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Cohesion Matters: Exploring the Impact of Accompanying Text on Responses to Art

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Abstract

Previous research has shown that accompanying text to artworks (e.g., titles) increases the preference for artworks. We further examined the influence of the presence and cohesion of artwork descriptions on aesthetic responses. We found that accompanying text increased appreciation and that the effect of cohesion depended on the viewer's interest in art. Less interested viewers were more affected by cohesion than more interested viewers.

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Keywords: cohesion, coherence, art

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Researchers in experimental aesthetics identify and examine factors that affect our aesthetic reactions to artwork, such as liking, interest and understanding. One factor is the presence and the content of discourse that often co-occurs with the artwork (Swami, 2013). Accompanying text may include the title, artist's name, year created, the medium, physical dimensions, and other information regarding the artwork, including its genre and the goal of the artist. For example, researchers have noted that the presence and type of title influences preferences for paintings (Leder, Carbon, & Ripsas, 2006; Millis, 2001). Millis (2001) has shown that elaborative or metaphorical titles (e.g., "One Day at a Time") increase the liking of a painting (e.g., of a woman gardening) over that of a descriptive title (e.g., "A Woman Gardening") or no title at all (e.g. "Untitled"). Millis termed this the elaboration effect. Millis found elaboration effects for both more- and less-art experienced undergraduates, and even when participants were told that the titles were fake. However, randomly assigned elaborative titles resulted in a smaller elaboration effect. On the basis of these findings, he argued that aesthetic experiences increase when the text adds additional information about the artwork. However, the amount of increase is dependent on the extent that the information can be coherently integrated with the artwork. Presumably, the elaborative titles caused the viewer to generate bridging inferences that link the artwork with the title that would not have occurred in the absence of the title or presence of a descriptive title.

Millis' claims are consistent with more recent research that has gone beyond title effects. Swami (2013) and Park, Yun, and Jeong (2015) reported that accompanying text that provided specific information regarding the artwork (e.g., materials and how it fits into an art genre) increased appreciation of the artwork. Steciuch and Millis (2019) also reported that the number

of bridging inferences that a person made on the basis of think aloud protocols predicted understanding and liking, whereas the number of elaborative inferences predicted understanding and interest. Although Steciuch and Millis (2019) did not manipulate accompanying text, they showed that extra, albeit inferred, information did increase responses.

In the present study, we tested Millis' (2001) claims more directly. In this study, we had participants view representational and conceptual museum-quality artworks before rating them on understanding, interest, and liking. In order to test the hypothesis that more meaning is related to more positive aesthetic experiences, we manipulated the amount of text that accompanied each artwork. For one-third of the artworks, there was no accompanying text except for the name of the artist. However, for the other two-thirds, the artwork was paired with accompanying text that helped to explain the artwork. The text included the artist's name, genre, title, dimension, and elaborative information regarding the artwork. Therefore, if the amount of meaning-making partly determines aesthetic responses, then we should find greater ratings for images paired with text than when there is no text.

The current study also tested the hypothesis that the coherence of the representation resulting from the accompanying text with the painting would matter. We constructed a low-cohesion and a high-cohesion version of each accompanying text. We assumed that the final representation for an artwork would be more coherent if it was read with a more-cohesive text than with a less-cohesive text. We predicted that aesthetic responses would be more positive in the presence of the more-cohesive texts than the less-cohesive texts.

We also considered the type of artwork on the effects that accompanying text might have on aesthetic experiences. Swami (2013) found that accompanying text had a greater positive

impact on aesthetic responses for abstract works by Picasso than on representational artworks by the same artist. Presumably, accompanying text may not be needed to acquire the depth of meaning desired by the individual for representational artworks, but the additional text may be necessary to generate meaning for abstract artwork. We extended Swami by comparing representation artworks to conceptual art. In conceptual art, everyday objects are depicted but the intended meaning of the artwork may have nothing to do with them.

In addition to varying the presence and type of accompanying text, we explored whether the effects would depend on characteristics of the participant. We measured the art knowledge and interest of each participant. We also measured the extent that they appreciate complexity of art, the extent that they experience negative feelings when viewing art, and the extent that they seek out contextual information when viewing artwork. We specifically tested whether these aspects of individual differences would interact with cohesion and genre. It is possible that cohesion would interact with art interest or with art knowledge because both of these factors may compensate for low cohesion. We had predicted that participants would prefer representational paintings more than conceptual artworks but this difference would be smaller for participants with greater art knowledge and for participants who appreciate art complexity.

Methods

Participants

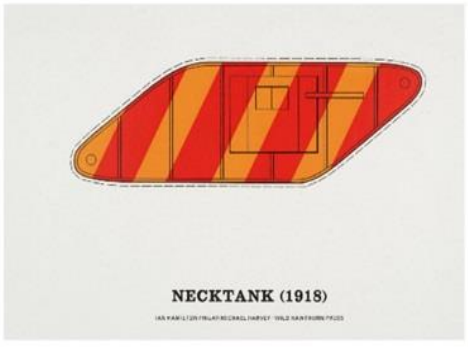
One-hundred and seventy-six MTurk workers were paid $1.00. The average age was 38 years old (SD = 13).

Materials

Three artworks from six artists were used. Three of the artists were representational artists (Goya, Munch, Rembrandt) and three were conceptual artists (Finlay, Hesse, Duchamp). Accompanying text was created for each artwork. These texts included the artist's name, the size, medium, information regarding the artwork's genre, and an interpretation of the artwork. The less cohesive versions were created by rearranging sentences in the more-cohesive versions such that argument overlap among adjacent sentences were minimal. Figure 1 shows an example conceptual artwork with more- and less-cohesive versions. The descriptions were normed the more- and less-versions by another group of MTurk workers on readability and understandability using a repeated measures design, and we found that the less-cohesive text versions were rated lower on these scales than the more-cohesive text versions (p's $< .05$).

Figure 1. Example Conceptual Artwork and Text.

More-Cohesive Text



The title of the next image is Necktank painted by Ian Hamilton Finlay in 1973. The screenprint is on paper and is 14" by 17". Finlay was a Scottish poet who served in World War II before becoming a conceptual artist. Conceptual artists convey ideas that are usually very different than what is actually depicted. Conceptual artists will often use whatever materials are at hand to communicate their thoughts. This screenprint highlights the absurdity of war. The screenprint shows the similarity between a deadly tank and a necktie. The idea of wearing a tie in the midst of war may strike some as ironic.

Less-Cohesive Text

This screenprint highlights the absurdity of war. The title of the next image is Necktank painted by Ian Hamilton Finlay in 1973. Conceptual artists will often use whatever materials are at hand to communicate their thoughts. The screenprint is on paper and is 14" by 17". The idea of wearing a tie in the midst of war may strike some as ironic. Conceptual artists convey ideas that are usually very different than what is actually depicted. Finlay was a Scottish poet who served in World War II before becoming a conceptual artist. The screenprint shows the similarity between a deadly tank and a necktie.

Design

The design was a 3 (Conditions: No text, More-cohesive text, Less-cohesive text) × 2 (Genre: Representational, Conceptual) between-participants factorial design.

Procedure

Participants were randomly assigned to one of the 6 conditions (Representational vs Conceptual art by No text, Lower cohesion text vs Higher cohesion text). Participants were shown 9 artworks on the computer, one at a time. The three artworks for each artist were grouped together and presented in the same order. The order of artist blocks were counterbalanced across participants. When the text was present, it was shown below the artwork (i.e., as in Figure 1). After each participant inspected the image at their own pace, they rated it on perceived understanding, liking and interest using a 1 (Low) to 6 (High) Likert-type scale. At the end of each artist block, they were given two T/F comprehension questions about the content of the art in the no text condition, or the content of the accompanying text in the text conditions. The reason for the T/F questions was to motivate the participants to engage in the task as well as to provide a measure of their engagement/comprehension of the material. Lastly, participants took the Vienna Art Interest and Art Knowledge (VAIAK) questionnaire (Specker et al., 2020) and a new scale called the Aesthetics Processing Preference Scale (APPS) by Kopatich et al. (2020).

Results

We omitted 25 participants for fairly quick responses (1 SD below grand mean). We omitted 33 additional participants who answered below 67% accuracy on the comprehension questions. We believe that the omitted participants were not fully compliant with the instructions. Therefore, there was a total of 118 participants.

The understanding, liking and interest scores were highly correlated (.79 to .93). We collapsed liking and interest scores and renamed them appreciation scores (e.g., Swami, 2013) because they were the highest correlated (.93) and theoretically closer together in that they fall closer to emotional responses than understanding which falls closer to cognitive processing.

Appreciation Scores. We used linear mixed-effects models with the R package lme4 (Bates, Mächler, Bolker, & Walker, 2015) in the R environment in version 3.6.0 (R Core Team, 2019). Artworks and participants were first entered as random factors, using restricted maximum likelihood estimation. The intraclass correlation (ICC) was .57 indicating that the random variables accounted for substantial variance. Fixed effects were Cohesion (1 = no text, 2 = lower cohesive text, 3 = higher cohesive text), Genre (0 = conceptual, 1 = representational), the interaction between Cohesion and Genre, the APPS subscales (appreciation for complexity, negative emotionality, propensity to use context), the VAIAK subscales (art knowledge, art interest), the Cohesion by APSS interaction, and the Cohesion by VAIAK interaction.

In order to test the hypothesis that any text would increase aesthetic responses, we compared the no text condition to the average of the text conditions. The test was statistically significant with approximately almost a point different (.92) between them, $t(104) = 2.73$, $p < .05$. We also compared the lower vs higher cohesion text conditions. The difference (.04) was

nowhere near statistically significant, $t(104) = .18$, ns. However, as described below, cohesion interacted with art interest.

Table 1 shows the summary results of the linear mixed-effects models. Table 2 shows the estimates of all the factors and interactions. Table 1 shows that the following models or variables accounted for a significant amount of variance: Text conditions, Genre, VAIAK, APPS, and the interaction between Genre and APPS, and the interaction between VAIAK and Cohesion. Based on the planned comparisons (see above) and Table 2, having any text increased appreciation over having no text. Not surprisingly, participants rated the representational paintings higher than the conceptual artwork. However, genre interacted with the APPS 'appreciation for complexity' subscale. The interaction indicates that participants who scored higher on the subscale had greater appreciation than participants who scored lower on the subscale, but this difference was significantly higher for the conceptual artworks than the representational artworks.

Most importantly to our research questions, a person's interest in artwork (VAIAK's art interest subscale) interacted with text cohesion positively predicted the appreciation scores. The interaction (shown in Figure 2) indicates that for individuals with high art interest, cohesion does not matter, but it does for individuals with lower art interest.

Understanding scores. Not surprisingly given the high correlation between outcome variables, the same effects occurred for the understanding scores, except that the sizes of the effects were larger for the text conditions.

Figure 2. Interaction between Art Interest and Cohesion on Appreciation

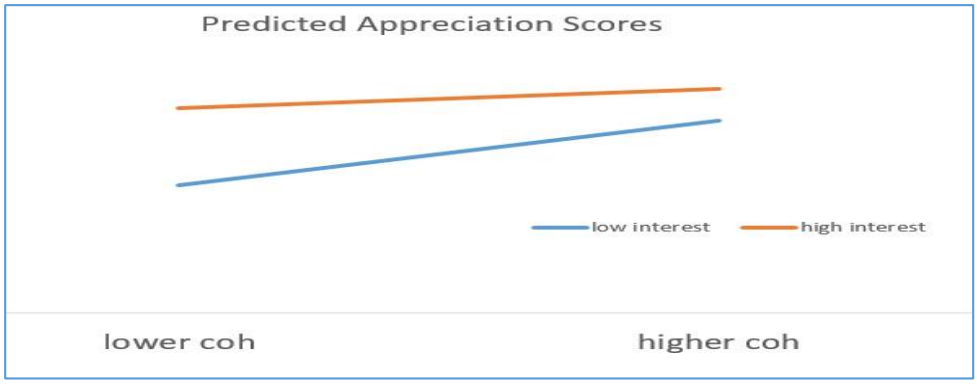


Table 1. Summary of Mixed Linear Effects Models

Models Predicting Appreciation

Parameter Added	AIC	Δdf	$\Delta\chi^2$
Random effects	3324	--	--
Genre	3314	1	12.72***
VAIAK	3271	2	47.35***
APPS	3266	3	10.60*
Text Cohesion	3263	2	6.72*
Genre × Cohesion	3266	2	1.50
APPS × Genre	3258	3	13.53**
VAIAK × Genre	3262	2	0.53
VAIAK × Cohesion	3256	4	14.08**
APPS × Cohesion	3260	6	7.80

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$

Table 2. *Final Model Estimates for Predicting Appreciation*

Variable	*B*	*SE*	df	*t*
Intercept	2.34	0.68	103	3.46***
Conceptual	-2.28	0.90	103	-2.54*
Art Interest (VAIAK)	0.02	0.01	98	1.43
Art Knowledge (VAIAK)	0.05	0.03	98	1.58
Appreciation for Complexity (APPS)	-0.01	0.18	98	0.05
Negative Emotionality (APPS)	0.16	0.12	98	1.32
Propensity to Contextualize (APPS)	0.05	0.17	98	0.29
Low Cohesion	-0.77	0.62	98	-1.24
High Cohesion	0.60	0.52	98	1.16
Conceptual × Appreciation for Complexity	0.64	0.24	98	2.63**
Conceptual × Negative Emotionality	-0.15	0.16	98	-0.92
Conceptual × Propensity to Contextualize	-0.07	0.22	98	-0.34
Conceptual × Low Cohesion	-0.42	0.39	98	-1.08
Conceptual × High Cohesion	0.22	0.36	98	0.61
Conceptual × Art Interest	-0.01	0.01	98	-0.67
Conceptual × Art Knowledge	-0.00	0.04	98	-0.11
Art Interest × Low Cohesion	0.04	0.01	98	3.09**
Art Interest × High Cohesion	0.01	0.01	98	0.63
Art Knowledge × Low Cohesion	-0.06	0.04	98	-1.31
Art Knowledge × High Cohesion	-0.08	0.04	98	-1.82†

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$

Discussion

We found that accompanying text increased aesthetic responses, supporting Millis' (2001) claim that additional information integrated with the artworks mental representation increases aesthetic responses. The findings also replicate prior research that has shown accompanying textual information increases understanding and appreciation (Park et al., 2015; Swami, 2013), and also shows that the effect occurs for conceptual artwork which had not yet been examined.

There was some evidence that the cohesion of the text mattered. Text cohesion increased the appreciation and understanding only for individuals with low art interest. This provides partial support for Millis' claim that the coherence of the integrated representation is necessary for an increase. One interpretation of the interaction is that when the viewer is interested in art, they will process the less cohesive text in a manner that results in a more coherent representation than if they did not do the additional processing. That is, the interest motivates them to create a coherent representation. Relatedly, when the text is less cohesive, individuals who are not interested in art will merely rely on the discourse as is, leading to differences in their mental representation of the lower and higher cohesion versions, which then may affect their appreciation.

Lastly, the representational artworks were rated higher than the conceptual artworks. However, the difference was smaller for participants who appreciate complexity in artworks, as measured by the APPS. This supports the validity of the appreciation of complexity subscale, which assumes individuals who appreciate complexity prefer ambiguous artworks that require controlled processing to understand.

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