotion during aesthetic experiences using IBM SPSS Statistics (Version 21).

Exploratory Analysis

The data was mainly analyzed using exploratory analysis, as the topic of the influence of mood and subsequent emotions during aesthetic experiences hasn't been explored extensively so far. It aims to answer some of the unanswered questions in the field concerning whether different moods lead to different experiences of emotional valence, complexity, and combinations.

Materials

The table in Appendix A summarizes all the instruments and scales used in the experiment. For the purposes of this study, we will focus on instruments to assess mood and emotions, namely the Geneva Emotion Wheel (GEW) (Sacharin et al., 2012) and Pick-A-Mood (PAM) (Desmet et al., 2016).

Geneva Emotion Wheel (GEW)

The GEW developed by Sacharin et al., (2012) was used to evaluate what emotions would be evoked considering different daily aesthetic experiences. It was available in English, German and Dutch.

The GEW is arranged in a circular shape and divided by two axes: valence, spanning from positive to negative on the x-axis, and control, ranging from high to low on the y-axis. The four sections are: high control/positive valence (interest, amusement, pride, joy, pleasure), low control/ positive valence (contentment, love, admiration, relief, compassion), low control/ negative valence (sadness, guilt, regret, shame, disappointment) and high

control/ negative valence (fear, disgust, contempt, hate, anger) (Scherer, 2005). Additionally, the intensity of each emotion can be indicated. The center of the model consists of two free response items: "None" allowing the respondent to either refrain from reporting an emotion, or "Other" to report an emotion that may not be included in the emotion wheel (Sacharin et al., 2012). This study only used information concerning the emotions valence. For a visual representation see Figure 2 i).

Pick-A-Mood (PAM)

The Pick-A-Mood by Desmet et al., (2016) scale was selected due to its ability to assess specific moods, excluding emotions from its measurement scope. This instrument uses pictorial self-report measures to assess affective states. It offers three sets of cartoon figures, male, female, and a robot, which can be chosen according to the study's target sample.

For this research, the robot was chosen to ensure neutral study administration. Each figure within the set shows eight facial expressions and accompanying hand gestures to represent a range of certain moods, namely excited, cheerful, relaxed, calm, sad, bored, irritated, tense, and a neutral alternative. Respondents were asked to identify the robot that best represents their current mood per entry. The PAM scale has been found to be a reliable tool for assessing mood, especially due to its self-report and pictorial assessment (Desmet et al., 2016). For a visual representation see Figure 1 ii).

Figure 1

The self-report tools used in the questionnaire.

i.)   ii.)
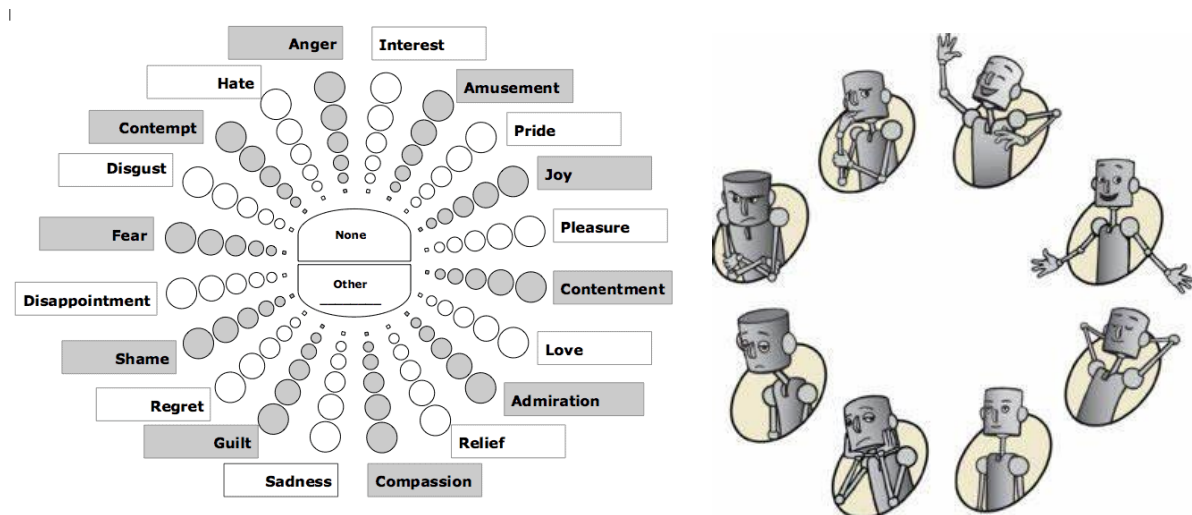
Procedure

The online self-report survey was designed to assess several personal attributes of participants both outside of and about their AE. The survey was made available to participants in an app and a website format designed using Qualtrics (https://www.qualtrics.com), from November 9 to December 10, 2023. This longitudinal design allowed participants to choose freely when to add entries about AEs. Participants were prompted to report at least five entries relating to separate AEs. Participants gave their email addresses as identifiers to link their separate entries together, and email reminders were sent once per week. The questionnaire was set up in three phases that are described hereafter:

1. Pre-questionnaire. The pre-questionnaire included Informed Consent (IF) and Information Form (IF), a short definition of AE, demographics, and self-perceived occurrence, frequency, and importance of AE (Buzzo & Sayim, 2023). Furthermore, measures of self-perceived stress level, art knowledge and interest, current mood, and self-reflection were assessed.

2. Entries. Upon completion of the pre-questionnaire, participants could access the journal entry phase of the survey. Each entry included a reminder of the definition of AE and several questions in relation to the specific AE participants chose to

report on. This included the time at which the experience occurred, the perception

of time during the experience, and the stimulus that initiated the experience.

Furthermore, 5-point Likert-scale measures were used to assess the self-perceived

appreciation, intensity, and meaningfulness of the AE. Other measures were used

to assess the current mood, emotions evoked by the experience, mind-wandering,

and immersion. Additionally, participants were prompted to describe the self-

perceived meaning of the AE in their own words as per think-aloud protocols by

Tenbrink (2015). Participants were given the same questions each time they chose

to report a new experience.

3. Post-questionnaire. After the last journal entry, the post-questionnaire could be

accessed. It included measures of self-perceived stress level and the capability of

mental imagery.

Results

The Chi-Square test of Independence was chosen for this analysis to test the

relationship between both the variables, mood and emotion, using IBM SPSS Statistics

(Version 21). Specifically looked at was whether the initial mood has an impact on the

afterwards felt emotions of an aesthetic experience, using an exploratory approach.

Table 2 includes all observed frequencies for possible combinations within the

contingency table. Prior to conducting the Chi-Square test, three assumptions were tested:

variables are categorical, including a minimum of two categories per variable and

independence of observations, and found to be non-violated. The test was conducted using a

significance level of $\alpha = .05$.

Chi-Square Test Results

The Chi square test of independence was conducted (X^2 (1,N=432) = 16.251, p<.001 (see Table 3) indicating a significant relationship between mood and emotions. These findings suggest that both positive and negative mood seem to influence the experienced emotions during an aesthetic experience. This implies that mood can act as a moderator of emotions, in the context of aesthetic experiences.

As indicated, the difference between positive mood and subsequent positive and negative mood is significant (p<.05). Furthermore, there is a significant difference between the proportions of negative mood and reporting of positive and negative emotions (see Table 2).

To quantify the relationship, the Phi Coefficient (r=0.194) was calculated, which indicated a weak association (Cohen, 1988). This association suggests that, even though statistically significant, the observed relationship between mood and emotion is of limited practical significance (see sTable 4).

Table 2

Moods and GEW frequencies Crosstabulation

			Positive Valence	Negative Valence	Total
			Emotion_PositiveNegativeValence		
Mood_PositiveNeg ative	Positive Mood	Count	347_a	42_b	389
		Expected Count	338.6	50.4	389.0
		% within Mood_PositiveNegative	89.2%	10.8%	100.0%

			92.3%	75.0%	90.0%
		% within Emotion_PositiveNegativeValence			
		% of Total	80.3%	9.7%	90.0%
		Residual	8.4	-8.4	
		Standardized Residual	.5	-1.2	
	Negative Mood	Count	29$_a$	14$_b$	43
		Expected Count	37.4	5.6	43.0
		% within Mood_PositiveNegative	67.4%	32.6%	100.0%
		% within Emotion_PositiveNegativeValence	7.7%	25.0%	10.0%
		% of Total	6.7%	3.2%	10.0%
		Residual	-8.4	8.4	
		Standardized Residual	-1.4	3.6	
Total		Count	376	56	432
		Expected Count	376.0	56.0	432.0
		% within Mood_PositiveNegative	87.0%	13.0%	100.0%
		% within Emotion_PositiveNegativeValence	100.0%	100.0%	100.0%
		% of Total	87.0%	13.0%	100.0%

Each subscript letter denotes a subset of Emotion_PositiveNegativeValence categories whose column proportions do not differ significantly from each other at the .05 level.

Table 3

Chi-Square Test Results

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16.251[a]	1	<.001		
Continuity Correction[b]	14.380	1	<.001		
Likelihood Ratio	12.694	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	16.214	1	<.001		
N of Valid Cases	432				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.57.

b. Computed only for a 2x2 table

Table 4

Calculations Phi and Cramers V

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.194	<.001
	Cramer's V	.194	<.001

N of Valid Cases   432

_____

Exploratory Analysis

      To investigate the effects of mood on emotions during aesthetic experiences more in depth, the overall occurrences of different valences, emotional complexity, emotion combinations, and awe were closely examined using Microsoft Excel (2019) and IBM SPSS Statistics (Version 21).

      Figure 3 shows the disparities in counts of emotions of positive and negative valence based on prior mood. Positive valenced emotions in relation to positive mood are approximately 11 larger (347 counts) than the positive emotions reported in relation to a negative mood (29 counts). Conversely, the negative emotion groups, while closer together, are approximately four times as big in a positive mood (42counts) compared to negative mood (14 counts).

Figure 3

Group distribution of emotional valence based on prior mood
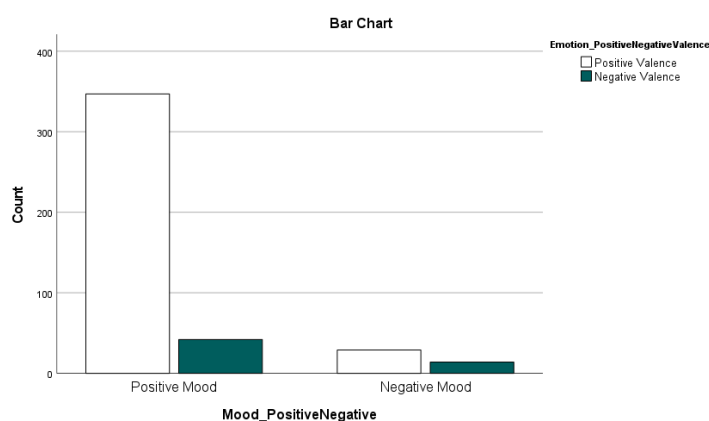
      The emotion distribution also displays the lack of participants choosing the options "Other" or "None" in the GEW, indicating it's good as a measurement tool for this reporting emotions for aesthetic experiences. Emotions such as envy and guilt were not reported. The

total of 432 emotions included most commonly positively valenced emotions as happiness

(86), enjoyment (59) and felling awe (58). The least selected emotions, were all of negative

valence, such as disgust (1), shame (1) and regret (2) excluding envy and guilt. For a more

visual representation of the emotion distribution, see Figures 2 and 4.

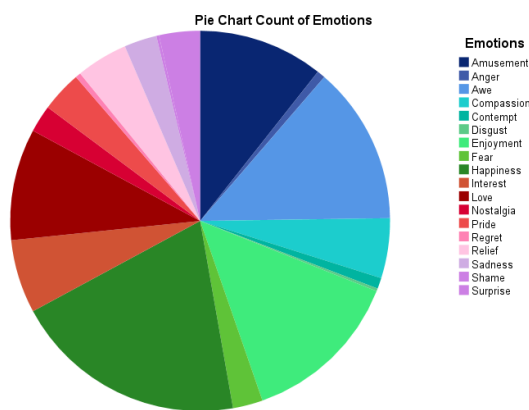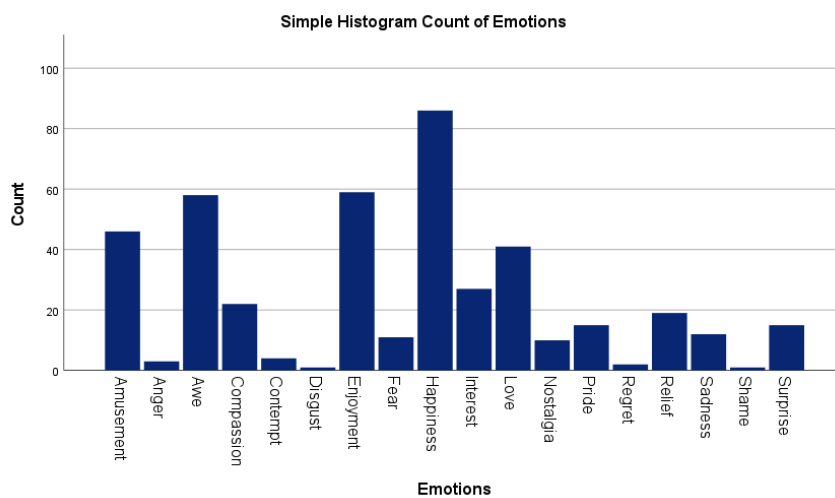**Figure 2**

Pie chart of distribution of Emotions

**Figure 4**

Distribution Emotions in Histogram

Influence of Mood on Emotional Valence

Mood was first examined regarding it's influence on emotional valence during aesthetic experiences. For both positive and negative moods, the results were skewed towards positive valenced emotions while lacking negative emotions. This finding supports hypothesis 1, that positive mood leads to an increase in positive emotions, but does not support the second hypothesis, of mood congruency for negative mood. Indicating that the reported emotional valence may not be due to prior mood but possibly be the result of a non-examined confounding factor.

When participants reported being in a positive mood, the emotion combinations were predominantly positive (151 counts), significantly fewer combinations included positive and negative emotions (23 counts), with the least amount being solely negative emotions (9 counts). Similarly, for participants reporting being in a negative mood, the distribution was quite similar, as mainly positively valenced emotion combinations were reported (11 counts) with negative (5counts) and mixed valence (4 counts) being similarly less common (see Figure 5). Suggesting that regardless of prior mood, mainly positive emotions were evoked during aesthetic experiences.

Figure 5

Distribution Emotional valence combinations during positive/negative mood
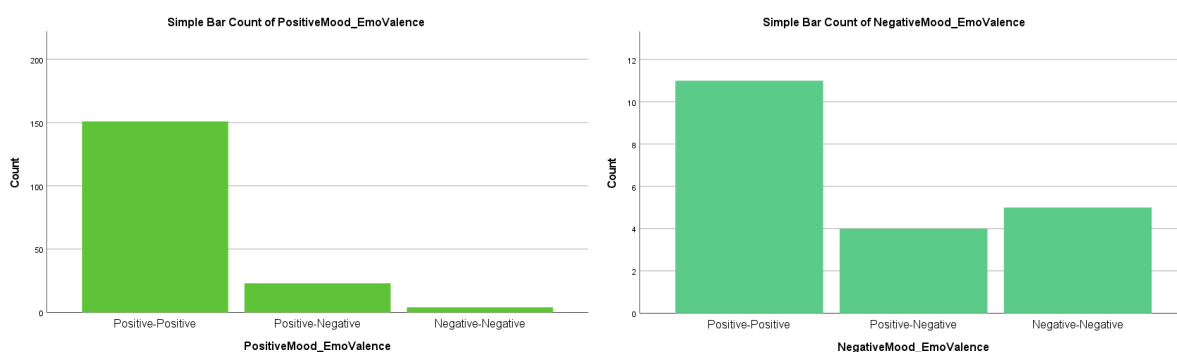
Furthermore, for either mood, participants reported negative emotions most commonly in association with positive emotions and rarely in relation to emotions with the

same negative valence. In contrast, positive emotions were found most commonly in combination with other positive emotions. Indicating that negative aesthetic experiences were commonly experienced with accompanying positive emotions.

Influence of Mood on Emotional Complexity

The mood was further assessed regarding it's influence on emotional complexity during aesthetic experiences. The findings indicated that mood possibly influences how complex the emotions during aesthetic encounters. Giving rise to a more complex emotional experience when in a positive mood and a more mixed emotional experience when in a negative mood.

Participants predominantly reported combinations of solely complex emotions (109 counts) when in a positive mood. Combinations that included both a complex and a basic emotion were less frequent (67 counts) while only basic emotions were reported the least (7 counts). A difference between moods can be seen in participants with a negative mood, as they primarily experienced emotion combinations that included both complex and basic emotions (11 counts) whereas complex combinations (7 counts) were less common and solely basic emotions were rarely reported (2 counts). For a visual representation see Figure 6.

Figure 6

Distribution Emotional complexity combinations during positive/negative mood
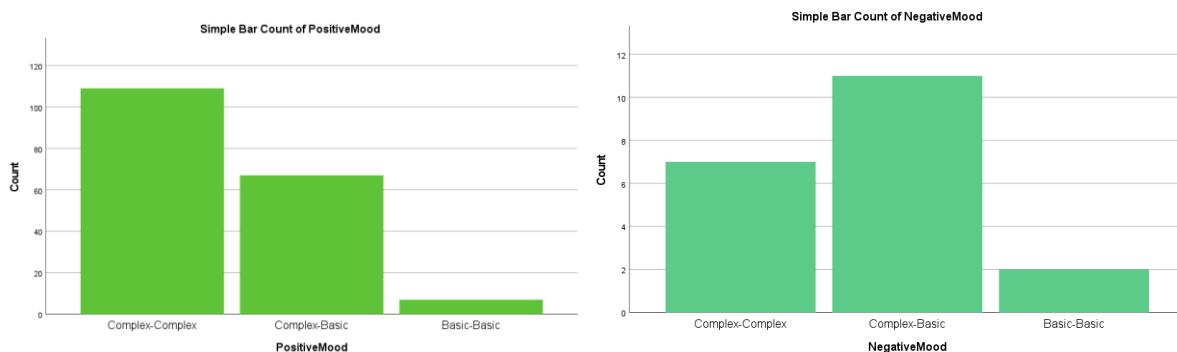
Influence of Mood on the Experience of Awe

When examining the relationship between awe and mood, some diverging tendencies were found. Participants reporting negative mood experienced feelings of awe solely in relation to negatively valenced emotions (8 counts). Contrary to this, participants experiencing positive mood reported the associated emotions as predominantly positive (44 counts) with only two exceptions. Additionally, in some cases, awe was reported without any accompanying emotion. This suggests a possible relationship between negative mood leading to awe being experienced more negatively and positive mood leading to awe being a more positive experience. Proposing that positive mood and negative mood influence certain emotions, which is partly in line with my hypotheses, of a mood congruency bias for specific emotions as awe.

Discussion

This research is in line with previous findings conceptualizing aesthetic experiences as an important and multifaceted phenomenon. (Slobodan Marković, 2012). The findings show that, irrespective of prior mood, a spectrum of emotions including various complexities and valences was evoked, resulting in a multitude of emotional experiences regarding aesthetic stimuli. This research contributes to the limited body of literature employing a diary study design to assess the influence of mood on emotions during aesthetic experiences. Specifically examined was the impact of both positive and negative moods on the subsequent emotions of everyday aesthetic experiences. The result of the Chi-Square test of Independence indicated a significant association between mood and emotion.

Moreover, exploratory analyses showed support for Hypothesis 1 ("Does positive mood lead to positive emotions during aesthetic experiences?") as the majority of reported emotions in relation to positive mood were followed by positively valenced emotions. Conversely, the

assumed relationship of Hypothesis 2 ("Does negative mood lead to negative emotions during aesthetic experiences?") was not supported, as participants in negative mood prior to the aesthetic experience reported most frequently positive emotions.

Valence and Emodiversity

Participants commonly described a positive emotion range, irrespective of their initial mood, implying a higher attentiveness for positive stimuli in everyday lives compared to negative stimuli (Helregel & Weaver, 1989; Tamir & Robinson, 2007). Specifically, positive mood was skewed towards positive valenced emotions, while lacking negatively valenced emotions. As assumed by Hypothesis 1, it is possible that this inclination is due to participants favouring aesthetic stimuli congruent with their present mood, which is possibly influenced by heightened receptiveness to rewards and positive stimuli in their environments, as previously found by Becker and Leinenger (2011). However, while this mood congruent attentional bias can be supported for positive moods, there is no finding indicating the same regarding negative moods.

Contrary to the Hypothesis 2, negative mood did not lead to an increase in negative emotions. Instead, participants reporting negative mood tended to experience emotions high in positive valence and low in negative valence. Research by Lee et al. (2013), found negative mood to be related to negative emotions, due to the need for reflection and emotional connection. This, as aforementioned, is not supported by the current findings. Instead, the results imply that for emotion regulation, it is uncommon to ruminate and more intuitive to turn attention to mood- and-emotion alleviating stimuli (Helregel & Weaver, 1989; Knobloch & Zillmann, 2002). Therefore, it seems plausible that, for negative mood, a mood-incongruent attentional bias was elicited, possibly to maintain emotional homoestasis and prevent enduring negative emotional spirals (Watkins & Roberts, 2020).

For either initial mood, findings showed that negative emotions were mostly chosen in combination with positive emotions and rarely in combination with other negative emotions. The resulting combinations oftentimes indicated complex emotional experiences (e.g. compassion-happiness, contempt-awe, happiness-sadness, fear-amusement). Presenting the ability and multitude of emotional covariation, during aesthetic experiences, as previously suggested by Schimmack, 2001. It further implies that negative aesthetic experiences, when of mixed valence, appear to have inherently rewarding qualities, potentially explaining why the negative stimuli were attended to begin with (Menninghaus et al., 2019). And could additionally explain why the participants kept seeking out aesthetic situations that elicited similar mixed emotions (Menninghaus et al., 2019). Prior findings have shown similar effects, suggesting emotions of mixed valence do not elicit avoidance of stimuli (O'Toole et al., 2020) but facilitate interest and engagement (Menninghaus et al., 2019). Underlining the importance of the interaction of differently valenced emotions and give rise to implications about their interplay when having an aesthetic experience.

Conversely, research by Panksepp (2005) & Posner et al., (2005) found purely negative emotions to lead to avoidance, as no positive quality can be ascribed to the stimuli. And that aesthetic stimuli are rarely interpreted as inherently negative (Menninghaus et al., 2019). The present findings indicate non-conformity with those assumptions, as double negatively valenced emotion combinations, although not comparable in frequency to positive or mixed combinations, made up 25% of the experiences for negative mood and about 5% of experiences for positive mood. And rather shows that, even if not seen as frequently, it is possible to experience beauty and pleasure in experiences where the prevalent emotions are solely negative. Even though these findings aren't related to prior mood, they still show the ability to derive meaning from emotionally challenging emotions, giving implications for therapeutic settings to include such stimuli to help with resilience and emotional intelligence

(Abbing et al., 2019). And furthermore, it questions the traditional definitions of beauty, which commonly refer to something being inherently appealing (Cambridge University Press, n.d.) but has hereby been shown to also be evoked through unattractiveness.

Also independent of mood, two emotions that weren't chosen to describe any aesthetic experience were envy and guilt. Guilt is an emotion that leads to self-doubting reflections thereby encouraging restorative behavior (Tangney, 2012) and envy is an emotion that arises from negative comparisons (Parrott & Smith, 1993). Contrary to guilt, which is a necessary emotion for human social interactions (Tangney et al., 2007) envy is often condemned and taught to be repressed (Hill & Buss, 2008). As envy is highly socially negatively connotated, social desirability likely is the reason for the lack/avoidance of admitting or acknowledging it (Hill & Buss, 2008; Holden & Passey, 2009). The absence of guilt may indicate difficulty of experiencing such emotions in relation to aesthetic experiences.

Influence of Mood on Awe

Looking at positively valenced emotions, it becomes apparent that they are more easily expressed and evoked compared to negatively valenced emotions. Awe seems to be a special case, as it is made up of multiple positive emotions, but can occasionally integrate negative ones as well (Keltner & Haidt, 2003; Menninghaus et al., 2019). Interestingly, awe was found to be solely reported in combination with negative emotions when participants reported a negative mood. Whereas positive mood resulted in awe typically being combined with positive emotions. The difference in emotion combinations may be due to awe evoking the feeling of time-slowing and prolonged experience of the aesthetic stimuli, which, in relation to negative mood, could evoke feelings of powerlessness in the face of the stimuli's overpowering qualities (Gordon et al., 2017). It has also been suggested that awe acts as a

mediator in lessening negative emotional impact, possibly alleviating the negativity of stimuli and turning them into an aesthetic and pleasurable one instead (Sun et al., 2023).

Generally, mood seems to be the defining factor of how awe-evoking stimuli are emotionally experienced, thereby evoking negative emotions when in a negative mood and vice versa. Alternatively, one could contemplate that being in a specific mood state leads to a biased interpretation of the awe experience. However, this raises the question of whether this is specifically the case for awe or if it indicates emotions with greater complexity being more responsive to mood influences. These interpretations remain speculative in nature given the limited literature on awe and its connection to prior moods. Further research could include more complex or epistemic emotions that are experienced when one's experience and prior knowledge don't align, such as awe, surprise, and boredom (Vogl et al., 2021). It could further be investigated whether these emotional differences have implications for preceding mood, which could be useful in therapeutic settings for mood regulation and emotion regulation.

Influence of Mood on Emotional Complexity

The concepts of basic emotions posited by Paul Ekman (1992) can be challenged by the findings of this study. The idea of basic emotions is currently seen as rather outdated (Posner et al., 2005) which can be further reinforced by the current findings. Participants various interpretations and interactions with their emotions showed the impossibility of summarizing their aesthetic experience simply and straightforwardly. Rather, the emotions encountered seemed to be of nuanced emotional complexity, often including either entirely complex or mixed emotions. Regardless of prior mood the complexity of emotions remained consistent, as for positive and negative mood a diversity of valence and complexity was

found. This suggests that emotion complexity is a trait stable across differing moods (Berrios, 2019)

Moreover, mood was found to influence the frequency with which mixed emotions were experienced. As for positive mood, most emotion combinations were predominantly complex, while negative mood was associated with mostly complex and basic emotion combinations. This is in line with previous findings, which suggest that mood and affective states determine which stimuli are focused on in the first place (Clore et al., 2001).

Findings by Gasper and Clore (2002) have previously demonstrated higher global processing when in a positive mood and higher local processing when in a negative mood. Consequently, elicited emotions could differ in complexity as the attended aesthetic stimuli also vary in complexity. Furthermore, it is plausible that negative mood leads to an adaptive way of processing aesthetic experiences, thereby making complex emotional experiences easier to process and attend to when in a positive mood, compared to negative mood (Mackie & Worth, 1989).

Overall, this study provided findings that can be further built on, covering the relationship between mood and emotion, considering their valence, complexity, and aesthetic emotions. The diary study approach has been found to be a good measure of emotional complexity (Grühn et al., 2013) as it provides participants with the opportunity to report experiences and emotions immediately and with all their complexity, thereby heightening the ecological validity of the study. Especially the longitudinal design enabled capturing changes as well as similarities in mood and emotions over time. Furthermore, the GEW has been shown to be very reliable, as no participant opted for the options "None" or "Other".

Contrary to that it is important to notice that in the context of this study there are some limitations, including the limited generalizability of the findings to other populations as the

sample consisted solely of psychology students. This could be improved by sampling from more different age ranges and populations. Another limitation lies in the general conception that aesthetic experiences are positive (Vessel, 2020), possibly making it challenging for participants to identify negative aesthetic experiences. While the concept of negative aesthetics was explained and accompanied by an example prior to each diary entry, it remains unsure if participants are generally as aware of negative aesthetic experiences as they are of positive ones. Furthermore, the low amount of negative emotions and negative mood led to a lack of consistent comparisons. This could be alleviated by either recruiting participants specifically based on their mood or by inducing the mood.

The high amount of complex emotions during positive mood, could be used for future therapeutic settings. As previous findings indicated, emotional complexity brings a multitude of benefits, as emotional intelligence, resilience, and general high adaptability (Abbing et al., 2019; Rudd et al., 2012) which could be further fostered by engaging in more aesthetic experiences in combination with aesthetic experiences.

Additionally, focusing on the specific effects that mood has on awe and similar emotions, to investigate whether the difference in aesthetic experiences have any influence on preceding mood and emotional experiences. Overall, the present research aimed at answering some of the questions still left unanswered in this field of research but further investigations are still needed to answer the differing effects that mood can have on emotions in the aesthetic context, going into more depth concerning aesthetic emotions, complex emotions, and emotional complexity.

Conclusion

The current findings imply that mood acts as a partial moderator of emotions in the context of aesthetic experiences. Initially, impact of moods on emotional valence during aesthetic

experiences was analysed. Contrary to the assumptions, mood did not significantly influence emotional valence. For both positive and negative mood, the results were skewed towards positive valenced emotions, while lacking negative emotions. Implying the emotional valence during aesthetic experiences is more related to the aesthetic experience itself rather than prior mood. Nevertheless, supporting Hypothesis 1 that positive mood enhances positive emotions but contradicting Hypothesis 2, of mood congruency for negative mood, suggesting the opposite effect.

Secondly, moods influence on emotion complexity during aesthetic experiences was assessed. The results indicated that mood possibly influences the complexity of emotions that are experienced during aesthetic encounters. Especially implying a more complex emotional experience when in a positive mood and a more mixed emotional experience when in a negative mood.

Furthermore, the relationship between mood and awe was explored, which revealed negative mood to be indicative of more negative emotions experienced, while positive mood led to more positive emotional experiences. Suggesting that both positive mood and negative mood do influence certain emotions differently, partially aligning with the hypotheses of a mood congruency bias when analysing awe separately.

Overall these findings are indicative of the nuanced influence that mood can have on emotional experiences during aesthetic encounters.

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Appendix A

Summary of Methods used in Methodology

Table 1

Inventory table of all D.E.A.R. Study instruments

Inventory/Scale	Source	Purpose	Items/Method	Used in
Perceived Stress Scale (PSS-10)	Lee (2012)	Measuring self-perceived stress levels of the last month	Likert scale (anchored at 1 = never, 5 = very often)	Pre and Post
Pick-a-mood	Desmet et al. (2016)	Assessing state mood	8 facial expressions represent different moods, one neutral option	Diary entries
Vienna Art and Interest Knowledge	Specker et al. (2020); Specker et al. (2023)	Assessing participants' art knowledge and interest	Scale Interest: 7 Likert items (anchored at 1 = not at all, 7 = very much), 4 Likert items (descripted across levels);	Pre

			Scale Knowledge: 6 multiple-choice items	
Self-reflection and Insight Scale (SRIS-12)	Silvia (2021)	Capturing engagement tendencies in self-reflection, need for self-reflection and internal state awareness	Shortened version, Likert scale (anchored at 1 = strongly disagree, 7 = strongly agree)	Pre
BSM	GEMMA SCHINO	Capturing areas of perceived bodily activation and deactivation	Distributing up to 10 clicks across body areas	Diary entries
The Geneva Wheel of Emotion 2.0 (GEW 2.0)	Scherer, K. R. (2005)	Assessing emotions constituting the experience	Placement of up to two emotion indictor points inside the wheel	Diary entries
Flow Short Scale	Laakuso et al. (2022)	Assessing flow levels of the experience by	Likert scale (anchored at 1 = strongly	Diary entries

		subscales capturing absorption and fluency levels	disagree, 7 = strongly agree)	
Questionnaire for Mind-Wandering	Composed of 3 items adopted from Taruffi (2021), 4 items from Deil et al. (2022), 1 item from the Mind-Wandering Inventory (MWI) (Gonçalves et al., 2020)	Capturing MW occurrence and assessing its components	1 multiple-choice item; 6 Likert items (anchored individually but ranging from low to high); 2 multiple-choice items	Diary entries
The Plymouth Sensory Imagery Questionnaire (Psi-Q)	Andrade et al. (2013)	Assessing participants' mental imagery ability across 7 sensory modalities and one global score (e.g. visual,	35 items with 5 items making one of 7 subscales. Response ranging from	Post

sound, smell,

taste, touch,

bodily

sensation,

feeling)

Note. Pre stands for Preliminary entry, Entry includes any entry between Pre and Post, Post is the conclusive entry. AE stands for Aesthetic Experience. Inventory/Scale explains the measurement tool. The source references the related authors. The purpose explains why the measurement tool was included in the study. The measurement of assessment explains what and how the tool was used specifically in the current study. Used in refers to the entry of the diary study (Pre/Middle/Post) that included the measurement tool.