Individual differences in conflicting stimulus evaluations: Openness/Intellect predicts mixed-valenced appraisals of visual art

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Abstract:

Openness/Intellect, a trait domain reflecting a tendency towards cognitive exploration, is positively associated with the tendency to experience *mixed emotions* (i.e., simultaneous positive and negative feelings). This study examined whether this trait is also positively associated with *mixed appraisals* (i.e., concurrent positive and negative stimulus evaluations). Participants ($N = 225$) appraised 18 visual artworks. Higher Openness/Intellect predicted stronger mixed appraisals, particularly of the artworks rated as more mixed on average. Openness/Intellect also predicted stronger within-person positive relations between artwork viewing time and mixed appraisals, though this finding was less consistent across measures. It also appeared that Neuroticism might predict a lesser tendency to make mixed appraisals. This study provides a foundation for future research examining individual differences in mixed appraisals.

Keywords: Openness/Intellect | Big Five | Mixed appraisals | Mixed emotions | Visual art

Article:

1. Introduction

When people encounter complex objects and events, such as tragicomic films, life transitions, and multifaceted decisions, they may experience concurrent positive and negative feelings (Berrios et al., 2015a, Larsen and McGraw, 2011, Larsen and McGraw, 2014, Larsen et al., 2001). These *mixed emotions* are thought to arise when individuals make conflicting positively and negatively valenced evaluations of a stimulus, or *mixed appraisals* (Shuman, Sander, & Scherer, 2013). Recently, we found that trait Openness/Intellect predicts the tendency to experience mixed emotions (Barford & Smillie, 2016). In the present study, we examined whether this same personality trait domain also predicts the tendency to make mixed appraisals of complex and evocative stimuli. To examine this question, we analyzed participants' valenced appraisals of abstract and representational visual artworks. For both empirical and theoretical reasons, we predicted that individuals who scored higher on Openness/Intellect — especially the Openness (vs. Intellect) aspect of this domain (see DeYoung, Quilty, & Peterson, 2007) — would tend to make more mixed appraisals of the visual artworks.

1.1. Mixed emotions and levels of valence

The existence of mixed emotions has been controversial because of the implications they have for structural models of affect. Models of affect that represent positive and negative valences along a single *bipolar dimension* (e.g., Russell, 1980, Watson and Tellegen, 1985) have been influential, and may offer reasonable descriptions of affective states across a variety of circumstances. However, such models are incongruent with growing research showing that complex and conflicting stimuli can elicit simultaneous positively and negatively valenced feelings (see Berrios et al., 2015a, for a review). In contrast, models of affect such as the *Evaluative Space Model* (ESM; Cacioppo & Berntson, 1994), which represents positive and negative valences as *two unipolar dimensions*, capture more affective information than a single bipolar dimension (see Kron, Goldstein, Hyuk-Joon Lee, Gardhouse, & Anderson, 2013) and better accommodate mixed emotions.

In an attempt to reconcile these divergent models of affect, Shuman et al. (2013) proposed that there are different *levels of valence*. The highest level of valence corresponds to bipolar models of valence (e.g., Russell, 1980). This *macro-valence* is the superseding positivity or negativity of a stimulus, which ultimately serves to motivate behavioral approach or avoidance. However, consistent with the ESM (Cacioppo & Berntson, 1994), Shuman et al. (2013) also propose that there are *micro-valences*—the positive and negative qualities of individual stimulus evaluations or *appraisals*. Thus, whereas a stimulus's macro-valence is either pleasant or unpleasant, there can be multiple micro-valenced appraisals of that stimulus with conflicting valences. Expanding upon Scherer, 2001, Scherer, 2010 frequently cited *Component Processes Model* of appraisals, Shuman and colleagues suggest that micro-valenced appraisals occur within at least five appraisal dimensions—*inherent pleasantness, goal conduciveness, power, self-congruence,* and *moral goodness*—and that there are likely valenced appraisals within even more dimensions.

In the levels of valence model, mixed emotions are thought to arise during the process of weighting and synthesizing micro-valences, before determining an overall macro-valence (Shuman et al., 2013). Accordingly, mixed emotions may occur when evaluations with conflicting micro-valences (i.e., *mixed appraisals*) are made, either from within the same appraisal dimension or between different appraisal dimensions. For example, one study has demonstrated that manipulating mixed appraisals of goal conduciveness induces mixed emotions (Berrios, Totterdell, & Kellett, 2015b). This finding may generalize across different stimuli and appraisal dimensions. For example, an individual may appraise the qualities of a complex artwork with conflicting micro-valences (e.g., evaluating the artwork as beautiful, but also disgusting), resulting in simultaneously positive and negative feelings.

1.2. Individual differences in mixed emotions and mixed appraisals

In order to fully understand any psychological phenomenon we must understand how and why that phenomenon varies across individuals (Underwood, 1975). Two recent studies have related individual differences in the experience of mixed emotions to the 'Big Five' trait *domains* of personality (see John, Naumann, & Soto, 2008), which each hierarchically subsume two narrower trait *aspects*, as well as six or more trait *facets* (see DeYoung et al., 2007). In the first study, Kööts, Realo, and Allik (2012) sampled participants' daily-life affective experiences

multiple times over a two week period. They found that the Extraversion, Openness/Intellect, and Neuroticism domains were associated with greater incidence of mixed emotions, while Conscientiousness predicted fewer mixed emotional experiences. More recently, we found that Openness/Intellect was the only domain that was uniquely (positively) associated with the dispositional tendency to experience mixed emotions, and that both the Openness aspect of Openness/Intellect and the Volatility aspect of Neuroticism were unique aspect-level correlates (both positive) of trait mixed emotions (Barford & Smillie, 2016). Whilst we also found a relation between the Neuroticism domain and dispositional mixed emotions, this relation was not independent of the tendency to experience *negative* affect. Further, it is plausible that the finding for the Volatility aspect of Neuroticism may have reflected the tendency for these individuals to vacillate between positively and negatively valenced emotions, rather than to experience them simultaneously (see Barford & Smillie, 2016). Overall, the relation between Openness/Intellect and mixed emotions was the only finding from Kööts et al. (2012) that we clearly replicated.

If the link between Openness/Intellect and mixed emotions is robust, this domain may also be associated with the tendency to make mixed appraisals. Moreover, there are separate theoretical reasons for predicting a relation between Openness/Intellect and mixed appraisals. First, this domain is purportedly underpinned by the tendency to more thoroughly engage with and explore both semantic and perceptual information (DeYoung, 2013, DeYoung, 2014, DeYoung, 2015). This tendency towards *cognitive exploration* may lead those higher in Openness/Intellect to make greater numbers of appraisals, including more *divergent* appraisals (Oleynick et al., 2017), which would increase the likelihood of conflicting micro-valences. Second, Openness/Intellect is associated with a greater tolerance for ambiguity and uncertainty (e.g., Furnham & Marks, 2013). This tendency to accept equivocality may make individuals high on Openness/Intellect less motivated to suppress conflicting micro-valences in favor of certainty and simplicity. Finally, Openness/Intellect is associated with finding negatively themed art enjoyable, which may indicate a greater propensity to make mixed appraisals in aesthetic contexts (Fayn, Kuppens, & sensaPlease update reference ‘Fayn, in press). Thus, for both empirical and theoretical reasons, we propose that Openness/Intellect may be associated with an increased tendency to make mixed appraisals.

As a caveat to our prediction, we note that the two trait aspects within the Openness/Intellect domain may differ in their relation to mixed appraisals depending on the nature of the stimulus being evaluated. As noted above, each broad trait domain within the Big Five can be divided into two correlated aspects (DeYoung et al., 2007). Openness/Intellect divides into Openness, which is conceptualized as the tendency to explore information through perceptual and sensory means, and Intellect, which is conceptualized as the tendency to explore information through semantic means such as logic and abstract reasoning (DeYoung, 2015). The stimuli used in the present study were visual artworks. As visual art might more readily afford exploration via perceptual than semantic means, it is possible that people high on the Openness rather than the Intellect domain may be more sensitive to perceiving the mixed content in these stimuli.

1.3. Aims and hypotheses

In this study, we aimed to investigate individual differences in mixed appraisals of visual artworks. We utilized a data set originally reported by Fayn, MacCann, Tiliopoulos, and Silvia

(2015), in which participants viewed and evaluated a series of 18 abstract and representational visual artworks. Many of these evaluations were valenced, and could be conceptualized in terms of micro-valenced appraisals (Shuman et al., 2013). The degrees of overlap between different positive and negative micro-valenced appraisals were used as participants' mixed appraisal scores for each artwork. We investigated two indices of the tendency to make mixed appraisals: The first was participants' tendencies to make stronger mixed appraisals of the artworks in general, as captured by participants' average mixed appraisal ratings. The second was participants' tendencies to make stronger mixed appraisals of artworks appraised by participants on average as having more mixed content. This second index is captured by the within-person relations between the mean appraisal scores for the artworks and each participant's mixed appraisal ratings of the artworks. Based on the arguments above, we predicted that Openness/Intellect, and perhaps especially its narrower Openness (vs. Intellect) aspect, would predict (H1) the tendency to make stronger mixed appraisals of the artworks in general, and (H2) the tendency to make stronger mixed appraisals of artworks with relatively more mixed content.

On a more exploratory basis, we examined whether Openness/Intellect would predict (H3) the within-person relation between artwork viewing time and mixed appraisals. That is, we predicted that Openness/Intellect would moderate the within-person association between viewing time and mixed appraisals, such that individuals who score high (vs. low) on this domain make more mixed appraisals of the artworks that they view for longer than average. This may speak to the proposed basis of Openness/Intellect in cognitive exploration (DeYoung, 2013, DeYoung, 2014, DeYoung, 2015). Specifically, individuals high on Openness/Intellect may make more mixed appraisals as they continue to explore each artwork for novel information, whereas those low on this trait may view the artwork more passively, resulting in little increase in mixed appraisals as a function of viewing time.

2. Method

2.1. Participants

Two hundred and twenty-five students ages 18–56 ($M = 20.56$, $SD = 4.88$, 69.3% female) each viewed and evaluated 18 visual artworks. Participants received either 10USD cash payment, or course credit for a voluntary research option in exchange for their participation. The target minimum sample size for the original study was 130 participants, but continued well past this target, until the conclusion of one full semester forced recruitment to cease. One participant had missing data for one image, resulting in 4049 observation points for analysis. This participant and three additional participants also had missing personality data for the NEO Five Factor Inventory, reducing the total to 3978 observation points for the analyses that included this personality measure.

Power analyses for multilevel models are more complicated than those for generalized linear models, and require specific parameter estimates that we would not have been able to provide in advance of this study (see Bolger et al., 2012, Maas and Hox, 2005). A power analysis (two-tailed alpha = 0.05, power = 80%) based on a repeated measures ANCOVA with a single covariate (i.e., openness/intellect) and 18 measurements (i.e., corresponding to each artwork rating) suggests that our sample is sufficiently sensitive to detect an effect size equivalent

to $r = 0.20$ ($d = 0.41$), which is slightly smaller than the average effect size of $r = 0.24$ ($d = 0.49$) found in personality psychology (Fraley & Marks, 2007).

2.2. Measures

2.2.1. Openness/Intellect and other Big Five traits

As a measure of the Big Five personality domains (see John et al., 2008), participants completed the widely-used NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992). Participants rated their agreement with 12 self-descriptive sentences for each domain on a scale from 1 (strongly disagree) to 5 (strongly agree). Average scores were calculated for each of the five domains. The NEO-FFI Openness to Experience scale (NEO-Openness) (e.g., *I see beauty in things that others might not notice*) measured our hypothesized predictor, Openness/Intellect, and the other four domain measures (NEO-Extraversion, NEO-Neuroticism, NEO-Agreeableness, and NEO-Conscientiousness) were used as control variables.

Participants also completed the Openness/Intellect scale from the *Big Five Aspects Scales* (BFAS; DeYoung et al., 2007). The BFAS assesses each of the Big Five domains as well as their two lower-order aspects. Participants rated their agreement with 10 self-descriptive phrases (e.g., *love to reflect on things*) on a scale from 1 (strongly disagree) to 5 (strongly agree) for each aspect of the Openness/Intellect domain (i.e., Openness and Intellect). Average scores were calculated for the Openness and Intellect aspect scales (BFAS-Openness and BFAS-Intellect), and the full Openness/Intellect domain scale was then computed as the average of the two aspect scales (BFAS-OI).

2.2.2. Micro-valenced appraisal measures

Participants responded to 24 questions about each artwork in randomized order (see supplementary material). Eleven of these 24 questions referred to evaluations of different positive and negative qualities of the artworks. These questions each began with the phrase "Did you find this image…" followed by one of the following evaluative descriptors: *pleasing, beautiful, interesting, exceptional, profound, awe-inspiring, upsetting, disgusting, disturbing, confusing* and *haunting*. Participants rated each descriptor on a scale from 1 (not at all) to 7 (very much). We conceptualized these items as micro-valenced appraisals rather than emotions because participants were asked to evaluate the images rather than to report their feelings. However, we note that to the extent that these ratings correspond with their respective emotions, these ratings may also be used as a proxy for those emotions (i.e., judging an image to be interesting may also entail experiencing the emotion of interest; see Silvia, 2008), and indeed, these items have been used to infer emotional experiences elsewhere (e.g., Fayn et al., 2015).

2.3. Procedure

Participants attended a single, hour-long lab session in groups of 8 or fewer. They first completed the personality questionnaires, which were presented in randomized order. They then viewed the 18 artworks, which were presented in full color in a randomized order using Medialab™ software (see supplementary material for full details of the artworks). Participants

could view each artwork for as long as they wanted, with a minimum of five seconds, and viewing time for each artwork was recorded. Participants then responded to a series of questions about each artwork, including the items used as micro-valenced appraisals (noted above). A small version of the artwork remained on screen while participants answered the questions.

2.4. Analyses

Three different indices of mixed appraisals were calculated in order to examine the generalizability of our findings across different appraisal types. First, Pleasing-Upsetting appraisal scores indicated the overlap between ratings of *pleasing* and *upsetting*, which were the clearest pair of antonyms among the available valenced appraisals. This was of interest because some approaches to the measurement of mixed experiences have placed importance on the use of ratings that are clear semantic opposites (e.g., Kööts et al., 2012, Russell and Carroll, 1999). Second, the overlap between *beautiful* and *disgusting* appraisals was computed. This was again because these appraisals were strong semantic opposites. In addition, the aesthetic appraisal of beauty seemed particularly relevant because the stimuli being evaluated were visual artworks.

The remaining positively valenced appraisals, *interesting, exceptional, profound,* and *awe-inspiring*, were all appraisals that correspond to *knowledge emotions;* emotions that motivate learning and are particularly relevant to the arts domain (Fayn et al., 2015, Silvia, 2008, Silvia, 2010). In line with this, these appraisals loaded on the same factor in an exploratory within-person factor analysis of the available appraisal items (see supplementary material). Thus, we averaged these ratings to create a positive knowledge appraisal composite score for each participant. A negatively valenced appraisal factor also emerged in the factor analysis, consisting of the appraisals *disgusting, disturbing, haunting,* and *upsetting*. Thus, these evaluations were averaged to create a negative appraisal composite. (Note, the item *confusing* did not load strongly on either factor, and was therefore omitted.) The overlap between these knowledge and negative appraisal composites provided a third index of mixed appraisals.

In keeping with the mixed emotions literature, minimum statistics (i.e., the lower intensity of the two appraisal ratings) were used to indicate the degree of overlap between the positive and negative appraisal ratings for each type (see Schimmack, 2001). For example, if a participant rated one artwork as 1 (not at all) for *upsetting* and 7 (very much) for *pleasing*, then the minimum statistic for the Pleasing-Upsetting appraisal would be 1, indicating non-mixed appraisals. Or, if a rating of 6 was given for *beautiful* and 4 for *disgusting*, then the minimum statistic for the Beautiful-Disgusting appraisal would be 4, indicating moderately to strongly mixed appraisals. Minimum statistics have recently been demonstrated to be more accurate indicators of the co-occurrence between positive and negative valence than other indices (e.g., the correlation between positive and negative valences; see Larsen, Hershfield, Stastny, & Hester, 2017). Alternative measures for capturing co-occurring mixed experiences also include binary measures. However, because appraisals were rated on continuous intensity scales rather than binary scales in the current data, reducing the data to a binary measure (e.g., by dummy coding MIN so that all cases where MIN is greater than the minimum possible value are recoded as a one, representing presence of mixed appraisals, and all cases where MIN is equal to the minimum possible value are recoded as 0, representing the absence of mixed appraisals) would eliminate information about the *intensity* of mixed appraisals.

In addition to calculating each *individual's* score on the three mixed appraisal types, we also calculated a score for each *stimulus* (i.e., the average minimum statistic for *each art piece* across all individuals) for all three mixed appraisal types. These *stimulus mixed-valence scores* were used as a proxy for the degree to which each artwork consisted of mixed-valenced content.

As a preliminary investigation of the relations among the main variables, correlations between the mixed appraisal scores, the Openness/Intellect measures, and the time spent viewing the images (i.e., *viewing time*) were calculated. Finally, because the data were hierarchically structured such that appraisals across the 18 artworks were clustered within-persons, multilevel modeling was used to test our three hypotheses (see H1–H3 above). The personality variables were all modeled as latent factors, which has been demonstrated to reduce measurement error (Cai, 2012). Thus, the final models were multilevel structural equation models (SEMs). All multilevel SEMs were analyzed using MPLUS™ (V.7) software, all reported effects are unstandardized, and model fit indices are reported for interest where available.[1]

Table 1. Correlations and descriptive statistics.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Know-Neg												
2 Pleas-Upset	0.83**											
3 Beaut-Disgust	0.79**	0.82**										
4 Time (s)	0.11	0.10	−0.01									
5 BFAS-OI	0.19**	0.17*	0.09	0.15*								
6 BFAS-O	0.15*	0.14*	0.06	0.21**	0.84**							
7 BFAS-I	0.17*	0.14*	0.10	0.03	0.83**	0.39**						
8 NEO-O	0.26**	0.20**	0.13	0.25**	0.76**	0.75**	0.53**					
9 NEO-A	−0.11	−0.13	−0.15*	0.06	0.08	0.17**	−0.05	0.08				
10 NEO-C	−0.08	−0.10	−0.11	−0.02	0.12	−0.04	0.24**	−0.03	0.21**			
11 NEO-E	−0.04	−0.05	−0.06	0.00	0.09	0.03	0.12	0.09	0.24**	0.16*		
12 NEO-N	0.04	−0.03	0.01	−0.10	−0.07	0.09	−0.21**	0.08	−0.12	−0.23**	−0.25**	
M	2.35	1.78	1.62	11.11	3.77	3.92	3.62	3.84	3.63	3.32	3.48	3.28
SD	0.61	0.55	0.50	5.00	0.46	0.56	0.55	0.57	6.64	0.55	0.56	0.64
α					0.83	0.76	0.80	0.81	0.77	0.83	0.80	0.83

M = mean. *SD* = standard deviation. α = alpha. The presented effects are Pearson's correlation coefficients. The abbreviations, Know-Neg, Pleas-Upset, and Beaut-Disgust, refer to mixed knowledge/negative, pleasing/upsetting, and beautiful/disgusting appraisals, respectively. BFAS OI, O, and I refer to the Big Five Aspects Scales' Openness/Intellect domain scale and the Openness and Intellect aspect scales, respectively. NEO O, A, C, E, and N, refer to the NEO Openness, Agreeableness, Conscientiousness, Extraversion, and Neuroticism scales, respectively. *$p < .05$. ** $p < .01$.

3. Results

3.1. Preliminary results

Descriptive statistics and correlations among the main variables are reported in Table 1. All Openness/Intellect domain and aspect scales, and the remaining four NEO-FFI domain scales,

[1] MPLUS™ V.7 does not provide standardized output for multi-level models, and there is disagreement regarding how to calculate standardised effects in multilevel modeling (see Hox, 2010). Model fit indices are not available for random slopes models.

had high internal consistency. The NEO-Openness domain scale was strongly positively correlated with BFAS-OI and BFAS-Openness, and less strongly positively correlated with BFAS-Intellect. This is consistent with prior research showing that — as its name suggests — NEO-Openness is weighted more toward the Openness than the Intellect aspect of this domain (DeYoung et al., 2007). Table 1 also shows that the three indices of mixed appraisals (Knowledge-Negative, Pleasing-Upsetting, and Beautiful-Disgusting) were strongly positively intercorrelated, suggesting that they all measured similar phenomena.

The Knowledge-Negative and Pleasant-Upsetting mixed appraisals were positively correlated with NEO-Openness, BFAS-OI, BFAS-Openness, and BFAS-Intellect. The Beautiful-Disgusting mixed appraisals were negatively associated with NEO-Agreeableness. Finally, viewing time was positively correlated with NEO-Openness, BFAS-OI, and BFAS-Openness, but not BFAS-Intellect.

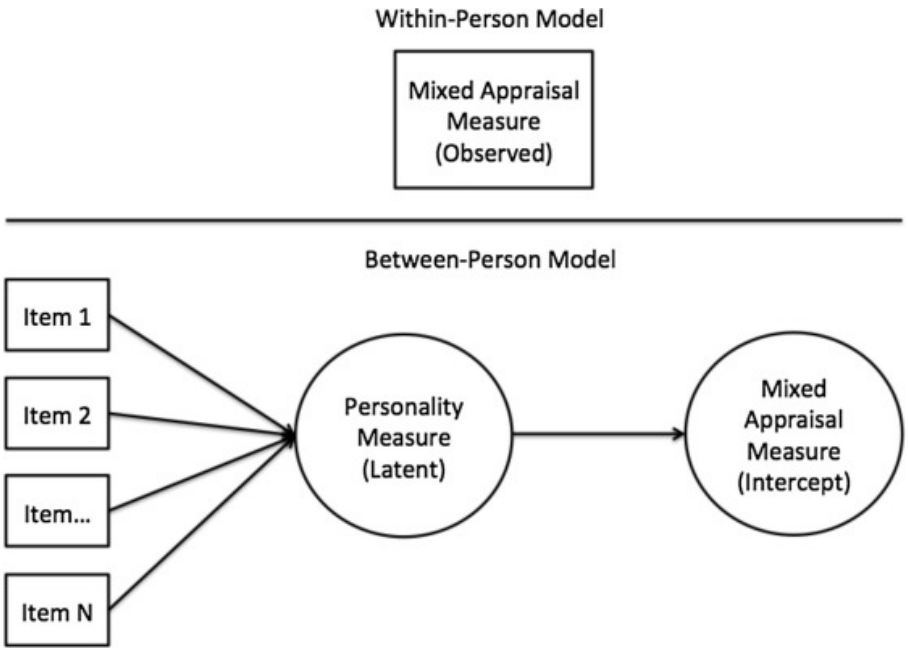

Figure 1. This figure represents the models used to test personality predictors of average mixed appraisals (results presented in Table 2). In these models, the observed mixed appraisal scores were modeled at the within-person level, and their intercept was predicted at the between-person level. The personality predictors were latent factors created through confirmatory factor analyses of their items.

3.2. Main analyses

3.2.1. Predicting average mixed appraisal scores

We first examined whether individuals' Openness/Intellect scores positively predicted the average degree of overlap between their positive and negative appraisals across all the stimuli. This required a series of multilevel SEMs in which observed mixed appraisal scores were examined at level one and the between-person variance in mixed appraisal scores was regressed on Openness/Intellect measures at level two (see Fig. 1). For each of the three appraisal types

(Knowledge-Negative, Pleasing-Upsetting, and Beautiful-Disgusting), three models were created with three different sets of latent trait predictors at level two: (1) the NEO-Openness domain, controlling for the other NEO-FFI domains, (2) the BFAS-OI domain, and (3) the two aspects of BFAS-OI (i.e., BFAS-Openness and BFAS-Intellect), entered simultaneously. The results of these nine models are reported in Table 2. (Note, intercepts are reported only once, as they were essentially identical across analyses.)

Table 2. Trait predictors of average mixed appraisal scores.

		Mixed Appraisals					
		Know-Neg		**Pleas-Upset**		**Beaut-Disgust**	
Model	**Predictor**	**B**	***CI***	**B**	***CI***	**B**	***CI***
	Intercept	2.35**	2.27, 2.43	1.78**	1.71, 1.85	1.63**	1.56, 1.69
1	NEO-O	0.50**	0.23, 0.76	0.37**	0.14, 0.60	0.25*	0.05, 0.45
	NEO-A	−0.23	−0.54, 0.09	−0.23	−0.52, 0.07	−0.23	−0.48, 0.03
	NEO-C	−0.03	−0.20, 0.14	−0.09	−0.25, 0.08	−0.07	−0.22, 0.08
	NEO-E	−0.01	−0.17, 0.14	−0.03	−0.16, 0.11	−0.01	−0.13, 0.10
	NEO-N	−0.00	−0.24, 0.23	−0.13	−0.35, 0.09	−0.06	−0.25, 0.14
2	BFAS-OI	0.24*	0.04, 0.43	0.19*	0.02, 0.37	0.01	−0.07, 0.26
3	BFAS-O	0.12	−0.05, 0.30	0.11	−0.05, 0.27	0.04	−0.12, 0.19
	BFAS-I	0.17	−0.06, 0.39	0.11	−0.08, 0.31	0.09	−0.09, 0.26

The reported effects (B) are unstandardized and the reported confidence intervals (*CI*) are 95% confidence intervals. The abbreviations, Know-Neg, Pleas-Upset, and Beaut-Disgust, refer to mixed knowledge/negative, pleasing/upsetting, and beautiful/disgusting appraisals, respectively. BFAS OI, O, and I refer to the Big Five Aspects Scales' Openness/Intellect domain scale and the Openness and Intellect aspect scales, respectively. NEO O, A, C, E, and N, refer to the NEO Openness, Agreeableness, Conscientiousness, Extraversion, and Neuroticism scales, respectively. Fit statistics for the models were as follows (indices for models with the same personality predictors varied by no more than 0.01): NEO-FFI models: RMSEA: 0.01, CFI: 0.62, TLI: 0.61, SRMR: within, 0.00, between, 0.09; BFAS-OI models**:** RMSEA: 0.03, CFI: 0.55, TLI: 0.50, SRMR: within, 0.00, between, 0.11; BFAS-Openness and Intellect models**:** RMSEA: 0.02, CFI: 0.71, TLI: 0.67, SRMR: within, 0.00, between, 0.10. * $p < .05$. ** $p < .01$.

On average, Knowledge-Negative appraisals were more mixed than Pleasing-Upsetting appraisals, and Beautiful-Disgusting appraisals were the least mixed (consistent with the means reported in Table 1). NEO-Openness positively significantly predicted mixed appraisals of all three types, even whilst controlling for the other NEO-FFI domains. No other NEO-FFI domain significantly predicted mixed appraisals. BFAS-OI positively predicted mixed Knowledge-Negative and Pleasing-Upsetting appraisals, but was not associated with mixed Beautiful-Disgusting appraisals. Finally, neither the Openness, nor the Intellect aspect of BFAS-OI contributed uniquely to the prediction of any mixed appraisals.

3.2.2. Predicting the within-person relation between stimulus mixed-valence scores and mixed appraisals

As an index of whether people high (vs. low) on Openness/Intellect are more sensitive to perceiving mixed content, we tested whether Openness/Intellect predicted stronger within-person relations between stimulus mixed-valence scores and participants' mixed appraisal ratings. In other words, we examined whether stimuli that were rated as more mixed on average were especially likely to be perceived as more mixed by participants with higher scores on Openness/Intellect. We created a set of multilevel random slopes models with cross-level interactions (Fig. 2). In each model, the within-person relation between the stimulus mixed-

valence scores and the individuals' observed mixed appraisal scores were modeled at level one. At level two, we tested whether the Openness/Intellect measures predicted the strength of this within-person relation (i.e., the random slope) and the between-person variance in individuals' mixed appraisal scores (i.e., the random intercept). Again, three models were analyzed for each mixed appraisal type, one with each set of latent trait predictors. The stimulus mixed-valence scores analyzed in each model corresponded to the individuals' mixed appraisal type being investigated (e.g., for the Knowledge-Negative models, the stimulus mixed-valence scores were the averages of mixed Knowledge-Negative appraisals reported for *each stimulus* across all individuals). The results of these nine models are reported in Table 3.

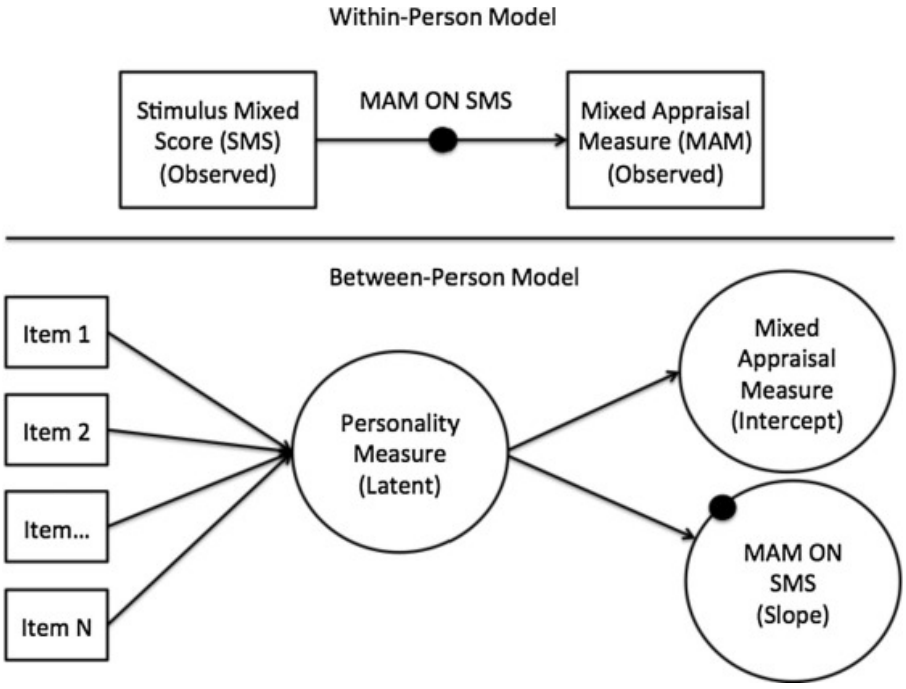

Figure 2. This figure represents the models used to test personality predictors of the within-person relation between stimulus mixed-valence scores and mixed appraisals (results presented in Table 3). In these models, observed mixed appraisal scores (MAM) were regressed on stimulus mixed-valence scores (SMS) at the within-person level. The random slope of this regression (MAM on SMS), as well as the random intercept for the mixed appraisal scores, was then predicted by the personality measures at the between-person level. The personality predictors were latent factors created through confirmatory factor analyses of their items.

Unsurprisingly, there were significant positive within-person relations between the stimulus mixed-valence scores and the individuals' mixed appraisal scores for all three appraisal types (see intercepts in Table 3). More critically, NEO-Openness, BFAS-OI, and BFAS-Openness were significant positive predictors of all three of these random slopes. This indicates that, for each appraisal type, the positive within-person relations between the mixed content of the stimuli and the individuals' mixed appraisal ratings of the stimuli were stronger for individuals high on domain-level Openness/Intellect, and that this also held for the Openness aspect of this domain. Unexpectedly, NEO-Neuroticism was a significant negative predictor of the within-person relation between the stimuli's mixed Pleasing-Upsetting scores and the individuals' mixed

Pleasing-Upsetting scores. None of the other NEO-FFI domains were predictors of the random slopes.

Table 3. Trait predictors of the within-person relation between stimulus mixed-valence scores and mixed appraisals.

		Random Slopes					
		Know-Neg		**Pleas-Upset**		**Beaut-Disgust**	
Model	**Predictor**	**B**	***CI***	**B**	***CI***	**B**	***CI***
	Intercept	1.00**	0.94, 1.06	1.00**	0.87, 1.13	1.00**	0.87, 1.13
1	NEO-O	0.34**	0.13, 0.56	0.63**	0.18, 1.08	1.04**	0.50, 1.58
	NEO-A	−0.08	−0.27, 0.12	−0.18	−0.60, 0.24	−0.22	−0.63, 0.19
	NEO-C	−0.03	−0.16, 0.10	−0.22	−0.54, 0.10	−0.13	−0.44, 0.17
	NEO-E	0.04	−0.07, 0.15	−0.05	−0.35, 0.25	0.02	−0.24, 0.27
	NEO-N	−0.02	−0.17, 0.14	−0.48*	−0.96, −0.01	−0.24	−0.23, 0.16
2	BFAS-OI	0.23**	0.12, 0.34	0.49**	0.21, 0.76	0.58**	0.31, 0.85
3	BFAS-O	0.17**	0.07, 0.26	0.35**	0.12, 0.58	0.47**	0.22, 0.72
	BFAS-I	0.10	−0.06, 0.26	0.22	−0.19, 0.62	0.13	−0.26, 0.51

The reported effects (B) are unstandardized and the reported confidence intervals (*CI*) are 95% confidence intervals. Intercepts are the average within-person relations between participant mixed appraisal ratings and stimulus mixed-valence scores. The abbreviations, Know-Neg, Pleas-Upset, and Beaut-Disgust, refer to mixed knowledge/negative, pleasing/upsetting, and beautiful/disgusting appraisals, respectively. BFAS OI, O, and I refer to the Big Five Aspects Scales' Openness/Intellect domain scale and the Openness and Intellect aspect scales, respectively. NEO O, A, C, E, and N, refer to the NEO Openness, Agreeableness, Conscientiousness, Extraversion, and Neuroticism scales, respectively.
* $p < .05$. ** $p < .01$.

3.2.3. Predicting the within-person relation between viewing time and mixed appraisals

Finally, we examined whether Openness/Intellect predicted the within-person relation between viewing time and mixed appraisals, in order to explore whether individuals high (vs. low) on this trait made more mixed appraisals of artworks they viewed for longer. This required a final set of multilevel random slopes models with cross-level interactions (Fig. 3). In each model, the within-person relation between viewing time and mixed appraisal scores was calculated at level one. Viewing time was group mean centered so that we could examine within-person associations between viewing time and mixed appraisals relative to each individuals average viewing time. Next, the latent trait factors and average viewing times were entered as simultaneous predictors of the between-person variance in mixed appraisal scores (i.e., the random intercept) and the within-person relation between viewing time and mixed appraisals (i.e., the random slope) at level two. We controlled for average viewing time to ensure that any moderating effects of personality traits on the relation between viewing time and mixed appraisals were not simply due to those individuals viewing the stimuli for longer on average. Again, this model was repeated for each mixed appraisal type and set of latent trait predictors, yielding a total of nine models reported in Table 4.

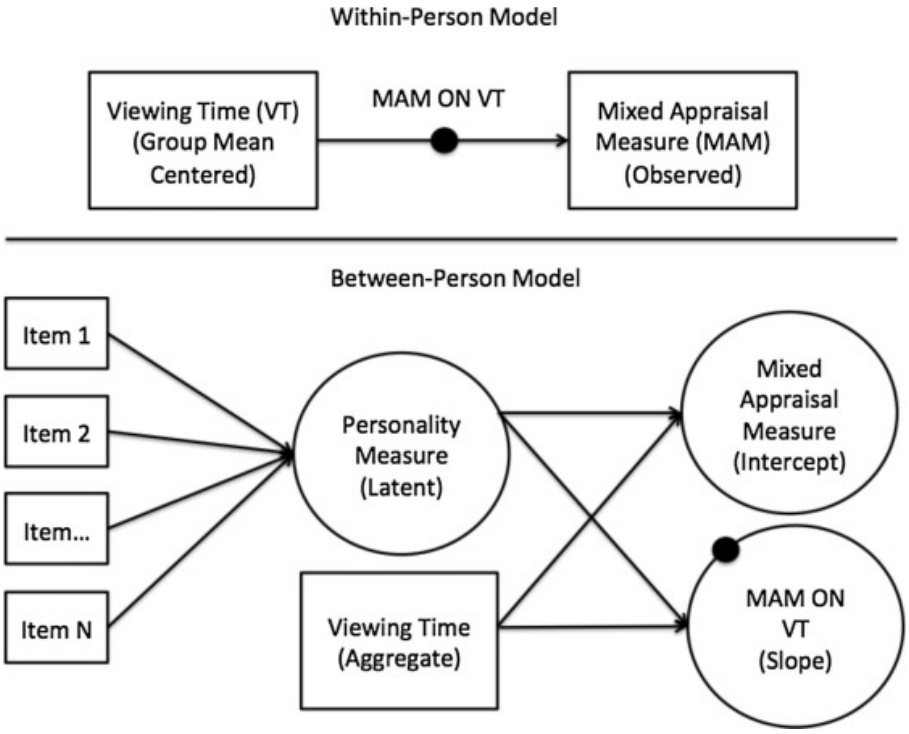

Figure 3. This figure represents the models used to test personality predictors of the within-person relation between viewing time and mixed appraisals (results presented in Table 4). In these models, observed mixed appraisal scores (MAM) were regressed on group mean centered viewing time (VT) at within-person level. The random slope of this regression (MAM on VT), as well as the random intercept of the mixed appraisal scores, was then predicted at level two by the personality measures and participants' average viewing times. Personality predictors were latent factors created through confirmatory factor analysis of their items.

Intercepts for the random slopes are reported only once, as they varied very little (by no more than 0.01) across analyses. There were significant positive within-person relations between viewing time and all three mixed appraisal types, indicating that the time an individual spent viewing the artworks (relative to their average) was positively associated with how strongly mixed the individual rated the artworks (see intercepts in Table 4). BFAS-OI positively predicted the within-person relation between viewing time and mixed Knowledge-Negative appraisals. This indicates that, for individuals high (vs. low) in Openness/Intellect, spending relatively more time viewing the images was associated with stronger ratings of these mixed appraisals. However, this finding did not generalize to the mixed Beautiful-Disgusting or Pleasing-Upsetting appraisals. NEO-Neuroticism was a significant negative predictor of the within-person relation between viewing time and mixed Knowledge-Negative appraisals and NEO-Agreeableness was a significant positive predictor of the within-person relation between viewing time and mixed Beautiful-Disgusting appraisals. No other NEO-FFI domain was a significant predictor of these random slopes.

Table 4. Trait predictors of the within-person relation between viewing time and mixed appraisals.

		Random Slopes					
		Know-Neg		Pleas-Upset		Beaut-Disgust	
Model	**Predictor**	**B**	***CI***	**B**	***CI***	**B**	***CI***
	Intercept	0.14**	0.07, 0.20	0.10**	0.05, 0.15	0.05*	0.01, 0.10
1	Time (*agg.*)	−0.06**	−0.11, −0.02	−0.03	−0.07, 0.00	−0.02	−0.05, 0.02
	NEO-O	0.14	−0.02, 0.30	0.11	−0.02, 0.23	0.02	−0.06, 0.10
	NEO-A	0.14	−0.03, 0.31	0.04	−0.07, 0.14	0.11*	0.00, 0.21
	NEO-C	−0.03	−0.14, 0.08	0.03	−0.07, 0.12	−0.08	−0.17, 0.00
	NEO-E	−0.06	−0.14, 0.02	0.04	−0.02, 0.11	−0.02	−0.07, 0.04
	NEO-N	−0.17*	−0.32, −0.01	−0.06	−0.17, 0.06	−0.09	−0.19, 0.02
2	Time (*agg.*)	−0.05*	−0.10, −0.01	−0.03*	−0.06, 0.00	−0.01	−0.03, 0.01
	BFAS-OI	0.14*	0.00, 0.27	0.09	−0.00, 0.18	0.00	−0.08, 0.09
3	Time (*agg.*)	−0.05*	−0.09, −0.01	−0.03*	−0.06, −0.00	−0.01	−0.04, 0.01
	BFAS-O	0.04	−0.05, 0.13	0.05	−0.02, 0.12	0.02	−0.04, 0.08
	BFAS-I	0.12	−0.00, 0.25	0.06	−0.05, 0.17	−0.01	−0.09, 0.07

The reported effects (B) are unstandardized and the reported confidence intervals (*CI*) are 95% confidence intervals. Intercepts are the average within-person relations between group mean centered viewing time and the mixed appraisal scores. The predictor variable Time is an aggregated measure (agg.) representing participants' average viewing times. BFAS OI, O, and I refer to the Big Five Aspects Scales' Openness/Intellect domain scale and the Openness and Intellect aspect scales, respectively. NEO O, A, C, E, and N, refer to the NEO Openness, Agreeableness, Conscientiousness, Extraversion, and Neuroticism scales, respectively.
* $p < .05$. ** $p < .01$.

Finally, the between-person variance in viewing time was negatively associated with the within-person relation between viewing time and mixed appraisals in all three mixed Knowledge-Negative analyses, and was significantly negatively related to the random slope in two of the mixed Pleasing-Upsetting analyses. This indicates that individuals who spent more time viewing the images on average had a weaker link between viewing time and their mixed appraisal scores.

4. Discussion

In this study, we examined individual differences in mixed-valenced appraisals of visual artworks. In support of hypothesis 1, we found that two measures of the Openness/Intellect domain predicted stronger mixed Knowledge-Negative and Pleasing-Upsetting appraisals of visual artworks. One of these measures (NEO-FFI Openness) also predicted mixed Beautiful-Disgusting appraisals of these artworks. Further, in support of hypothesis 2, we found that both measures of the Openness/Intellect domain, along with the Openness aspect of this domain, predicted stronger within-person positive relations between subjective measures of the mixed-valenced content in the artworks and all three mixed appraisal types. In relation to hypothesis 3, which we made on more exploratory grounds, we found that the measure of Openness/Intellect that equally balances its two aspects (i.e., the BFAS; DeYoung et al., 2007) predicted stronger within-person positive relations between how long individuals viewed the artworks and the strength of their mixed Knowledge-Negative appraisals of the artworks, controlling for how long they tended to view the artworks on average.

We also obtained three unpredicted significant results: First, participants with higher Neuroticism scores had weaker within-person relations between the mixed Pleasing-Upsetting content of the artworks and their mixed Pleasing-Upsetting appraisals of the artworks. That is,

artworks rated by participants on average as more simultaneously pleasing and upsetting were rated as less so by more neurotic individuals. Second, neurotic individuals had weaker within-person relations between artwork viewing time and the strength of their mixed Knowledge-Negative appraisals of the artworks, independent of how long they viewed the artworks on average. In other words, more neurotic individuals rated artworks they viewed for longer as less mixed in terms of knowledge and negative appraisals. Finally, participants with higher Agreeableness scores had stronger positive relations between how long they viewed the artworks and the strength of their mixed Beautiful-Disgusting appraisals of the artworks, independent of their average viewing times. That is, more agreeable people rated artworks they viewed for longer as more mixed, at least in terms of beautiful and disgusting appraisals.

4.1. Implications of the relations between Openness/Intellect and mixed appraisals

The observed positive relations between mixed appraisals and Openness/Intellect are consistent with our reasoning that individuals who tend to feel more mixed emotions (Barford and Smillie, 2016, Kööts et al., 2012) will also tend to make more mixed appraisals. This prediction drew on Shuman et al.'s (2013) theory that mixed emotions arise from conflict among micro-valences that arise during the process of evaluating a stimulus. We also demonstrated that people higher on Openness/Intellect rate stimuli with relatively more mixed content as more strongly mixed. This suggests that people high on this trait may have a greater *sensitivity* to the mixed-valenced qualities of a stimulus, rather than a global *bias* towards rating everything as more mixed regardless of content. The specificity of this particular finding to the Openness rather than the Intellect aspect of the broader Openness/Intellect domain may be due to our use of visual arts stimuli, which might more readily afford exploration through perceptual means than through logic and reasoning (DeYoung, 2015). Alternatively, it is possible that the Openness aspect is more generally associated with mixed experiences relative to the Intellect aspect. This would be consistent with previous evidence that only the Openness aspect is uniquely associated with the general tendency to experience mixed emotions (Barford & Smillie, 2016).

4.1.1. Openness/Intellect, viewing time, and mixed appraisals

There are several possible interpretations of the finding that BFAS Openness/Intellect predicted a stronger positive within-person relation between viewing time and mixed appraisals (significantly for Knowledge-Negative appraisals, though just falling short of significance for mixed Pleasing-Upsetting appraisals). One possibility is that people who have a greater tendency to cognitively explore sources of information may be more likely to make divergent and potentially conflicting appraisals as they continue to explore stimuli over time. In contrast, people who have a lesser tendency toward cognitive exploration may seek confirmation of initial evaluations during prolonged viewing time, rather than explore alternate interpretations or perspectives. A second possibility is that the stimuli that higher scorers on Openness/Intellect choose to view for longer have particular qualities that are more likely to elicit mixed appraisals (e.g., more ambiguous or conflicting content). Conversely, due to a lesser tolerance for ambiguity (Furnham & Marks, 2013), individuals low on Openness/Intellect may view stimuli they rate as more mixed for shorter time periods because these stimuli create psychological discomfort. Evaluation of each of these and further possibilities in future research may enable a more fine-grained description of the processes underlying the tendency to make mixed

appraisals. We should emphasize, however, that our findings concerning linking Openness/Intellect, viewing time, and mixed appraisals were the least consistent findings for this domain across our different measures, and should therefore be treated more cautiously.

4.2. Unpredicted findings: neuroticism and agreeableness

In addition to Openness/Intellect, two other Big Five domains were associated with mixed appraisals. First, Neuroticism negatively predicted two indices of the tendency to make mixed appraisals. In relation to Pleasing-Upsetting appraisals, we found that stimuli rated as more mixed by participants on average were rated as less mixed by individuals high in Neuroticism. This decreased sensitivity to mixed content may potentially reflect a bias towards attending negative information whilst ignoring positive information (e.g., Chan, Goodwin, & Harmer, 2007). We also found that neurotic individuals viewed stimuli they rated as more mixed for less time, which potentially reflects the tendency of such individuals to have aversive responses to uncertainty (see Hirsh & Inzlicht, 2008).

In addition, one association emerged for Big Five Agreeableness: a moderating effect on the within-person relation between viewing time and mixed appraisals for the Beautiful-Disgusting index, such that higher Agreeableness predicted the tendency to make more mixed Beautiful-Disgusting appraisals with increased viewing time. We are aware of no theory or research that may offer a plausible interpretation of this finding, and emphasize that Agreeableness did not emerge as a significant predictor in any other model in this study. Overall, we treat these unpredicted findings with caution, while suggesting that future research in this area might examine whether or not they can be replicated.

4.3. Limitations and future directions

The limitations of the present study should be considered when interpreting the results. For example, although the minimum statistic is superior to binary measures of the co-occurrence between two experiences because it provides additional information about their joint-intensity, it may be more susceptible than binary measures to the impact of response biases. In other words, any tendency for some individuals to select higher numbers on all scales could artificially inflate their minimum statistic scores. The minimum statistic can be transformed into a binary measure through dummy coding, viz., all cases where the minimum statistic is greater than the minimum possible value (i.e., 1 in our data) are recoded as 1, representing the presence of mixed appraisals, and all cases where the minimum statistic are equal to the minimum possible value are recoded as 0, representing the absence of mixed appraisals. This measure fails to capture individual variation in intensity of mixed appraisals, but by equalizing all non-minimal responses it provides another means to guard against the impact of response biases. Promisingly, the pattern of results indicating Openness/Intellect as the trait domain associated with average mixed appraisals was similar, though admittedly less consistent, when using binary measures of mixed appraisals (see Appendix D, Table S2) as when using MIN (Table 2). Finally, as noted above, the fact that more open people in this study appeared to be more sensitive the mixed-valenced *qualities* of a stimulus seems to argue against the possibility that they simply rated all stimuli as more mixed, regardless of content.

In addition, whilst the use of pre-existing data provided an efficient means to test our hypotheses, it also represents a constraining factor on this study. For example, the measures within this data set did not include a measure of mixed emotions. Thus, we could not investigate whether mixed appraisals mediate the relation between Openness/Intellect and mixed emotions. We have now shown a relation between Openness/Intellect and the tendency to make mixed appraisals (i.e., the tendency to make conflicting evaluations of whether a stimulus is positive or negative), building on our previous finding of an association between Openness/Intellect and the tendency to experience mixed emotions (i.e., the tendency to feel simultaneous positive and negative affect; Barford & Smillie, 2016). However, a further study is needed to examine whether the former explains the later. This study would need both ratings of stimulus evaluations, as in the present study (i.e., *did you find this stimulus…?*), along with separate unipolar ratings of momentary positive and negative affect (i.e., *how do you feel in the present moment?*), which the current data did not contain. Although to the that extent the valenced evaluations we examined reflect their corresponding affective states they might be conceptualized as emotions rather than appraisals, the questions were framed in a way that probed the individuals' personal perceptions of the artworks, rather than their momentary affective states. We therefore believe these evaluations are best conceptualized as valenced appraisals. Future studies could also investigate how closely linked valenced appraisals are with their corresponding emotions (e.g., does evaluating a stimulus as both pleasing and upsetting necessarily correspond to feeling simultaneously pleasant and upset?).

Although confidence in many of our findings is bolstered by replication across multiple measures of Openness/Intellect and multiple mixed appraisal types, independent replication of these findings is desirable. Particularly, the findings regarding trait moderators of the within-person relation between artwork viewing time and mixed appraisals, which were less consistent across measures than our other findings, need replication. Future extensions of this research should also examine whether our results are generalizable to stimuli other than visual art, as it is possible that different traits may predict mixed appraisals in response to different classes of stimuli. Similarly, it is possible that appraisal conflicts within appraisal dimensions that were unlikely to be elicited by the visual artwork stimuli in this study (e.g., simultaneous positive and negative appraisals of goal conduciveness) are predicted by other traits. Finally, future research should examine potential mechanisms underlying the relation between mixed appraisals and Openness/Intellect that we have explored in this discussion. For example, researchers could manipulate the degree of ambiguity of stimuli and examine whether people higher on Openness/Intellect tend to view more ambiguous stimuli for longer and make more strongly mixed appraisals of these stimuli.

5. Conclusions

Our aim in this paper was to examine relations between basic personality traits and the tendency to make mixed-valenced appraisals of visual artworks. As hypothesized, we found evidence across multiple personality and appraisal measures that individuals higher in Openness/Intellect tend to make stronger mixed appraisals of visual artworks, and that the Openness (vs. Intellect) aspect is associated with a greater sensitivity to mixed content. We found less substantive evidence for our exploratory hypothesis that individuals high (vs. low) in Openness/Intellect would have greater increases in the strength of their mixed appraisals with increased artwork

viewing time, based on a greater propensity for cognitive exploration. Unexpectedly, two findings also emerged that suggested Neuroticism might predict a lesser tendency to make mixed appraisals. We suggest this study may provide a foundation for future research to examine the generalizability of the relations these traits have with mixed appraisals in different contexts, and the implications of these relations for individual differences in the experience of mixed emotions.

Conflict of interest
The authors declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Appendix
Supplementary material may be found at the end of this document.

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Supplementary Material

Individual differences in conflicting stimulus evaluations: Openness/Intellect predicts mixed-valenced appraisals of visual art

Supplementary Material

Individual differences in conflicting stimulus evaluations: Openness/Intellect predicts mixed-valenced appraisals of visual art

A. Full list of artworks

1. Heav IV - Francis Bacon
2. Ancient of days - William Blake
3. Apology - Mark Ryden
4. Blue poles - Jackson Pollock
5. Buddha - Maya Hayuk
6. Echo of scream - David Alfaro
7. Falling stars - Anselm Kiefer
8. Fighter - Egon Schiele
9. I am born - Aya Kato
10. Paradise on earth - Aya Kato
11. Portrait of the bourgeoisie - David Alfaro
12. Saturn devouring his son - Francisco Goya
13. Sequence of Thoughts - Brendan Monroe
14. The creatrix - Mark Ryden
15. Fate of animals - Franz Marc
16. The human condition - René Magritte
17. The rise of empire - JMW Turner
18. Barge haulers on the Volga - Ilya Repin

B. Full list of questions following each artwork

1. Did you find this image INTERESTING?
2. Did you find this image CONFUSING?
3. Did you find this image EXCEPTIONAL?
4. Did you find this image PROFOUND?
5. Did you find this image AWE INSPIRING?
6. Did you find this image gives you GOOSE BUMPS/CHILLS?
7. Did you find this image BEAUTIFUL?
8. Did you find this image PLEASING?
9. Did you find this image DISGUSTING?
10. Did you find this image DISTURBING?
11. Did you find this image HAUNTING?
12. Did you find this image UPSETTING?
13. This image is: common - unusual
14. This image is: simple - complex
15. This image is: hard to understand - easy to understand
16. This image is: incomprehensible – comprehensible
17. This image made me introspective.
18. This image is thought provoking.
19. This is the kind of art that I usually enjoy.
20. This image fits with my values.
21. I would like more information on this image.
22. On Facebook I would "like" this image.

23. On Facebook I would share this image on my wall.

24. I would like to own a copy of this.

C. Exploratory Within-Person Factor Analysis of the Appraisal Items

Based on number of eigenvalues over 1 and the scree plot, two within-person factors were extracted using maximum likelihood estimated multilevel factor analysis (first five eigenvalues = 4.43, 2.73, 0.93, 0.53, 0.479). Factor loadings are presented in Table S1. All items had acceptable factor loadings of .3 or greater on the factor (except for Confusion which had a factor loading of .28). The correlation between the factors was .10.

Table S1
Exploratory Within-Person Factor Analysis of Appraisal Items

Appraisal item	Factor 1	Factor2
Interest	0.74	
Confusion		0.28
Exceptional	0.79	
Profound	0.65	
Awe- inspiring	0.74	
Disgusting		0.75
Disturbing		0.89
Haunting		0.80
Upsetting		0.81
Beautiful	0.69	-0.44
Pleasing	0.64	-0.50

Note: Loadings below .20 are not shown

D. Personality correlates of binary measures of mixed appraisals

In order to test the convergence of our findings regarding trait predictors of average mixed appraisal scores with a measure less sensitive to response biases than the minimum statistic, we re-ran the analyses reported in Table 2 of the main paper using a binary measure of mixed appraisals. This binary measure is a dummy coded version of the minimum statistic (MIN): all cases where MIN is equal to the minimum value (1) were recoded as 0, representing the absence of mixed appraisals and all cases where MIN was greater than 1 were recoded as 1, representing the presence of mixed appraisals.

Latent factors were created for each personality measure through confirmatory factor analysis of their items. Nine models were analysed in total: one for each of the three types of mixed appraisals and one for each set of personality predictors. The mixed appraisal measure was regressed simultaneously on the personality predictors for each model. See Figure 1 in the main paper for a graphic representation of the models.

Table S2

Trait predictors of average binary mixed appraisal scores

		Binary Mixed Appraisals					
		Know-Neg		Pleas-Upset		Beaut-Disgust	
Model	Predictor	B	*CI*	B	*CI*	B	*CI*
	Intercept	.71**	.68, .74	.42**	.39, .45	.35**	.32, .38
1	NEO-O	.11**	.03, .20	.15**	.05, .26	-.03	-.09, .03
	NEO-A	-.05	-.15, .06	-.04	-.17, .08	-.05	-.14, .05
	NEO-C	-.01	-.07, .05	-.05	-.14, .06	-.08	-.21, .04
	NEO-E	-.04	-.09, .02	-.06	-.13, .00	-.04	-.13, .05

	NEO-N	-.04	-.12, .04	-.09	-.21, .02	.08	-.02, .18
2	BFAS-OI	.05	-.01, .11	.06	-.02, .14	.02	-.06, .09
3	BFAS-O	.02	-.04, .07	.03	-.03, .10	-.02	-.08, .04
	BFAS-I	.06	-.02, .13	.04	-.05, .13	.06	-.03, .15

*$p < .05$, **$p < .01$. The reported effects (B) are unstandardized and the reported confidence intervals (*CI*) are 95% confidence intervals. The abbreviations, Know-Neg, Pleas-Upset, and Beaut-Disgust, refer to mixed knowledge/negative, pleasing/upsetting, and beautiful/disgusting appraisals, respectively. BFAS OI, O, and I refer to the Big Five Aspects Scales' Openness/Intellect domain scale and the Openness and Intellect aspect scales, respectively. NEO O, A, C, E, and N, refer to the NEO Openness, Agreeableness, Conscientiousness, Extraversion, and Neuroticism scales, respectively. Fit statistics for the models were as follows (indices for models with the same personality predictors varied by no more than .01): NEO-FFI models: RMSEA: .01, CFI: .62, TLI: .60, SRMR: within, .00, between, .09; BFAS-OI models**:** RMSEA: .03, CFI: .55, TLI: .50, SRMR: within, .00, between, .11; BFAS-Openness and Intellect models**:** RMSEA: .02, CFI: .71, TLI: .67, SRMR: within, .00, between, .10.