Primenjena psihologija
Vol. 16, No. 2, pp. 151-174, 2023

Research Article

Contribution of Affect and Cognition in Shaping Aesthetic Responses

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Art appreciation is one of the most unique human experiences (Pepperell, 2011), often being associated with exceptional states of consciousness. These experiences are formed based on the interaction between the work of art itself, the observer, and the context. Using the multilevel modelling with crossed random effects analysis, we explored the connection between the affective and cognitive appraisals of a visual work of art and the aesthetic judgment. Two studies were performed. In the first, lay persons (N = 34, 29 women, M_{age} = 18.6 years), appraised figural paintings with pleasant and unpleasant content. In the second study (N = 72, 54 women, M_{age} = 18.5 years), abstract and realistic paintings were appraised. Both affective and cognitive appraisals have a positive connection with aesthetic judgement. Naïve observers use everyday, practical perception when evaluating works of art, and the paintings which are more fluently processed were assessed as more aesthetically pleasing. The deviation of a painting from traditional art canons further strengthens the reliance on everyday perception in lay persons, whereby these artworks lose their artistic status becoming closer to ordinary, everyday objects.

Keywords: aesthetic judgment, hedonic value, comprehensibility, multilevel modelling

UDC: 159.93:7.01
DOI: 10.19090/pp.v16i2.2432
Received: 19.09.2022.
Revised: 19.11.2022.
Accepted: 05.12.2022.

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Introduction

The ideals of the beautiful and pleasant are no longer the focus of contemporary visual art. Instead, avant-garde art takes on a new discourse that accepts cognitively hermetic works of art that are sensationalistic, propagandistic, or simply unpleasant and ugly. Because of this new paradigm of contemporary art, lay persons, and sometimes even the art world, consider these works distant, incomprehensible, or on the wrong track (Young, 2001). The current research aimed to determine how the naïve audience reacts to non-canonical artworks that deviate from the traditional concept of being pleasant and comprehensible. In this paper canoncial works are defined as those that fit into the naïve person`s view of art, that are congruent with their art scheme (pleasant and realistic) and fluently processed.

Aesthetic appraisals are formed based on the interaction between the work of art itself, the observer, and the context, but there is no agreement in empirical aesthetics about the ways these factors operate. On one pole are theories of fluent processing which, relying on the mere-exposure effect (Zajonc, 1968), assume that the more fluent the processing, the more positive the aesthetic response (Belke et al., 2010; Graf & Landwehr, 2015; Reber et al., 2004). According to this view, symmetrical patterns (Reber, 2002), familiarity (Whittlesea, 1993), good Gestalt (Koffka, 1935/1999), meaningfulness (Martindale et al., 1990), pleasantness (Bornstein, 1989) or prototypical forms (Martindale et al., 1988) are preferred because they facilitate fluent processing. Providing additional information on an artwork (Belke et al., 2010) or art training (Stojilovic & Markovic, 2014) are also ways to improve cognitive fluency. At the opposite end, there are approaches that believe that precisely the works that represent a challenge led to a stronger and more positive aesthetic response (Ishai et al., 2007; Jakesch et al., 2013). Reacting to an aesthetic object depends not only on the characteristics of the object itself, but also on dynamic processes and the degree of elaboration of the observer himself (Muth & Carbon, 2013). First inspection of hard-to-comprehend artworks (i.e., unpleasant, abstract) evokes a negative affective response in naïve observers. Then it is necessary for them to achieve a quick insight or

only to anticipate it (Muth et al., 2019; Muth & Carbon, 2013, 2016), in order to reduce uncertainty, which leads to a more positive affective response (Van de Cruys & Wagemans, 2011). The importance of cognitive processes in the formation of an aesthetic response, especially those paintings in which the object cannot be immediately recognized, is indicated also by the connection between the duration of elaboration and affective response (Pepperell, 2011). Finally, the very context in which the appraisal of paintings takes place, or the feeling of security affects the aesthetic experience (Carbon et al., 2013; Gartus & Leder, 2014).

Models of aesthetic dynamics involve different processes that are related to the final aesthetic response, and most include both emotional and cognitive components (Graf & Landwehr, 2017; Leder et al., 2012; Marković, 2012; Nadal et al., 2008; Pelowski et al., 2016, 2017). Affective processes and responses to works of art are an inalienable part of art (Cupchik, 2006; Graf & Landwehr, 2017; Pelowski & Akiba, 2011; Silvia, 2009). One often hears the opinion that the value of a work of art rests on the strength of the emotions it evokes in the audience. This connection with affect is also indicated by recent neuroscientific research on the importance of the reward system in shaping the aesthetic response (Skov & Nadal, 2021). The same work can provoke emotions by a combination of several sources (e.g. symbolic and structural regularities), and can simultaneously evoke various and even opposite emotions (Menninghaus et al., 2019; Pelowski et al., 2017).

Emotional reactions to artworks may range from very mild to strong, from positive to negative, and from simple to complex (Pelowski et al., 2021; Prinz, 2012; Reber et al., 2004; Silvia, 2009). A problem for contemporary psychological theories of art is explaining the relationship between emotional and aesthetic appraisals when encountering artworks that provoke negative emotions, such as Goya's, Bosch's, or Beckman's paintings, to name just a few. Modern art, for example, may elicit positive emotions, but also the states of ambiguity, uncertainty (Jakesch & Leder, 2009), unpleasantness, disgust or anger (Silvia & Brown, 2007). Research on photographs with negative content has shown that they are assessed as both unpleasant and pleasant

(Menninghaus et al., 2019; Van Dongen et al., 2016; Wagner et al., 2014). However, importantly, photographs presented as artwork are perceived as more pleasant than ordinary documentary photographs, due to the assumed activation of the art scheme. As this study indicates, a positive affective reaction to a work of art is an inalienable part of the aesthetic process, regardless of the style and content of the work.

Nevertheless, the question remains whether and how the strength of connection between positive affective and aesthetic responses changes for artworks that vary in terms of how they fit into naïve observers' canons of visual art. Our assumption was that there is a positive correlation between hedonic and aesthetic responses, and that this connection strengthens as naïve observers encounter works that increasingly deviate from traditional canons of beauty (those that are negative in content or abstract). We based this hypothesis on the assumption that non-canonical artworks, due to low fluency and non-congruence with the art scheme of naive observers, cause surprise and tension in the observer and a stronger reliance on evoked emotions when defining the final aesthetic response (Meyer et al., 1997; Steinbeis et al., 2006).

The second, cognitive domain has an important role in aesthetic experience because it controls and gives sense to the whole process (Marković, 2012). When creating an aesthetic response, the audience goes through a clear order of processing, regardless of whether they are naive observers or art experts (Augustin et al., 2008, 2011). For example, in the model proposed by Leder and colleagues (2004), the "explicit classification" stage is based either on depictive content or on style information of the artwork. Which of the two aspects becomes more central depends on the beholder's level of art expertise and the nature of the artwork (Belke et al., 2006). Similarly, the Marković model (2012) of aesthetic experience, suggests the existence of two levels of cognitive processing: processing of a narrative and processing of form and composition. Using the second level, abstract art conveys its meanings to the observer; at this level, specific art knowledge is important (Belke et al., 2006; Bullot & Reber, 2013; Leder & Nadal, 2014). Previous research

mostly indicate that non-art trained subjects prefer more realistic than abstract paintings (Heinrichs & Cupchik, 1985; Stojilovic, 2017; Szubielska et al., 2021; Vartanian & Goel, 2004), but there are also opposite results (Pepperell, 2011).

The second aim of our research was to investigate the connection between cognitive and aesthetic assessments. We focused on examining whether the strength of connection between these two assessments varies when the degree to which a painting fits into traditional art canons varies from realistic to abstract. Our assumption is that the strength of connection becomes more powerful as the work increasingly deviates from the canonical (realistic) and becomes non-canonical (abstract), due to the low fluency and disruption of the art scheme in naive observers for more abstract works. Violation of the art scheme leads to a stronger reliance on everyday perception, where the intelligibility of the observed object is strongly preferred.

Study 1: Pleasant and unpleasant paintings

Method

The first study was performed to investigate the connection between affective and cognitive appraisals with the aesthetic appraisal of realistic paintings that have pleasant or unpleasant content.

Participants

The study comprised convenient sample of 34 participants from introductory psychology courses from the University of Kosovska Mitrovica who received credit toward a research option. The majority of participants were female (N = 29, 85%), aged 18–19 years (M_{age} = 18.6 years, SD = 0.50).

Materials

Stimuli. The study utilized 17 figural paintings from the Renaissance to contemporary periods. In a preliminary study, the authors had singled out 84 figural paintings of varying degrees of pleasantness from relevant art collections. These paintings were exhibited via an online form to a group of

19 evaluators; these were first-year psychology students who did not participate in the main research study. The evaluators were asked to appraise each of the paintings according to their degree of pleasantness (from 1 = *extremely unpleasant* to 7 = *extremely pleasant)*. The range of painting pleasantness from 2.4 to 6.8 was obtained. In the final selection, the authors selected 17 paintings based on the following principles: 1) paintings that had extremely high (above 6) and low scores (below 2) were rejected due to the potential effect of rank restriction, 2) for paintings that had the same or very similar scores (difference less than 0.05) only one painting was randomly selected, and 3) care was taken to ensure that the selected paintings were at as similar distance as possible from each other. The final range of painting pleasantness in the main study was from 2.4 to 6.0 with an average mutual distance of 0.23. The paintings were then ranked from least pleasant (rank 1, painting "Saturn Devouring His Son", by Francisco Goya, c. 1819–1823) to most pleasant (rank 17, painting "The Promenade (Julienne Dubanc and Adrienne)" by Pierre-Auguste Renoir, c.1906).

Instruments. The participants' interest in art was determined using three questions related to their degree of interest in art, painting and modern painting (1 = *not at all* to 5 = *very much*) (Stojilović & Marković, 2014). These three questions were averaged to obtain an overall value for "interest in art" (Cronbach α = .75, acceptable alpha level according to George and Mallery (2003), 95% *CI* [.71, .78], *M* = 2.31, *SD* = 0.93).

The participants rated each of the paintings on the domain of hedonic value using three seven-point Likert-type scales; these assessed how pleasant, likeable, and optimistic the paintings were. The responses were averaged to obtain an overall value for Hedonic value or positive affective assessment (α = .79, acceptable level, 95% *CI* [.76, .82], *M* = 4.58, *SD* = 1.71).

An additional three scales were used to examine cognitive appraisal; these assessed how comprehensible, intelligible, and understandable the paintings were. The responses were again averaged to obtain an overall value for cognitive assessment or Comprehensibility (α = .84, good level, 95% *CI* [.82, .86], *M* = 4.84, *SD* = 1.90).

The participants also rated the paintings using two seven-point Likert-type aesthetic scales, these assessed beauty and fascination. The two scales were utilized to examine whether different aspects of aesthetic assessment (beauty and fascination) are differentially connected with affective and cognitive appraisals. "Beauty" corresponds to a more traditional understanding of art, in which the expressiveness of emotions and the conventionality of content and form are important (Carroll et al., 2012; Scruton, 2011). "Fascination" relates to our understanding of an aesthetic experience as an exceptional state of mind, whereby even ugly scenes can provoke an aesthetic experience (Marković, 2012; Pelowski et al., 2021).

Procedure

The participants performed the evaluation of artworks in groups of 6 to 12 people. All paintings were displayed via an LCD projector. The average display time of one painting was 100 seconds. The order of presentation of the paintings was counterbalanced. The experiment lasted 45 minutes per group.

Analytical strategy

Preliminary analyses. Descriptive analysis, linear regression analysis, and Cronbach's alpha internal consistency coefficients were used to describe and compare the subject level variables. All analyses were performed using SPSS for Windows, version 26.0. Statistical significance was defined as a two-tailed p-value of <.05.

Multilevel modelling. We used multilevel modelling with crossed random effects analysis, with a within-subject and within-stimuli design (Chang & Lane, 2016; Heck et al., 2013; Hoffman, 2015). The restricted maximum likelihood method (REML) was used to evaluate the model because its variance estimates are less biased with fewer level-2 entities (here individuals), the REML has the property that if the level-2 entities are balanced (have equal level-1 responses), its estimates are equivalent to analysis of variance (ANOVA) estimates, and it is a preferred model for small samples (Hox, 2010). Maas and Hox (2005) report that with as few as 30 level-2 entities (individuals), REML estimation produces accurate variance estimates.

Therefore, the minimum number of respondents was set on 30. The significance of fixed effects was assessed using *p*-values of the Wald test, and the significance of random effects was estimated using −2ΔLL likelihood ratio tests and informative criteria (Akaike's information criteria and Bayesian information criteria) between two models that include the same fixed effects (Hoffman, 2015). At both levels (participants and paintings), the identity correlation matrix was defined. The Satterthwaite method was used to estimate denominator degrees of freedom.

Results: Study 1

Increases in paintings' rank (i.e. pleasantness) were associated with increases in appraisals of: Hedonic value (standardized $\beta = .94$, $F(1, 15) = 108.03$, $p < .001$), Comprehensibility ($\beta = .78$, $F(1, 15) = 23.30$, $p < .001$), Beauty ($\beta = .89$, $F(1, 15) = 55.95$, $p < .001$) and Fascination ($\beta = .50$, $F(1, 15) = 4.904$, $p = .043$).

Model 0 (Table 1 within the online Supplementary material) reports the estimates of fixed and random effects in the model. The average score for the paintings' Beauty was 4.81, and intercepts varied significantly across paintings (Wald $Z = 2.685$, $p < .01$) and across subjects ($Z = 2.710$, $p < .01$). Similarly, the average Fascination score was 2.92, and intercepts varied significantly across paintings ($Z = 2.590$, $p < .01$) and across subjects ($Z = 3.440$, $p < .01$).

Model 1 (Table 1 within the online Supplementary material) included individual ratings for Hedonic and Cognitive appraisals of the paintings. These covariates were centered at 4 to facilitate interpretation of the intercept and their simple main effects. The simple main effect analysis indicated that beauty increased by 0.82 for every 1 unit increase in Hedonic value ($t(357.8) = 20.439$, $p < .001$, 95% *CI* [.718, .870]) and increased by 0.17 for every 1 unit increase in Comprehensibility ($t(428.7) = 5.072$, $p < .001$, 95% *CI* [.109, .247]). The Hedonic value by comprehensibility interaction was non-significant (unstandardized $b = -.03$, $t(557.43) = 1.88$, $p = .06$) and was therefore not used in subsequent models. in the next model, the variable "Interest in art" was included; this did not improve the model ($b = .12$, $t(32.00) = 1.77$, $p = .09$) and the variable was therefore excluded from further analysis.

Fascination values for the paintings increased by 0.34 for every 1 unit increase in Hedonic value (t (553.7) = 5.907, p < .001, 95% *CI* [.229, .458]), and increased by 0.15 for every 1 unit increase in Comprehensibility (t (559.7) = 2.970, p < .005, 95% *CI* [.051, .250]). Interest in art, again, did not improve the model and was therefore excluded from further analysis (b = .28, t (32.07) = 1.80, p = .08).

In model 2 (Table 2 the online Supplementary material), the rank of the observed paintings was added. This analysis aimed to determine the relationships (represented by slopes) between Hedonic and aesthetic appraisals, as well as between Comprehensibility and aesthetic appraisals for each rank of the paintings. Using simple regression analysis, we examined whether changes in the degree of pleasantness of the paintings (rank) predicted a linear trend of change in the slopes (hedonic-aesthetic relationship and comprehensibility -aesthetic relationship). A linear regression established that the rank of a painting could predict the slope between Hedonic value and Beauty (F(1, 15) = 6.320, p = .024); the paintings' ranking accounted for 29.6% of the explained variability in the connection of the Hedonic values and Beauty slope. The regression equation was predicted Hedonic-Beauty slope = 0.93 – 0.02 × paintings` rank (Figure 1). The connection between appraisals of Hedonic value and Beauty decreased linearly with increases in the paintings' ranking i.e. level of pleasantness. In contrast, the paintings' Comprehensibility and Beauty were not linearly connected with the ranking (F (1, 15) = 1.545, p = .23). Regarding Fascination, no linear connection was found between the change in slope and the paintings' ranking.

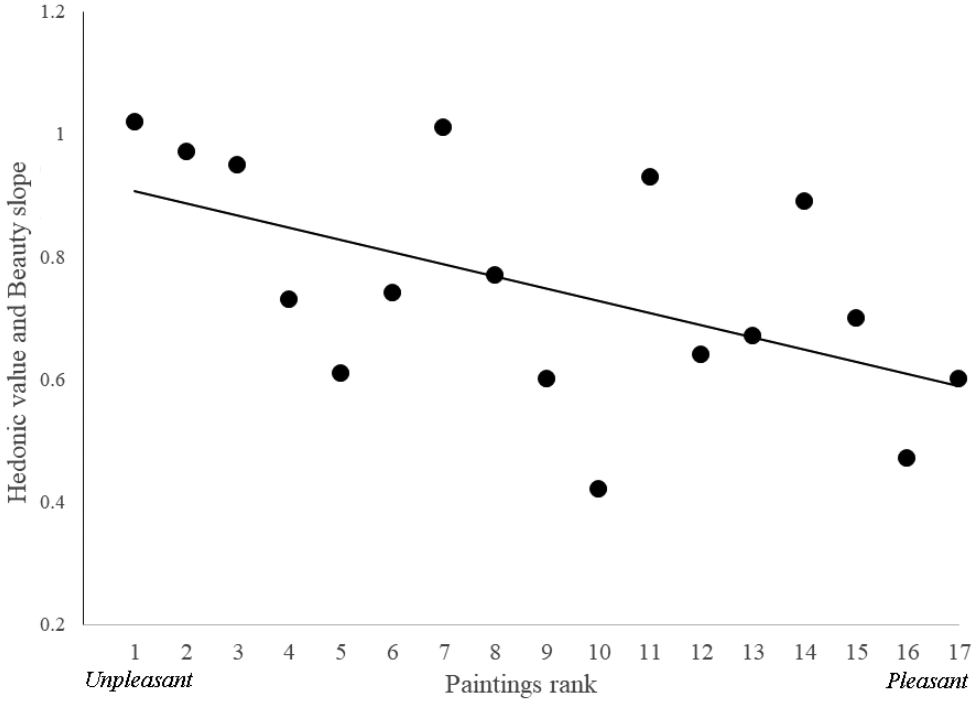

Figure 1. Relationship between Paintings' pleasantness (rank) and Hedonic value - Beauty slope.

Discussion: Study 1

The obtained results indicate that both hedonic and comprehensibility assessments are positively related to the aesthetic responses. Hedonic assessment is more strongly related to appraisals of beauty than to appraisals of fascination. Regarding the cognitive assessment, similar intensity in relationships with beauty and fascination appraisals were found.

The main research hypothesis – strengthening positive correlation between hedonic reactions and aesthetic responses for non-canonical artworks – was confirmed for the beauty–hedonic relationship changes. The correlation between hedonic reactions and beauty appraisals strengthens as we move to the less fluent paintings with more negative (non-canonical) content.

Study 2: Realistic and abstract paintings

Method

Our second study investigated the connection between hedonic and comprehensibility assessments and aesthetic appraisals for the paintings varied in realism/abstraction.

Participants

The study comprised a convenience sample of 72 participants from introductory psychology courses, who received credit toward a research option for their participation. The majority of participants were females (*N* = 54, 75%), aged 18–19 years (M_{age} = 18.5 years, *SD* = 0.50).

Materials

Stimuli. The study utilized 16 paintings, from the Renaissance to contemporary periods, with different degrees of abstraction. The paintings ranged from realistic images that mimetically support reality, without any or with minimal deviation from the real form to abstract images in which real objects cannot be recognized and with no clear theme. In preliminary research, the authors had singled out 93 paintings with varying degrees of abstraction from relevant art collections. These were presented via an online form to a group of 19 evaluators (the same individuals as in Study 1). The evaluators were asked to appraise each of the paintings according to their degree of abstractness (from 1 = *abstract* to 7 *= realistic)*. The range of realisms of the paintings from 2.08 to 6.54 was obtained. Following the same principles described in Study 1, the authors selected 16 paintings whose range of realism ranged from 2.08 to 5.99. The selected paintings were then ranked from the most abstract (rank 1, "No. 8 (White stripe)" by Mark Rothko, 1958) to the most realistic (rank 16, "Madonna and Child with the Book" by Raphael, c. 1503).

Instruments. We used the same instruments as in study 1. The overall values obtained were: Interest in art α = .78, acceptable level, 95% *CI* [.75, .80], *M* = 2.96, *SD* = 0.75; Hedonic value α = .87, good level, 95% *CI* [.86, .88], *M* = 4.79,

SD = 1.49; and Comprehensibility α = .89, good level, 95% *CI* [.88, .90], *M* = 4.77, *SD* = 1.68.

Procedure and Analytical strategy

The same procedure and analytical strategy were used as in Study 1.

Results: Study 2

As the degree of realism of the paintings increased, the rating increased, for all variables: Hedonic value standardized β = .84, $F(1, 14) = 33.29$; Comprehensibility β = .99, $F(1, 14) = 1671.83$; Beauty β = .87, $F(1, 14) = 44.92$; and Fascination β = .89, $F(1, 14) = 52.76$ (all *p*-values < .001).

Again, we used multivariate analysis with crossed random effects modelling to further analyze the data. Model 0 (Table 1 within the online Supplementary material) presents an empty model with the estimates of fixed and random effects. The average score for Beauty for the assessed paintings was 4.91, and intercepts varied significantly across paintings (Z = 2.611, p < .01) and across subjects (Z = 4.831, p < .001). The average score for Fascination for the paintings was 3.25, and intercepts varied significantly across paintings (Z = 2.571, p < .01) and across subjects (Z = 5.416, p < .001).

In the model 1, the simple main effect analysis of change in Hedonic value indicated that Beauty increased by 0.86 for every 1 unit increase in Hedonic value ($t(897.8) = 34.79$, p < .001, 95% *CI* [.813, .911]). Likewise, Beauty increased by 0.15 for every 1 unit increase in Comprehensibility ($t(545.47) = 6.81$, p < .001, 95% *CI* [.107, .194]). These results suggest that assessments of the paintings' Hedonic value and Comprehensibility are positively correlated with appraisals of Beauty. The addition of a subject level variable "Interest in art" did not improve the model and was therefore excluded from further analyses (unstandardized b = .01, $t(69.45) = 0.23$, p = .09).

Fascination for the paintings increased by 0.58 for every 1 unit increase in Hedonic values ($t(1023.66) = 15.056$, p < .001, 95% *CI* [.503, .654]), and increased by 0.18 for every 1 unit increase in Comprehensibility ($t(764.57) = 5.024$, p <

.001, 95% *CI* [.108, .246]). The addition of the "Interest in art" variable did not improve the model (b = .03, t (69.95) = 0.224, p = .08).

In the last step (Model 2, Table 2 in the Supplementary material), we added the rank of the observed paintings as a variable. We then, using simple regression analysis, examined whether the degree of realism/abstraction of the paintings could predict the linear trend of slope values. A linear regression established that the paintings' rank could predict the Comprehensibility–Beauty slope (F(1, 14) = 4.787, p = .046, Figure 2), and rank accounted for 25.5% of the explained variability in the slope. The regression equation was: predicted Comprehensibility–Beauty slope = 0.26 – 0.02 × paintings` rank. In other words, the strength of connection between the assessments of Comprehensibility and Beauty grew linearly with the increase in abstraction. The model that included the slope of Hedonic–Beauty assessments and ranking was not significant (F (1, 14) = 3.184, p = .096). In model 2, for the aesthetic scale of Fascination, the linear connections between the two slopes and the rank were not determined.

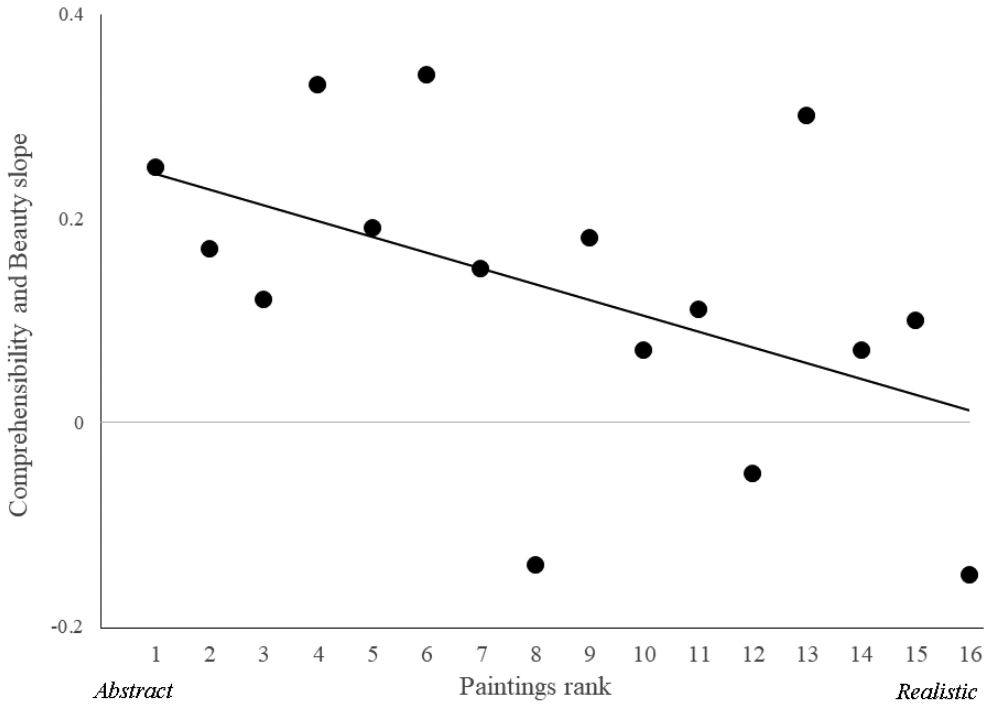

Figure 2. Relationship between Paintings' pleasantness (rank) and Comprehensibility - Beauty slope.

Discussion: Study 2

The results indicate that Hedonic value and Comprehensibility assessments are positively related to aesthetic assessments. We found a positive linear strengthening of the connection between the Comprehensibility of paintings and their Beauty with the move from realism to abstraction. In other words, the more abstract the painting, the more assessment of beauty coincides with the assessment of its (in)comprehensibility. This linear change was not observed when considering the variable of Fascination.

General discussion

The two studies were performed to investigate the connection of affective and cognitive processes with aesthetic judgments, and to examine the impact of deviation from naïve persons` traditional art canons on aesthetic judgments.

First, the obtained results indicate a strong positive connection between affective appraisals and the aesthetic response of naive observers. Previous research has shown that lay persons, compared to art experts, prefer works of popular art or even kitsch because they are more pleasant and "make them happy" (Ortlieb et al., 2017; Ortlieb & Carbon, 2019; Winston & Cupchik, 1992). The obtained results are in line with research by Cupchik and colleagues (Cupchik et al., 2009; Cupchik & Gebotys, 1988; Cupchik & László, 1992), who concluded that naive observers must learn to pay attention to the stylistic characteristics of a work of art, as such observers often focus only on certain favorite colors or scenes, familiar content, literal or narrative information. Naive observers rely heavily on emotional aspects when observing artwork (e.g., pleasantness), whereas experts` processing is based on the active elaboration and evokes more complex emotions. The results are aligned with the fluency theory (Graf & Landwehr, 2015; Reber et al., 2004). In our study, we posit that naive observers failed to overcome the extrinsic (pragmatic) perception and value of beauty and relied primarily on the emotions depicted in the painting itself (art-represented emotions). For naïve subjects, paintings evoke emotions predominantly based on what is depicted or symbolically represented within them, while the transmission of emotions through the formal characteristics of the work (connotational meanings) is more limited. We can conclude that affective judgments, based on the emotions presented in the paintings themselves, are strongly related to the final aesthetic response of naïve observers. The results also indicate that affective assessments are more strongly associated with appraisals of beauty than with fascination for an art object. We believe that appraisals of beauty are more strongly connected with the daily perception, and assessment of ordinary objects such as clothes, cars, food, and so on. This type of everyday

assessment is more strongly based on hedonism, pleasure, and wellbeing, than on an exceptional state of mind.

Finally, the results suggest that the more the observed painting deviates from the traditional pleasantness scheme, the more their aesthetic judgment is "contaminated" by affective assessments. We believe that when naïve observers encounter paintings with unpleasant content, their art scheme is violated, and their aesthetic judgment is strongly influenced by the unpleasant content of the artistic painting. When appraising such works, naïve observers fail to get insights into Gestalt and recognize formal qualities of artworks, and their aesthetic judgment is guided exclusively by the negative, first impression of unpleasant content shown in the painting. By deviating from the art scheme of naive observers, a non-canonical (unpleasant content) artwork loses a part of its art, becoming more an object separate from the artistic context, where aesthetic assessment is based on pleasant–unpleasant assessment, as in everyday perception. The experience of these perceived evaluations serves to inform appraisals. As a consequence, affective feelings strongly influence the final aesthetic judgment (Clore & Huntsinger, 2007).

Second, the assessment of paintings' comprehensibility is also positively connected with the aesthetic response of naive observers. The connection is weaker than for affective assessments, which indicates a stronger reliance on affective assessments when making aesthetic judgments. This supports Cupchick and László's (1992) idea of the superiority of the "emotional" over the "cognitive" style of appraisal in naive observers of paintings.

Cognitive processes are more strongly connected with beauty appraisals when the paintings are abstract. We suggest this is again due to subjects being unable to create coherent Gestalt, which is felt as a negative affective state (Muth & Carbon, 2013). Because of the deviation of abstract work from a canonical understanding of art, naive respondents are more strongly guided by the impression of incomprehensibility and resulting confusion, not recognizing other formal characteristics of the work that require knowledge

of art. Thus, their aesthetic judgment is more strongly based on this negative impression.

Limitations and further research

We see room for improvement of the research in terms of ecological validity; for instance, ecological validity could be improved by conducting similar research in real museums and gallery spaces (Carbon, 2019; Gartus & Leder, 2014). Understanding typical responses to artworks can be further explored by determining associations between the personality traits of observers and their way of responding and preferred artistic styles. Also, the sample sizes and sample type (students) can also influence the results obtained, so the validation with other samples can be beneficial.

Conclusion

The obtained results suggest that aesthetic judgments of lay persons are primarily pleasure-dependent, based on everyday and extrinsic perception. We posit that the transition to a pleasure-independent aesthetic judgment requires additional art education and exposure to artistic content in an appropriate environment (e.g. museum, gallery) (Stojilović & Marković, 2014; Winsler et al., 2020). In situations when lay persons encounter artwork that is non-canonical, due to the violation of their art scheme, these individuals rely more heavily on their everyday perception abilities in forming an aesthetic judgment, thereby overlooking the formal qualities of the observed work of art. Naïve observers form judgments about such non-fluent works based more on everyday, non-artistic perception, for which pleasantness and comprehensibility play an important role.

Conflict of Interest

We have no conflict of interest to disclose.

Data Availability Statement

The supporting materials and data supporting the conclusions of this manuscript are *available on the OSF data repository* (https://doi.org/10.17605/OSF.IO/76K4G).

Ethics Statement

The studies involving human participants were reviewed and approved by the ethical committee of the Faculty of Philosophy in Kosovska Mitrovica. Participants provided their written informed consent to participate in this study.

The study was conducted in accordance with the Declaration of Helsinki.

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