

# Kent Academic Repository

## Full text document (pdf)

### Citation for published version

Wimmer, Lena Franziska, El-Salahi, Layla, Lee, Hon W. J. and Ferguson, Heather J. (2022) Narrativity and Literariness Affect the Aesthetic Attitude in Text Reading. *Empirical Studies of the Arts*. ISSN 0276-2374.

### DOI

<https://doi.org/10.1177/02762374221095482>

### Link to record in KAR

<https://kar.kent.ac.uk/94849/>

### Document Version

Author's Accepted Manuscript

#### Copyright & reuse

Content in the Kent Academic Repository is made available for research purposes. Unless otherwise stated all content is protected by copyright and in the absence of an open licence (eg Creative Commons), permissions for further reuse of content should be sought from the publisher, author or other copyright holder.

#### Versions of research

The version in the Kent Academic Repository may differ from the final published version.

Users are advised to check <http://kar.kent.ac.uk> for the status of the paper. **Users should always cite the published version of record.**

#### Enquiries

For any further enquiries regarding the licence status of this document, please contact:

[researchsupport@kent.ac.uk](mailto:researchsupport@kent.ac.uk)

If you believe this document infringes copyright then please contact the KAR admin team with the take-down information provided at <http://kar.kent.ac.uk/contact.html>

**Narrativity and literariness affect the aesthetic attitude in text reading**

Lena Wimmer<sup>1,2</sup>, Layla El-Salahi<sup>2</sup>, Hon W. J. Lee<sup>2</sup>, and Heather J. Ferguson<sup>2</sup>

<sup>1</sup>Department of Education, University of Freiburg, Germany

<sup>2</sup>School of Psychology, University of Kent, UK

Correspondence concerning this article should be addressed to Lena Wimmer,  
Department of Education, University of Freiburg, Rempartstraße 11, 79098 Freiburg im  
Breisgau, Germany. Email: lena.wimmer@ezw.uni-freiburg.de

**Abstract**

We report two pre-registered experiments investigating some of the conditions under which readers focus on aesthetically relevant object properties in text processing. Experiment 1 ( $N=159$ ) tested the role of narrativity, psychological information about textual characters, and readers' identification with them. Participants' focus on aesthetically relevant object properties was stronger after reading a narrative than an expository text. This relationship between participants' focus and narrativity was not affected by information about textual characters, or readers' identification with them. Experiment 2 ( $N=159$ ) tested the role of narrativity, literariness, and readers' perception of literary features. Again, reading a narrative led to a stronger focus on aesthetically relevant object properties than reading an expository text. The effect of literary narratives was mediated by readers' perception of literary features. In sum, narrativity and literariness, but not information about characters or identification with them affect the degree to which readers focus on aesthetically relevant object properties.

*Keywords:* aesthetic attitude, literary, narrative, expository, identification, foregrounding

## Introduction

### The aesthetic attitude

Aesthetic experiences form an essential part of our everyday lives. When we select clothes to wear today, catch a glimpse of a blooming flower on the way to work, think about what picture to hang up in the living room, or visit an art gallery, aesthetic decisions and experiences are likely to be involved. Over the centuries, philosophers have stressed the importance of a specific state of the recipient, the so-called *aesthetic attitude*, to fully explain the nature of aesthetic experiences (see Fenner, 1996). In the context of this article, the aesthetic attitude is defined as a mental state during which subjects focus on aesthetically relevant object properties. This attitude is contrasted with the so-called *factual reception attitude*, in which individuals direct their attention to the truth content or practical utility of objects. Here, we report two pre-registered experiments that investigate the aesthetic attitude in text reading. Each of the experiments tests the contribution of a distinct set of factors that are thought to make perceivers adopt the aesthetic attitude.

Fenner (1996) summarized traditional philosophical theories, as proposed by British empiricists and German metaphysicians, in particular Kant and Schopenhauer, when he outlined five essential aspects of the aesthetic attitude (note that these are not meant to describe Fenner's own view but his summary of traditional theories of the aesthetic attitude): First, recipients adopt the aesthetic attitude to facilitate an aesthetic experience. Thus, the aesthetic attitude is not an end in itself but serves the desire for an intensive aesthetic experience. Second, an aesthetic object can be any stimulus given perceivers process it in an aesthetic way. An object becomes an aesthetic object if recipients focus on aesthetically relevant object features; hence, the perceivers' point of view is crucial. Third, the nature of aesthetic properties is shaped by an interaction between object and recipient. More precisely, aesthetic properties rely on both the properties of the object that are thought to induce an aesthetic effect, and on the attitude of recipients who must direct their attention towards these

## Determinants of the Aesthetic Attitude During Reading

characteristics. Fourth, the aesthetic attitude draws on a distinction between subject and object. Assuming such a distinction helps us explain why everyday objects can become aesthetic objects without changing their essence, namely if recipients focus on aesthetically relevant object characteristics. Fifth, the aesthetic attitude originates from the perceiver. In principle, recipients can control whether they enter into an aesthetic attitude or not.

The notion of the aesthetic attitude has, however, not remained without criticism (e.g., Dickie, 1964); the question of whether there is a distinctive mental state which constitutes the aesthetic attitude and which individuals can turn on and off at will has been the subject of much debate, including in philosophy (for an overview see Shelley, 2020). Although only limited empirical work has targeted the aesthetic attitude, the available evidence suggests a rather complex picture: some aesthetic evaluations happen quickly and automatically and do not require a specific intention to focus on aesthetically relevant object features (e.g., Chatterjee et al., 2009); in contrast, others depend on or are facilitated by, intention and an aesthetic focus (e.g., Brielmann & Pelli, 2017; Höfel & Jacobsen, 2007). These conclusions build on experiments that have used mainly visual stimuli (and, in an experiment by Brielmann and Pelli, 2017, also gustatory and haptic stimuli). So far only one study by Wimmer (2015) has directly investigated the aesthetic attitude concerning verbal material.

### **Factors suspected to influence the aesthetic attitude**

**Narrativity.** Contextual information has been found to shape the aesthetic experience, including for verbal material (for an overview see Appel et al., 2021). Furthermore, philosophers have claimed that recipients' intention is crucial for adopting the aesthetic attitude (see above). Hence, Wimmer (2015) tested the prediction that giving participants a specific intention via contextual information would be a suitable method to induce the aesthetic attitude during reading. Contextual information was implemented in the form of

## Determinants of the Aesthetic Attitude During Reading

paratexts, i.e., pieces of text accompanying or complementing a text body (Genette, 1987).

Across three experiments, participants read either a fiction or non-fiction excerpt, comparable in content, whilst five paratextual methods of inducing the aesthetic *vs* factual reception attitude were implemented. Examples of induction methods included labelling the excerpts as either fiction (“taken from a novel”) or non-fiction (“taken from a travel report”); presenting a review, which highlighted either characteristics of a novel (“emotive thriller”) or a non-fiction book (“authentic documentary”); and instructing participants to take the role of a library staff member who has to categorize the text as an excerpt from a certain type of novel (e.g. adventure novel, coming of age novel) or non-fiction book (e.g. travel report, guidebook). In all experiments, participants predominantly entered into the aesthetic attitude, regardless of either the actual genre (i.e. fiction *vs* non-fiction) or paratextual induction method. Wimmer (2015) explained this finding in terms of participants’ knowledge about narrative features of different genres, which was assumed to have outweighed a potential paratextual impact. Indeed, all experiments exclusively used narrative texts as stimulus materials. Narratives can be defined as “representations of temporally coherent events centered around the goals of a protagonist, which follow a formal grammar or schema consisting of several related elements, including a setting, an inciting incident, rising action, a resolution, and a denouement” (Mar, 2018, p. 257). Since all texts corresponded to this definition of narratives, it is likely that participants considered narrativity as a cue suggesting an aesthetic processing of the text, and thus, the adoption of the aesthetic attitude. This assumption was supported by Wimmer (2015)’s main Study 1, where participants were presented with narrative fiction, narrative non-fiction, expository fiction, and expository non-fiction excerpts. When participants read an expository excerpt, they exclusively adopted the factual attitude, but the aesthetic attitude was dominant when they read a narrative excerpt. Taken together, narrativity has proven to be a factor affecting whether readers adopt the

## Determinants of the Aesthetic Attitude During Reading

aesthetic attitude. An unresolved question concerns the textual and psychological mechanisms that underlie the relation between narrativity and aesthetic attitude. Next, we will look at possible factors that could serve as such mechanisms.

**Explaining the relation between narrativity and aesthetic attitude, route 1: psychological transparency and identification.** On one hand, researchers have proposed that aesthetic experiences result from a process in which recipients empathetically identify with an aesthetic object or aspects of it (e.g., Crozier & Greenhalgh, 1992; see Brinck, 2018, for an overview). On the other hand, identification with characters (i.e., the multidimensional process of taking a character's perspective; e.g., Consoli, 2018), has been proposed as a key determinant through which stories trigger their effects on a variety of outcomes (Mar & Oatley, 2008; van Krieken et al., 2017). Hence, identification processes could play a role in linking narrativity with the aesthetic attitude. The multidimensional linguistic cues framework (van Krieken et al., 2017) proposes that readers need to be told what the character is thinking or feeling in order to take their perspective and identify with them. Consequently, it can be assumed that identification will be higher for narratives that provide explicit information about the protagonists' inner life (referred to as "high psychological transparency" texts) compared to narratives that provide less or no explicit information about the protagonists' emotional states (referred to as "low psychological transparency" texts). As such, it is possible that the observed relationship between narrativity and the aesthetic attitude can be explained by empathetic identification with story characters and psychological transparency of texts.

**Explaining the relation between narrativity and aesthetic attitude, route 2: literariness and foregrounding.** The pathway via identification and psychological transparency might not be the only route mediating the relationship between narrativity and the aesthetic attitude. Literary scholars have traditionally considered literariness/poeticity as a

## Determinants of the Aesthetic Attitude During Reading

manifestation of the aesthetic in the domain of textual material (e.g., Rühling, 1996), meaning that an aesthetic text can be described almost interchangeably as literary or poetic. Although literariness is in principle independent from narrativity (i.e., there are both narrative (e.g., novels) and non-narrative (e.g., certain types of poems) literary texts), literariness is often associated with the use of narrative devices (e.g., Miall & Kuiken, 1999). Hence, it is plausible to assume that the literariness conveyed by poetic narratives (but which is absent in typical textbook-style expository texts) invites readers to adopt the aesthetic attitude.

In search of the defining features of literariness, Czech structuralists (e.g., Mukařovský, 1964, 1977) coined the term *foregrounding* (in Czech: *aktualisáce*; overview: van Peer et al., 2021). This concept refers to the gestaltist principle of figure-ground relationship (in other words: foreground-background differentiation; van Holt & Groeben, 2005). It is assumed that what is brought to the foreground in literary texts is the self-referential function of language. Foregrounding stresses the ‘constructedness’ of language and disrupts fluent reading, so that greater effort is needed to direct meaning integration. This is reflected in suppressed default processing and enhanced attentional modulation (Hartung et al., 2021; van den Hoven et al., 2016). To summarize, we propose that the relationship between narrativity and the aesthetic attitude traces back to perceived effects of foregrounding and literariness of texts.

### **The present experiments**

Experiment 1 investigated whether psychological transparency of texts and readers’ identification with textual protagonists underlie the association between narrativity and aesthetic attitude. In line with Wimmer (2015), we predicted that reading a narrative text would be associated with a more pronounced aesthetic attitude than reading an expository text. Furthermore, we predicted that participants who read a narrative text that is high in



## Determinants of the Aesthetic Attitude During Reading

psychological transparency would experience a greater aesthetic attitude than participants who read a narrative text that is low in psychological transparency or an expository text (note that other scholars have claimed that having additional information about mental states reduces (or does at least not increase) readers' understanding of those states (Kotovych et al., 2011)). It was also expected that identification with protagonists would mediate the relationship between text condition and adoption of the aesthetic attitude. Thus, we predicted that participants who read a high psychological transparency narrative would identify more strongly with protagonists than participants who read a low psychological transparency narrative or expository text, leading to a greater aesthetic attitude.

Experiment 2 examined whether literariness of texts and effects of foregrounding reported by readers underlie the relation between narrativity and aesthetic attitude. It was predicted that reading a narrative text would be associated with a more pronounced aesthetic attitude than reading an expository text. Furthermore, we assumed that participants who read a literary fiction narrative would experience a greater aesthetic attitude than participants who read a popular fiction narrative or an expository non-fiction text. It was also expected that perceived effects of foregrounding would mediate the relationship between text condition and adoption of the aesthetic attitude. We predicted that participants who read a literary fiction narrative would perceive stronger effects of foregrounding than participants who read a popular fiction narrative or expository non-fiction text, leading to a greater aesthetic attitude.

### **Experiment 1**

#### **Method**

Within-subjects designs harbor a heightened risk of drop out as well as fatigue and test-retest effects (see Wimmer et al., in press, under revision). To avoid these, we opted for a between-subjects design including one factor, text, with three levels (narrative with high

## Determinants of the Aesthetic Attitude During Reading

psychological transparency vs narrative with low psychological transparency vs expository text). We used the randomization option in Qualtrics to randomly assign participants to one of three equally sized, pre-determined blocks, i.e. one out of three text excerpts. The study was pre-registered at the Open Science Framework, <https://osf.io/xjrw7>.

### Participants

Participants were recruited from the local student participant pool, received course credits, and provided written informed consent before data collection. Although Wimmer (2015) observed a very large effect size of Cohen's  $\omega = 0.94$  (Cohen's  $\omega \geq 0.5$  is considered a large effect; MRC CBU Wiki, 2020) for the relationship between narrativity and reception attitude, we targeted a sample size appropriate to detect a medium-sized effect since mediational effects – as the one predicted for identification in this experiment – are usually smaller in size than direct effects (Walters, 2019). We used G\*Power to conduct an a-priori power analysis, aiming for .80 power to reveal a medium effect size of  $f = .25$  at the standard .05 alpha error probability. This resulted in a total  $N$  of 158. This sample size would have a power of .18 to detect a small effect of  $f = .10$ . The target sample was reached after 163 volunteers. 159 participants remained in the final sample; four participants were excluded as they were not native English speakers. In the final sample, 53 participants had read the narrative text with high psychological transparency (44 women and 9 men with a mean age of 19.4 years ( $SD = 1.0$ )), 54 had read the narrative text with low psychological transparency (47 women and 7 men with a mean age of 19.2 years ( $SD = 1.3$ )), and 52 had read the expository text (44 women and 8 men with a mean age of 19.0 years ( $SD = 1.5$ )).

### Reading Stimuli

Texts were selected based on subject matter and word count. Because of the rarity of the expository fiction genre and the need to keep fictionality constant, we decided to only use non-fiction texts.

All texts dealt with Mexican immigration into the United States. Two excerpts from the memoir, *The Distance Between us* (Grande, 2013), which accorded with the definition of narratives provided above, served as narrative passages. The high psychological transparency excerpt naturally contained a large amount of interior monologue describing the protagonist's thoughts and feelings. This excerpt was used in its original version. For the low psychological transparency condition we chose a different part of the book that entailed a higher amount of external action, with the intention that this excerpt be attractive to participants even when information about the protagonist's inner life is removed. In addition, secondary details were deleted to achieve a word count comparable to that of the high psychological transparency version. Table 1 illustrates the variations of psychological transparency within the two narrative conditions.

A non-narrative passage was adapted from the textbook, *Mexican Immigration to the United States* (Gamio, 1971), for the expository condition. This excerpt was considered expository since it did not represent temporally connected events related to the aims of a protagonist, but described the living conditions of Mexican immigrants based on facts. Compared with the original, tables and references to tables were removed in order that all reading stimuli contained plain text only. In addition, minor details were deleted to keep text length comparable between conditions. As a result, word count was matched across the three texts (narrative with high psychological transparency: 1515 words; narrative with low psychological transparency: 1514 words; expository text: 1518 words).

## Determinants of the Aesthetic Attitude During Reading

Each text took between six and seven minutes to read, on average. Full stimuli, as presented to participants, are available on the pre-registration pages, <https://osf.io/xjrw7>. “Track changes” versions of all text materials showing exactly how the original texts were modified can be found at <https://osf.io/t7zfe/>.

<b>Narrative with high psychological transparency</b>	<b>Narrative with low psychological transparency</b>
<p>"Go say hello to your father." Tia Emperatriz came up from behind us and pushed us toward him. I didn't want to go. All I wanted was to run away, run back to Abuelita Chinta's house, far away from him. I didn't want to see that look on his face. All those years staring at his photo, wishing that his eyes were not looking to the left but instead were looking at me. All those years wishing to be seen by him. And here he was, looking at me, but not really seeing me. He couldn't see past the tangled hair, the dirt on my face, my tattered clothes. He couldn't see the girl who had longed so much for this moment, to finally meet her father.</p> <p>I knew he was ashamed by what he saw. What a cruel joke Felix played on us by not telling us the truth! If he had, we would have bathed and changed our clothes before going to my grandmother's house. Instead, I had to stand before the father I hadn't seen in almost eight years, looking like a beggar.</p>	<p>A light shone in the distance, and the purring got louder. "What's happening, Papi?" Mago asked.</p> <p>“Helicopter.”</p> <p>Carlos tripped on a rock, but Papi kept on running and didn't wait for him to get up. "Wait, Papi" I said, but Papi was like a frightened animal. He scampered through the bushes trying to find a place to hide.</p> <p>"Get down!" the coyote yelled from somewhere in the darkness.</p> <p>Papi immediately dropped to the ground, and we became lizards, rubbing our bellies against the cold, damp earth, trying to find a place to hide. Pebbles dug into my knees. I couldn't see Carlos in the darkness, and I cried and told Papi to wait, but he pushed me into a little cave created by overgrown bushes. Mago and I sat by Papi's side, and he held on to us tight while we listened to the roaring of the helicopter right above us.</p> <p>The beams of the searchlight cut through the branches of the bushes.</p>

*Table 1.* Excerpts of reading stimuli used in Experiment 1.

### Dependent Measures

**Reception Attitude.** The predominance of the aesthetic attitude over the factual reception attitude was assessed using a 26-item self-report questionnaire adapted from the Aesthetic Emotions Scale (Schindler et al., 2017) and from items found to be associated with the factual reception attitude (Wimmer, 2015, main study 2). After reading the text excerpt, participants rated how important specific experiences were to them using a 5-point scale ranging from 1 = ‘not at all’ to 5 = ‘very’. Some items (e.g. “How important was this experience for you: to be fascinated?”) are thought to indicate the aesthetic reception attitude, whereas others (e.g. “How important was this experience for you: to find the text conclusive?”) are expected to indicate the factual reception attitude.

Although it is assumed that aesthetic emotions can occur independently from the aesthetic attitude (Menninghaus et al., 2019), adopting the aesthetic attitude can be accompanied with appreciation of aesthetic emotions. This is because according to the traditional philosophical conception outlined above, the aesthetic attitude is adopted in the service of an intense aesthetic experience; aesthetic emotions, in turn, contribute to the intensity of aesthetic experiences (Marković, 2012). Thus, aesthetic emotions do not necessarily suggest the aesthetic attitude, but the aesthetic attitude prompts the valuation of aesthetic emotions. In contrast to the original Aesthetic Emotions Scale, the current instrument asked participants to rate the subjective importance of these emotions during the reading assignment rather than the intensity of certain emotions.

Additional items assessing the factual reception attitude, which is not addressed by the original Aesthetic Emotions Scale, were necessary to enable a comparison of the aesthetic with the factual attitude. In Wimmer’s main study 2, 13 items were found to be linked with the factual attitude, i.e., with the belief that participants read an expository non-fiction text. To achieve an equal number of aesthetic and factual attitude items, 29 items from the

## Determinants of the Aesthetic Attitude During Reading

Aesthetic Emotions Scale were excluded (the original Aesthetic Emotions Scale has 42 items). Since we aimed for a homogeneous set of items to achieve high internal consistency, we decided to focus on positive aesthetic emotions only. Thus, 10 negative emotion items (e.g., “made me aggressive”) were removed, and a further 19 items were excluded for not representing a specifically aesthetic emotion (e.g., “made me happy”).

The full questionnaire is available on the pre-registration pages, <https://osf.io/xjrw7>. To measure the predominance of the aesthetic attitude, a factor analysis was conducted to identify two separate factors (aesthetic vs factual attitude), and two sum scores were calculated to represent the strength of the aesthetic and a factual attitude, respectively. Internal consistency was  $\alpha = .92$  for the aesthetic attitude sub-scale, and  $\alpha = .86$  for the factual attitude sub-scale.

**Identification.** Participants' identification with the protagonist was assessed using a scale adapted from Cohen (2001). Eight items, such as, “I was able to understand the events in the story in a manner similar to that in which the protagonists understood them”, were rated on a 7-point Likert scale ranging from 1 = ‘strongly disagree’ to 7 = ‘strongly agree’, and used to calculate a sum score (higher scores indicate greater identification with the protagonist). The full list of items is available on the pre-registration pages, <https://osf.io/xjrw7>. Internal consistency of this scale was  $\alpha = .92$  in the present sample.

**Lifetime Exposure to Stories.** The Author Recognition Test – Genres (ART-G; Mar & Rain, 2015) provided an indicator of story reading habits. Participants were asked to accurately recognize the names of 110 narrative fiction and 50 expository non-fiction authors (targets) among names of 40 non-authors (foils). A narrative fiction sub-score was calculated based on the number of correctly identified fiction authors, with higher scores indicating greater experience with fictional stories. Unlike the scoring procedures of the ART version by Stanovich and West (1989), foils were not subtracted from hits because the authors of ART-

## Determinants of the Aesthetic Attitude During Reading

G do not recommend this; this may be related to the fact that the ART-G has sub-scales whereas the ART by Stanovich and West (1989) is unidimensional.

**Trait Empathy.** In the Empathy Quotient (EQ; Baron-Cohen & Wheelwright, 2004), 40-item version, respondents were asked to indicate the degree to which they agree with statements, such as, “I can easily tell if someone else wants to enter a conversation”, using a 4-point rating scale that ranged from ‘strongly disagree’ to ‘strongly agree’. A sum score was calculated for each respondent, with a possible range of 0 to 80, and higher scores indicating greater levels of empathy. Internal consistency of the EQ sum score was  $\alpha = .85$  in the present sample.

### **Procedure**

Participants were tested individually in a laboratory setting. All materials were presented on a computer screen via a Qualtrics survey. After giving their informed consent to participate, participants provided demographic information, and completed the EQ and ART-G. Next, participants were randomly allocated to one of the three reading conditions (narrative with high psychological transparency vs narrative with low psychological transparency vs expository text). Immediately after that, participants completed the Identification and Reception Attitude Scales. Finally, participants were debriefed in written form and course credits were granted. The entire experiment took 20 mins to complete, on average.

### **Data Analysis**

The dimensions underlying the reception attitude questionnaire were quantified using factor analysis. Two factors assumed to reflect the aesthetic and the factual attitude, respectively, were extracted using principal component analysis. An oblique rotation method

## Determinants of the Aesthetic Attitude During Reading

(Oblimin Rotation) was applied. Since the aesthetic and factual attitude scores were correlated,  $r(159) = .42$ ,  $p < .0001$ , it was deemed necessary to deviate from the pre-registered calculation of an overall reception attitude difference score (aesthetic attitude – factual attitude). Instead, in all analyses, the aesthetic attitude sum score was entered as the dependent variable, and the factual attitude sum score was implemented as a covariate. We also ran all pre-registered analyses. The pattern of results was consistent using both analysis approaches.

Hypothesis 1 was tested using an ANCOVA with text (high psychological transparency vs low psychological transparency vs expository) as the predictor, aesthetic attitude as the outcome, and ART-G fiction sub score, EQ sum score, and factual attitude as the covariates. Two planned contrasts were carried out: one contrasted expository with high psychological transparency, and one contrasted high with low psychological transparency. These contrasts deviated from the pre-registered contrasts (expository vs high psychological intensity, expository vs low psychological intensity), since these planned contrasts were not appropriate for testing the hypothesis that reading a narrative text high in psychological transparency is associated with a greater aesthetic attitude than reading a low psychological transparency narrative text or an expository text. Hypothesis 2 was tested using a mediation analysis using the PROCESS macro in SPSS (model 4). Text was a multi-categorical predictor (levels: high psychological transparency vs low psychological transparency vs expository), identification was entered as a mediator, and reception attitude served as the outcome.



## Results

### Factor Structure of the Reception Attitude Scale

Factor analysis of the reception attitude questionnaire resulted in two factors, explaining 47.15% of the total item variance. The results of the factor analysis are documented in Table 2. Factor 1 refers to aesthetic emotions and was named “aesthetic attitude”, due to the high loadings of items such as, “To feel awe”, “To feel something wonderful”, and “To be enchanted”. Factor 2 represents a “factual attitude” on the basis of items such as, “To find the text conclusive”, “To find the reading valid”, and “To find the reading logically structured”. Subsequently, three items were excluded from the scales because they did not clearly load on one of the factors: “To be attracted by the topic” (loadings were  $<.50$  for both factors), “To feel a sudden insight” (loadings were  $>.50$  for both factors), and “To sense a deeper meaning” (loadings were  $\sim.50$  for both factors). Excluding these items would have resulted in 13 items for the factual attitude sub-scale, but only 10 items for the aesthetic attitude sub-scale. To achieve an equal number of items for both scales, three further items with the lowest loadings on factor 2 were excluded (“To get the gist of the text”, “To find the text coherent”, and “To find the text well structured”). The remaining items (printed in bold in Table 2) were included in two sum scores reflecting the aesthetic and factual attitude sub-scales. Missing values (0.4%) were replaced by the series mean, defined as the mean of the respective item across participants with valid values.

### The impact of psychological transparency on adopting the aesthetic attitude

For the EQ, missing item values (1.42%) were replaced by the sample mean. Participants in the three text conditions did not differ on either the EQ sum score,  $F(2, 156) = 0.30, p = .74$ , or the ART-G fiction sub score,  $F(2, 156) = 1.16, p = .32$ , however, there was a group difference in the factual attitude sum score,  $F(2, 156) = 3.39, p = .04$ . According to

## Determinants of the Aesthetic Attitude During Reading

Bonferroni post-hoc tests, participants in the expository condition demonstrated a higher score than participants in the high psychological transparency condition,  $p = .03$ ; the remaining pairwise comparisons were not significant (expository *vs* low psychological transparency:  $p = .61$ , low *vs* high psychological transparency:  $p = .54$ ). Descriptive statistics of outcome measures are displayed in Table 3 and illustrated in Figure 1.

## Determinants of the Aesthetic Attitude During Reading

Item	Factor	
	1 “aesthetic attitude”	2 “factual attitude”
To be attracted by the topic	.483	.318
To be delighted	<b>.742</b>	.355
To be enchanted	<b>.799</b>	.328
To be fascinated	<b>.644</b>	.397
To be intellectually challenged	.406	<b>.597</b>
To be surprised	<b>.709</b>	.364
To be touched	<b>.737</b>	.287
To feel a sudden insight	.584	.553
To feel awe	<b>.821</b>	.346
To feel nostalgic	<b>.759</b>	.306
To feel something wonderful	<b>.810</b>	.251
To find text well structured	.432	.579
To find the reading beautiful	<b>.777</b>	.249
To find the reading sublime	<b>.717</b>	.229
To find the text coherent	.340	.570
To find the text comprehensible	.320	<b>.582</b>
To find the text conclusive	.351	<b>.814</b>
To gain knowledge	.213	<b>.696</b>
To sense a deeper meaning	.445	.568
That a linear reading is sensible	.219	<b>.655</b>
To get the gist of the text	.237	.513
To highlight important text passages	.362	<b>.592</b>
To find the reading logically structured	.213	<b>.727</b>
To find the reading realistic	.168	<b>.591</b>
To find the reading valid	.240	<b>.760</b>
To read something written by a domain expert	.187	<b>.552</b>

*Note.* Items with factor loadings printed in bold were included in the aesthetic attitude or the factual attitude sub-scales, based on the factor with higher loadings.

*Table 2.* Factor structure of the items assessing reception attitude

## Determinants of the Aesthetic Attitude During Reading

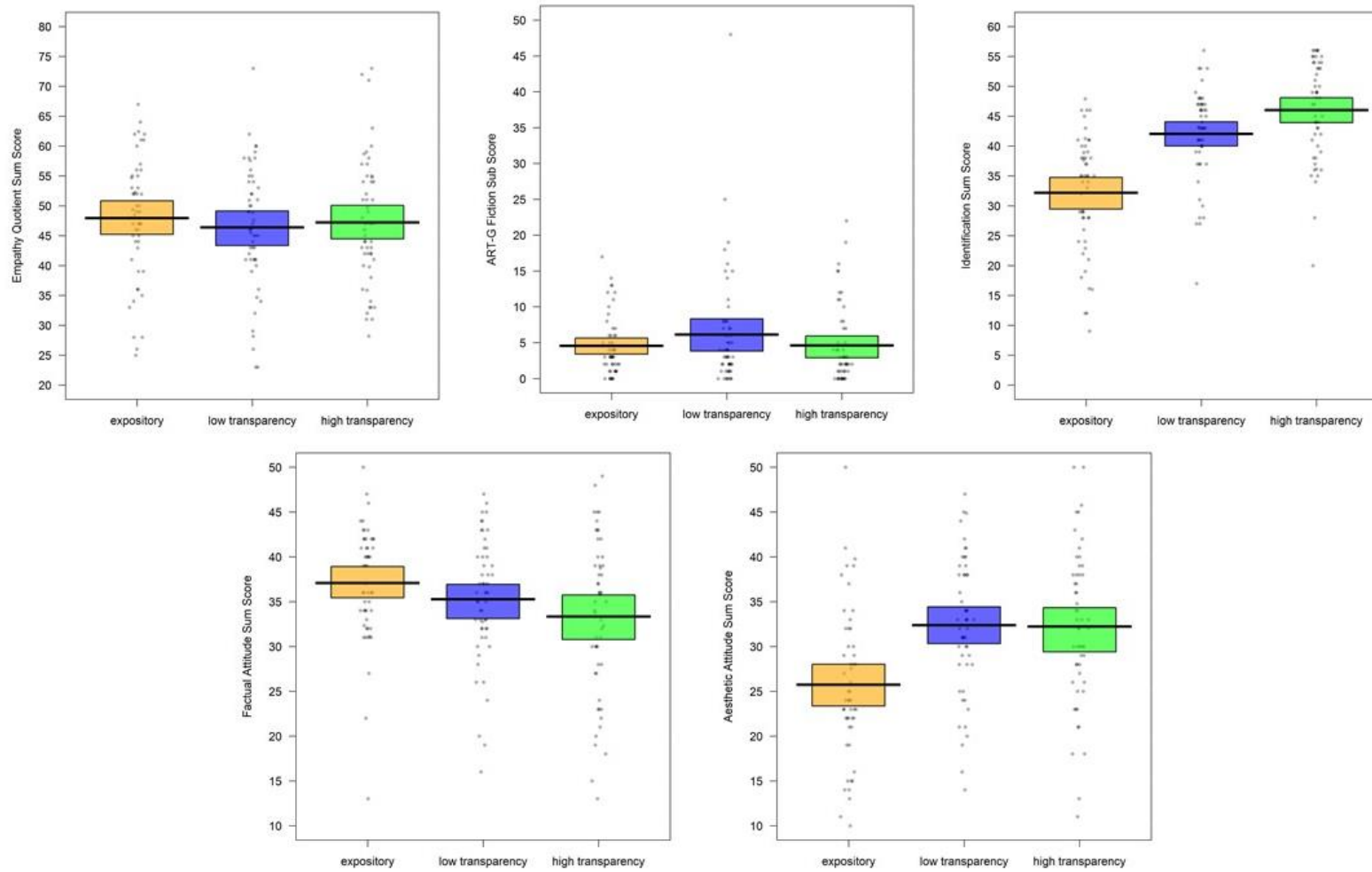
Dependent measure	High psychological transparency text		Low psychological transparency text		Expository text	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
EQ sum score	53	47.19 (10.57)	54	46.36 (10.30)	52	47.92 (10.08)
ART-G fiction sub score	53	4.60 (5.38)	54	6.13 (8.04)	52	4.54 (4.22)
Identification score	53	46.02 (8.13)	54	42.02 (7.55)	52	32.17 (9.64)
Factual attitude sum score	53	33.33 (8.75)	54	35.25 (6.79)	52	37.08 (6.38)
Aesthetic attitude sum score	53	32.22 (8.67)	54	32.37 (7.52)	52	25.72 (8.44)

*Note.* EQ = Empathy Quotient; ART-G = Author Recognition Test – Genres.

*Table 3.* Descriptive statistics for each dependent measure in each experimental group

The ANCOVA revealed a main effect of text on the aesthetic attitude sum score,  $F(2, 153) = 24.53, p < .0001, \eta^2_p = .243$ . Analysis of the contrasts revealed that the aesthetic attitude sum score in the high psychological intensity condition was significantly higher than in the expository condition, contrast estimate = -8.80,  $SE = 1.39, p < .001$ . However, the aesthetic attitude sum score in the high psychological intensity condition did not differ from the low psychological intensity condition, contrast estimate = -0.84,  $SE = 1.36, p = .536$ . The EQ sum score,  $F(1, 153) = 5.43, p = .021, \eta^2_p = .034$ , and the factual attitude sum score, also had a significant impact,  $F(1, 153) = 60.14, p < .0001, \eta^2_p = .282$ , whereas the ART-G fiction sub score did not,  $F(1, 153) = 0.57, p = .81$ .

## Determinants of the Aesthetic Attitude During Reading



*Figure 1.* Pirate plots for each outcomes measure and condition, showing raw data points, a horizontal line reflecting the condition mean, and a rectangle representing the Bayesian highest density interval.

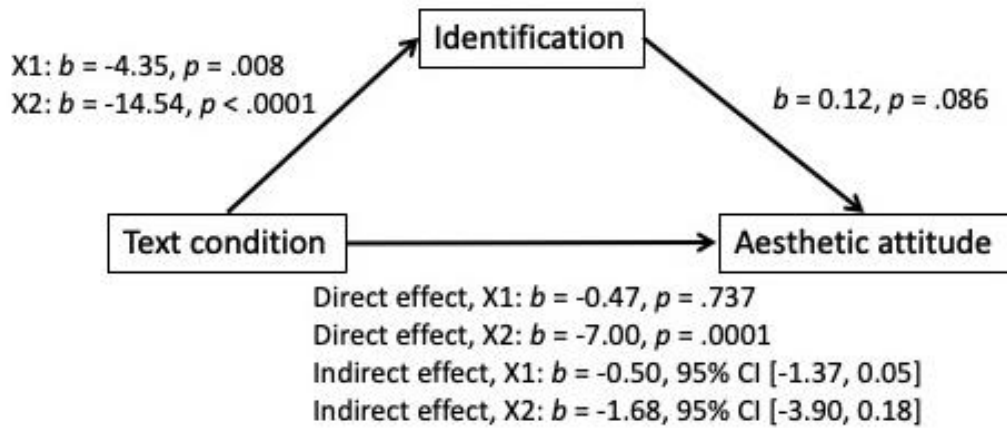
### **Mediating effects of identification**

Missing item values (1.26%) for the identification scale were replaced by the sample mean. Mediation analysis did not suggest a mediating influence of identification as all 95% confidence intervals of the indirect effect of text on the aesthetic attitude score contained zero, narrowest 95% CI [-1.37, 0.05] (see also Figure 2).

### **Exploratory analyses**

ANCOVA and mediation analysis were repeated without seven participants who had selected more than two mock authors in the ART-G. Excluding participants based on guesses within Author Recognition Tests is a common approach (cf. Kidd & Castano, 2013, 2019; Kidd et al., 2016; Panero et al., 2016; Samur et al., 2018) as such false alarms can reflect a rather inattentive participation style. Excluding participants with more than two guesses is more rigorous than measures applied in previous experiments (e.g., Kidd & Castano, 2019) since Moore and Gordon (2015) suggested a higher penalty for selecting mock authors than originally recommended (for an example applying this more stringent cut-off score see Wimmer et al., 2021). In these exploratory analyses, all significant effects remained as in the analyses reported above.

## Determinants of the Aesthetic Attitude During Reading



X1 = contrast comparing the high with the low psychological transparency text

X2 = contrast comparing the the high psychological transparency with the expository text

Figure 2. Model of text condition as predictor of aesthetic attitude, mediated by identification with protagonists. The confidence interval for the indirect effect is a bootstrapped CI based on 5000 samples.

## Discussion

The first empirical investigation of the aesthetic attitude in text processing was carried out by Wimmer (2015), showing that readers' aesthetic attitude depends on textual narrativity: regardless of fictionality, the aesthetic attitude dominated when a narrative text was read, whereas the factual attitude was adopted when an expository text was read. The present study aimed to replicate this association between narrativity and reception attitude, and tested mechanisms through which narratives might exert this influence. Specifically, we examined whether the aesthetic attitude is more pronounced when readers are presented with narratives high in psychological transparency compared with narratives low in psychological transparency. In addition, we tested whether the assumed relation between narrativity and reception attitude was mediated by identification with protagonists of a story.

## Determinants of the Aesthetic Attitude During Reading

The hypothesis that reading a narrative text is associated with a more pronounced aesthetic attitude than reading an expository text was confirmed. When lifetime exposure to written stories and trait empathy were controlled for, the aesthetic attitude was significantly greater for the high psychological transparency story than for the expository text. The same pattern emerged for the relationship between the low psychological transparency story and the expository text.

The assumption that participants who read a narrative text with high psychological transparency experience a more intense aesthetic attitude than participants who read a low psychological transparency narrative was not confirmed. Hence, although the level of detail in which a character's perspective is described has been proposed as a central determinant of identification with protagonists (van Krieken et al., 2017), it does not appear to be essential for promoting the aesthetic attitude, at least not when this elaborateness of the character's perspective is implemented as *psychological* transparency.

Resonating with this, results of a mediation analysis did not support the hypothesis that the relationship between narrativity and reception attitude is mediated by identification with protagonists. On one hand, psychological transparency modulated the level of identification such that the high transparency narrative was associated with greater identification than the low transparency narrative, which in turn was related to greater identification than the expository text (cf. the path leading from text condition to identification in Figure 2 and the descriptive statistics reported in Table 3). This finding supports the multidimensional linguistic cues framework (van Krieken et al., 2017), but contradicts the assumptions by Kotovych and colleagues (2011; see above). On the other hand, identification was not related to reception attitude (cf. the path leading from identification to reception attitude in Figure 2), nor was there an indirect effect of text condition on reception attitude via identification. This seems to suggest that stories, in



## Determinants of the Aesthetic Attitude During Reading

particular those high in psychological transparency, as distinct from expository texts facilitate identification with their characters, but identification does not seem to account for the finding that narrative texts induce the aesthetic reception attitude. Interestingly, however, trait empathy predicted the adoption of the aesthetic attitude. This could indicate that more stable dispositions like trait empathy impact more strongly on reception attitudes than proximal processes of identification with a specific story character.

In spite of producing these novel insights, Experiment 1 was limited in at least two ways. Firstly, whilst the use of three text excerpts (just a single text in each condition) matched on subject matter (i.e., Mexican immigration), fictionality (i.e., all texts were non-fiction), and word count (i.e., all excerpts were about 1,500 words in length) achieved a high level of experimental control, it might have also restricted the generalizability of the findings solely to the text excerpts under investigation. To avoid this limitation in Experiment 2, we implemented three texts of varying themes per text condition. This was meant to make our results more generalizable across textual variations. Second, the excerpts used in Experiment 1 were rather short, taking just 6 to 7 minutes to read. Within textual aesthetics, there is no evidence available on the reading duration necessary to evoke a rather stable reception (i.e., aesthetic or factual) reception attitude. However, it is reasonable to imagine that a reading duration of up to 30 minutes is better suited for eliciting a stable reception attitude compared with the shorter durations used in Experiment 1, without provoking fatigue effects (see Kidd & Castano, 2013, for an exemplary series of experiments successfully applying reading stimuli of this length). Hence, the texts investigated in Experiment 2 were selected to meet this criterion for reading duration.

## Experiment 2

### Method

The study was pre-registered on the Open Science Framework, <https://osf.io/mtv5e>, and implemented a between-subjects design including one factor, text, with three levels (literary fiction narrative vs popular fiction narrative vs expository non-fiction text). The randomization option within Qualtrics was used to randomly assign participants to one of the three text conditions.

### Participants

As in Experiment 1, participants were recruited from the local student participant pool, were awarded course credits, and gave written informed consent before data collection. We aimed to match the sample size in Experiment 1, i.e., a total sample size of  $N = 159$  meeting inclusion criteria for final analyses. This target sample was achieved after 166 volunteers. Four participants were excluded since their foils score on the ART-G was more than 3.5 SD above the sample mean; two participants were excluded for failing an attention check item interspersed within the foregrounding scale; and one participant was excluded because the time they spent on reading the text stimulus was more than 3.5 SD above the sample mean. Hence, 159 participants remained in the final sample. 54 participants had read a literary fiction narrative (88.9% women with a mean age of 19.20 years ( $SD = 2.25$ )), 47 had read a popular fiction narrative (80.4% women with a mean age of 19.79 years ( $SD = 4.63$ )), and 58 had read an expository non-fiction text (90.9% women with a mean age of 19.91 years ( $SD = 6.04$ )).

### Reading Stimuli

The current research question required that literary narratives were compared to non-literary narratives and expository texts. Although there is an unresolved debate about the relationship between literariness and fictionality, the most common type of literary text is often assumed to be fictional, with some scholars (e.g., Iser, 1991; Schmidt, 1980) even considering all literary texts to be fictional. Hence, we chose to investigate *fictional* literary narratives. As a non-literary counterpart, we selected *popular* fiction narratives, taken from Kidd and Castano (2013). We decided to use non-fictional expository texts due to the rarity of expository fictions (see above), even though this meant that the expository texts would differ from the two narrative texts in terms of narrativity and fictionality.

In order to broaden the generalizability of our reading materials (see above), three texts were implemented per text condition, using reading stimuli from Kidd and Castano (2013). “The Vandercook” (Alice Mattinson), “Uncle Rock” (Dagoberto Gilb), and “Corrie” (Alice Munro) served as literary fiction texts; “Jane” (Mary Jane Rinehart), “Space Jockey” (Robert Heinlein), and “Too Many Have Lived” (Dashiell Hammett) represented popular fiction texts; and the expository non-fiction texts under investigation were “How the Potato Changed the World” (Charles C. Mann), “Bamboo Steps up” (Cathie Gandel), and “The Story of the Most Common Bird in the World” (Rob Dunn). Kidd and Castano selected these texts based on their matching length, which was 4,640 words, on average. In addition, the literary fiction texts had all won a literary prize; the popular fiction texts were taken from an anthology of popular fiction and exemplified a variety of genres including science fiction (“Space Jockey”), mystery (“Too Many Have Lived”), and romance (“Jane”); all three expository texts were published in the *Smithsonian Magazine*.

## Dependent Measures

**Reception Attitude.** To determine the predominance of the aesthetic over the factual reception attitude we employed the 26-item self-report questionnaire applied in Experiment 1. Two sum scores based on the same items as in Experiment 1 were calculated to indicate the intensity of the aesthetic and a factual attitude, respectively. In the current sample internal consistency was  $\alpha = .88$  for the aesthetic attitude sub-scale, and  $\alpha = .80$  for the factual attitude sub-scale.

**Perceived foregrounding effects.** The extent to which participants perceived foregrounding effects with respect to the reading assignment was assessed through a 15-item self-report scale adapted from van Peer and colleagues (2007). Respondents indicated the degree of agreement to statements such as, "The text made me stop and think" using a rating scale ranging from -5 to 5, with -5 being 'strongly disagree', 5 being 'strongly agree'. The full item list is available on the pre-registration pages, <https://osf.io/mtv5e>. A sum score was calculated to achieve an indicator of perceived foregrounding effects. Internal consistency of this scale was  $\alpha = .89$  in the present sample.

**Lifetime Exposure to Stories.** Story reading habits were assessed as in Experiment 1, using the ART-G.

**Openness to Experience.** Using the 8-item openness sub-scale of the International English Big-Five Mini-Markers (Thompson, 2008), participants rated the accuracy with which adjectives, e.g., "artistic", describe themselves on a 5-point scale ranging from 1 = "inaccurate" to 5 = "accurate". A sum score was computed after reverting negatively phrased items. Cronbach's  $\alpha$  in the present sample was .74.

### **Procedure**

Volunteers participated remotely, via an online Qualtrics survey. After giving their informed consent to participate, participants provided demographic information, and completed the openness scale and the ART-G. Next, participants were randomly allocated to one of the three reading conditions (literary fiction narrative *vs* popular fiction narrative *vs* expository non-fiction text), where they were randomly presented with one of the three texts available for that condition. Next, participants completed the foregrounding and reception attitude scales. Finally, participants were debriefed in written form and received coursed credits. The entire experiment took 45 mins to complete, on average.

### **Data Analysis**

Hypothesis 1 was tested by means of an ANCOVA with text (literary fiction narrative *vs* popular fiction narrative *vs* expository non-fiction text) as the predictor, aesthetic attitude as the outcome, and ART-G fiction sub-score, openness sum-score, and factual attitude as the covariates. Two planned contrasts were carried out: one contrasted expository non-fiction with literary fiction narrative, one contrasted literary with popular fiction narrative.

Hypothesis 2 was tested via a mediation analysis using the PROCESS macro in SPSS (model 4). Text was a multi-categorical predictor (levels: literary fiction narrative *vs* popular fiction narrative *vs* expository), perceived foregrounding was entered as a mediator, and reception attitude served as the outcome.

## **Results**

### **The impact of literariness on adopting the aesthetic attitude**

Missing values were replaced by the sample mean. This affected 0.15% of the item values of the openness scale, and 0.46% of the item values of the aesthetic attitude score.

## Determinants of the Aesthetic Attitude During Reading

Participants in the three text conditions did not differ on either the openness sum score,  $F(2, 156) = 0.33, p = .72$ , or the ART-G fiction sub score,  $F(2, 156) = 1.05, p = .35$ . However, there was a group difference on the factual attitude sum score,  $F(2, 156) = 6.13, p = .003$ . According to Bonferroni post-hoc tests, participants in the expository non-fiction condition demonstrated a higher score than participants in the popular fiction condition,  $p = .002$ ; the remaining pairwise comparisons were not significant (expository vs literary fiction:  $p = .16$ , popular vs literary fiction:  $p = .35$ ). Descriptive statistics of outcome measures are displayed in Table 4 and illustrated in Figure 3.

Dependent measure	Literary fiction narrative		Popular fiction narrative		Expository non-fiction text	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>N</i>	<i>M (SD)</i>
Openness sum score	54	29.42 (5.14)	47	28.72 (5.23)	58	29.43 (4.55)
ART-G fiction sub score	54	5.93 (7.70)	47	7.55 (7.85)	58	5.43 (7.62)
Foregrounding score	54	13.16 (22.65)	47	0.49 (28.05)	58	9.53 (22.69)
Factual attitude sum score	54	34.02 (6.71)	47	31.85 (6.48)	58	36.56 (7.35)
Aesthetic attitude sum score	54	33.25 (6.90)	47	29.51 (8.22)	58	27.60 (8.29)

*Note.* ART-G = Author Recognition Test – Genres.

*Table 4.* Experiment 2: Descriptive statistics for each dependent measure in each experimental group

The ANCOVA revealed a main effect of text on the aesthetic attitude sum score,  $F(2, 153) = 11.21, p < .0001, \eta^2_p = .128$ . Analysis of the contrasts revealed that the aesthetic attitude sum score in the literary fiction narrative condition was significantly higher than in

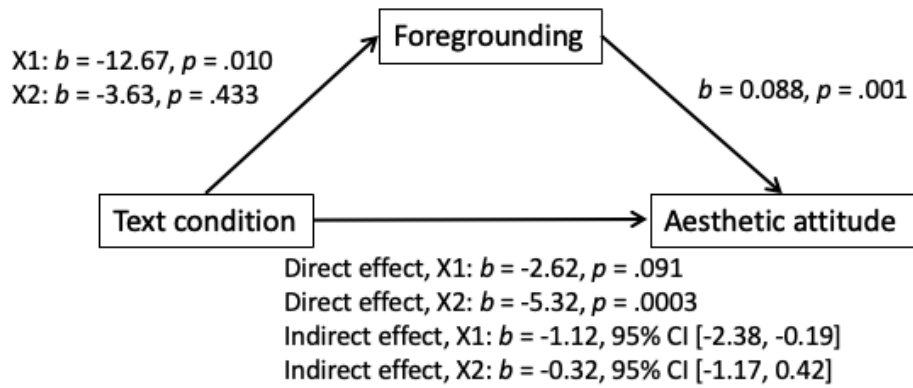
## Determinants of the Aesthetic Attitude During Reading

the expository non-fiction condition, contrast estimate = -6.61,  $SE = 1.40$ ,  $p < .001$ . However, the aesthetic attitude sum score in the literary fiction narrative condition did not differ from the popular fiction narrative condition, contrast estimate = -2.80,  $SE = 1.48$ ,  $p = .060$ . The factual attitude sum score also had a significant impact,  $F(1, 153) = 20.22$ ,  $p < .0001$ ,  $\eta^2_p = .117$ , whereas the openness sum score and the ART-G fiction sub score did not,  $F(1, 153) = 2.72$ ,  $p = .10$ , and  $F(1, 153) = 0.09$ ,  $p = .76$ , respectively.

### **Mediating effects of foregrounding**

Missing values (0.48%) on the foregrounding scale were replaced by the sample mean. Mediation analysis did not suggest a mediating influence of perceived foregrounding effects in explaining differences in aesthetic attitude between the expository non-fiction and the literary narrative fiction condition, since the 95% confidence interval of the corresponding indirect effect contained zero. However, the presence of an indirect effect (indicated by the 95% confidence interval excluding zero) between the contrast comparing the popular and the literary narrative fiction condition on the one hand and aesthetic attitude on the other revealed a mediating role of perceived foregrounding effects on the relationship between text condition (popular vs literary narrative fiction) and aesthetic attitude (see Figure 4).

## Determinants of the Aesthetic Attitude During Reading



X1 = contrast comparing the literary with the popular narrative fiction condition

X2 = contrast comparing the the literary narrative fiction with the expository non-fiction condition

*Figure 4.* Experiment 2: Model of text condition as predictor of aesthetic attitude, mediated by perceived foregrounding. The confidence interval for the indirect effect is a bootstrapped CI based on 5000 samples.



## Determinants of the Aesthetic Attitude During Reading

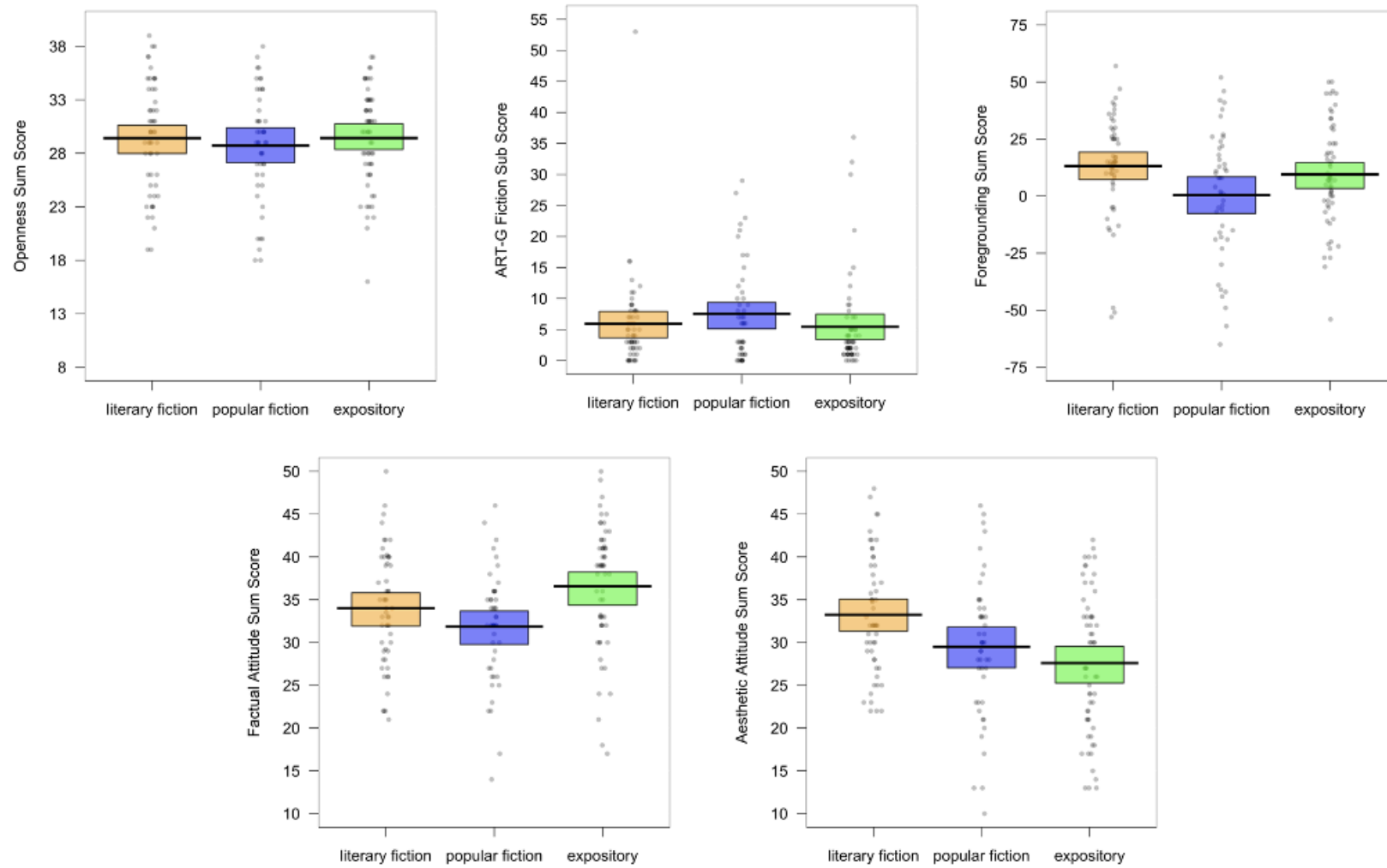


Figure 3. Experiment 2: Pirate plots for each outcomes measure and condition, showing raw data points, a horizontal line reflecting the condition mean, and a rectangle representing the Bayesian highest density interval.

## Discussion

Experiment 2 aimed to further replicate the association between narrativity and reception attitude. It also examined whether the aesthetic attitude is more pronounced when participants are presented with literary fiction stories compared with popular fiction stories. We also tested whether the assumed relation of narrativity with reception attitude was mediated by perceived effects of foregrounding.

Consistent with results from Experiment 1 and the earlier findings by Wimmer (2015), the hypothesis that reading a narrative text is linked with a stronger aesthetic attitude than reading an expository text was confirmed. After controlling for lifetime exposure to print narratives and trait openness, the aesthetic attitude was found to be significantly greater for the literary fiction narrative than for the expository text. A parallel pattern was observed for the relation between the popular fiction story and the expository text.

The prediction that participants who read a literary fiction narrative experience a more intense aesthetic attitude than participants who read a popular fiction narrative was not confirmed. Therefore, even though literariness has been considered as the essential manifestation of textual aesthetics, it does not appear to be necessary for *directly* generating the aesthetic attitude.

Nevertheless, results of a mediation analysis revealed an indirect effect of literary *vs* popular narrative fiction via perceived effects of foregrounding. So, whilst there was no direct relationship between literariness (in terms of literary *vs* popular narrative fiction) and the aesthetic attitude, there was an indirect link such that reading literary fiction narratives was more strongly associated with foregrounding effects than reading popular fiction narratives (see the path leading from text condition to foregrounding in Figure 4); foregrounding effects, in turn, were significantly positively related to the aesthetic attitude (see the path leading from foregrounding to aesthetic attitude in Figure 4). This pattern

## Determinants of the Aesthetic Attitude During Reading

suggests that foregrounding effects may be specific to reading literary as opposed to popular fictional narratives, and further corroborates the role of foregrounding within literariness. Finally, it supports our prediction that foregrounding acts as a mediator in the relationship between narrativity and the aesthetic attitude, albeit restricted to specifically literary fiction narratives.

Interestingly, when literary fiction narratives were contrasted with expository non-fictions, the above-mentioned difference in aesthetic attitude between the two text conditions was not mediated by perceived effects of foregrounding (see Figure 4). This may be because there was no significant effect of text condition (literary narrative fiction vs expository non-fiction) on foregrounding effects. In other words, reading literary fiction was not associated with greater foregrounding effects than reading expository non-fiction. Considering that, firstly, the expository pieces were all journalistic texts published in the *Smithsonian Magazine* and, secondly, the literary potential of journalistic texts has been widely recognized (Appel et al., 2021), it may not be too surprising to find that the foregrounding effects perceived by the participants did not differ between the literary fiction and the expository non-fiction texts. Despite these effects of foregrounding, aesthetic attitude was significantly enhanced after reading a literary fiction compared to expository non-fiction text. In sum, reading literary fiction texts was directly linked to a stronger aesthetic attitude than reading expository non-fiction—without a mediating role of foregrounding effects—, and only indirectly linked with a stronger aesthetic attitude than reading popular fiction texts—this time mediated by perceived effects of foregrounding.

## General Discussion

Aesthetic experiences are mental phenomena that form an important part of our daily lives. Philosophical theories have discussed the role of the aesthetic attitude within the realm

## Determinants of the Aesthetic Attitude During Reading

of aesthetics; however, very little empirical work has been carried out on this topic. In this paper we reported two experiments that tested determinants of the aesthetic attitude during reading. Both experiments aimed to replicate a previously observed pattern suggesting that the aesthetic attitude is enhanced by narrativity. In addition, the two experiments examined different routes through which this relationship may be manifest – Experiment 1 looked at the pathway via psychological transparency and identification with protagonists, and Experiment 2 tested the pathway via literariness and foregrounding effects. This research topic is important because it provides new evidence concerning the aesthetic attitude, a mental state that has so far been largely neglected by empirical aesthetics despite the longstanding tradition of this concept within philosophy. Thus, it helps us gain a more complete understanding of the aesthetic experiences pervading our lives. In addition, our experiments test these effects in *verbal* material, in particular comparing narrative vs expository texts, which is another rather neglected area of research on aesthetics.

In terms of research methods, the two experiments followed a between-subjects design to compare effects across different reading materials. Although within-subjects designs offer important advantages in most experimental work, including higher statistical power and separation of participant variance from other sources of variation, a between-subjects design was deemed the superior choice for the present research questions. This is because the between-subjects design reduced/eliminated the impact of fatigue, attrition and test-retest biases that are common during longer, repetitive testing sessions in a within-subjects design. The superiority of a between-subjects design for this kind of study is further reflected in the many studies that have used this design when comparing effects of text reading (e.g., Dodell-Feder & Tamir, 2018; Kidd & Castano, 2013; Małecki et al., 2019; Samur et al., 2018; Wimmer et al., in press, Experiment 1).

## Determinants of the Aesthetic Attitude During Reading

Both experiments found consistent evidence that reading a narrative text elicits a more intense aesthetic attitude than reading an expository text. This pattern presents a conceptual replication of Wimmer (2015), since the same relationship between narrativity and reception attitude was observed whilst using different reading stimuli and different measures to assess reception attitudes. Thus, this seems to be a stable finding across text materials and methods of measurement. Regarding the underlying mechanisms, Experiment 1 failed to demonstrate that psychological transparency of a text or identification with textual protagonists explain the link between narrativity and reception attitude. Experiment 2 revealed that literariness evokes the aesthetic attitude in two ways: directly by influencing the difference in aesthetic attitude between literary fiction narratives and expository non-fiction texts, and indirectly via foregrounding by explaining the difference in aesthetic attitude between literary and popular fiction narratives.

The two experiments also revealed how the aesthetic attitude might be influenced by individual differences between observers, in particular key aspects of readers' personality. In Experiment 1 empathy, a personality trait that is thought to influence identification with story characters, was found to have a significant effect on the strength of the aesthetic attitude. In contrast, in Experiment 2 openness to experience, a trait that has been proposed to involve high levels of aesthetic sensitivity, did not impact on the aesthetic attitude. To further elucidate the relationship between personality traits and reception attitudes, future research could consider more general traits that have been associated with aesthetic experiences, including education level (see Hartung et al., 2017), tolerance of ambiguity and alexithymia (see Pietras & Czernecka, 2018), as well as more domain-specific traits, including preference for perspective-taking (see Hartung et al., 2017), aesthetic processing preference (see Kopatich et al., 2021), aesthetic responsiveness (see Schlotz et al., 2020), and art affinity (see Tschacher et al., 2015). To achieve this, it would be desirable to work with more

## Determinants of the Aesthetic Attitude During Reading

heterogeneous samples. In the present studies, the homogeneity of samples may have impeded the investigation of individual differences. Firstly, since participants in both experiments were exclusively undergraduates, mainly studying psychology, a stronger impact of the perceiver could be observed if more diverse samples were recruited, especially regarding expertise with reading and/or aesthetics. Such a diverse sample could be achieved by recruiting older aged participants, who have acquired more life experience, greater exposure to text, and have more unstable aesthetic attitudes compared to younger adults (Pugach et al., 2017). This diversity also applies to gender. Although the gender distribution did not differ between the three experimental conditions in either experiment, which rules out a confounding effect of gender, all groups were predominantly feminine. Given well-known gender effects for reading (e.g., Logan & Johnston, 2010), it would be interesting to test whether the current pattern of findings persists in a more gender-balanced sample.

Interestingly, some of the present findings seem to contradict assumptions proposed by traditional philosophical theories of the aesthetic attitude. For example, the observed close relationship between narrativity as an object property and the aesthetic attitude seems to conflict with the idea that *any* object can be an aesthetic object as long as perceivers process it aesthetically. At least for the set of texts investigated by Wimmer (2015) and the present studies, an expository text structure has proven to be significantly less compatible with the aesthetic attitude. Consequently, the assertion that any object can be an aesthetic object seems to require modification. However, the notion that aesthetic properties are subject to an interaction between object and perceiver can in principle be reconciled with the present findings since narrativity and literariness seem to be object properties that are particularly well-suited to evoke the aesthetic attitude. It is possible that this traces back to readers' implicit knowledge that narrativity and literariness are text properties promising high aesthetic pleasure, however this remains a purely speculative claim and deserves targeted

## Determinants of the Aesthetic Attitude During Reading

investigation. Finally, the assumption that the aesthetic attitude is based on a subject-object distinction and originates from the subject is not directly supported by the present evidence. Object properties, in particular narrativity and literariness, were processed similarly across participants, so assuming a subject-object distinction or a guiding role of the subject is not mandatory to explain the current findings.

In conclusion, across two pre-registered experiments, we found that a more intense aesthetic attitude is elicited by reading a narrative text compared to an expository text. We tested potential mechanisms for these effects on aesthetic attitude, and found that both literariness (in terms of literary fiction narrative vs popular fiction narrative) and perceived foregrounding play a role in modulating the aesthetic attitude, however variations in psychological transparency and identification with the story characters did not.

### **Ethical Statement**

This research received ethical approval from the School of Psychology Ethics Committee at the University of Kent. Participants gave informed consent to take part in the study and were fully debriefed at the end of the session.

### **Data Availability Statement**

Data and analysis scripts can be found at <https://osf.io/t7zfe/> (Experiment 1) and <https://osf.io/yp8sa/> (Experiment 2).

### **Declaration of Interests Statement**

The authors declare that they have no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest, in the subject matter or materials discussed in this manuscript.

### **Funding Statement**

This work was funded by a Leverhulme Research Project Grant [RPG-2017-365].

References

- Appel, M., Hanauer, D., Hoeken, H., van Krieken, K., Richter, T., & Sanders, J. (2021). The psychological and social effects of literariness: Formal features and paratextual information. In D. Kuiken, & A. M. Jacobs (Eds.), *Handbook of empirical literary studies* (pp. 177-202). De Gruyter.
- Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An investigation of adults with Asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders, 34*(2), 163-175.  
<https://doi.org/10.1023/B:JADD.0000022607.19833.00>
- Brielmann, A. A., & Pelli, D. G. (2017). Beauty requires thought. *Current Biology, 27*(10), 1506-1513. <https://doi.org/10.1016/j.cub.2017.04.018>
- Brinck, I. (2018). Empathy, engagement, entrainment: The interaction dynamics of aesthetic experience. *Cognitive Processing, 19*(2), 201-213. <https://doi.org/10.1007/s10339-017-0805-x>
- Chatterjee, A., Thomas, A., Smith, S. E., & Aguirre, G. K. (2009). The neural response to facial attractiveness. *Neuropsychology, 23*(2), 135-143. <https://doi.org/10.1037/a0014430>
- Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society, 4*(3), 245-264.  
[https://doi.org/10.1207/S15327825MCS0403\\_01](https://doi.org/10.1207/S15327825MCS0403_01)
- Consoli, G. (2018). Preliminary steps towards a cognitive theory of fiction and its effects. *Journal of Cultural Cognitive Science, 2*(1-2), 85-100. <https://doi.org/10.1007/s41809-018-0019-5>



## Determinants of the Aesthetic Attitude During Reading

- Crozier, W., & Greenhalgh, P. (1992). The empathy principle: Towards a model for the psychology of art. *Journal for the Theory of Social Behaviour*, 22(1), 63–79.  
<https://doi.org/10.1111/j.1468-5914.1992.tb00210.x>
- Dickie, G. (1964). The myth of the aesthetic attitude. *American Philosophical Quarterly*, 1(1), 56-65.
- Dodell-Feder, D., & Tamir, D. I. (2018). Fiction reading has a small positive impact on social cognition: A meta-analysis. *Journal of Experimental Psychology: General*, 147(11), 1713–1727. <https://doi.org/10.1037/xge0000395>
- Fenner, D. E. W. (1996). *The aesthetic attitude*. Humanities Press.
- Gamio, M. (1971). *Mexican immigration to the United States: A study of human migration and adjustment*. Dover Publications.
- Genette, G. (1987). *Seuils*. Editions du Seuil.
- Grande, R. (2013). *The distance between us*. Washington Square Press.
- Hartung, F., Wang, Y., Mak, M., Willems, R., & Chatterjee, A. (2021). Aesthetic appraisals of literary style and emotional intensity in narrative engagement are neurally dissociable. *Communications Biology*, 4(1), 1401. <https://doi.org/10.1038/s42003-021-02926-0>
- Hartung, F., Withers, P., Hagoort, P., & Willems, R. M. (2017). When fiction is just as real as fact: No differences in reading behavior between stories believed to be based on true or fictional events. *Frontiers in Psychology*, 8, 1618.  
<https://doi.org/10.3389/fpsyg.2017.01618>
- Höfel, L., & Jacobsen, T. (2007). Electrophysiological indices of processing aesthetics: Spontaneous or intentional processes?. *International Journal of Psychophysiology*, 65(1), 20-31. <https://doi.org/10.1016/j.ijpsycho.2007.02.007>
- Iser, W. (1991). Das Fiktive und das Imaginäre: Perspektiven literarischer Anthropologie [*The fictive and the imaginary. Perspectives of literary anthropology*]. Suhrkamp.

## Determinants of the Aesthetic Attitude During Reading

Kidd, D. C., & Castano, E. (2013). Reading literary fiction improves theory of mind. *Science*, *342*(6156), 377-380. <https://doi.org/10.1126/science.1239918>

Kidd, D., & Castano, E. (2019). Reading literary fiction and theory of mind: Three preregistered replications and extensions of Kidd and Castano (2013). *Social Psychological and Personality Science*, *10*(4), 522-531. <https://doi.org/10.1177/1948550618775410>

Kidd, D., Ongis, M., & Castano, E. (2016). On literary fiction and its effects on theory of mind. *Scientific Study of Literature*, *6*(1), 42-58. <https://doi.org/10.1075/ssol.6.1.04kid>

Kopatich, R. D., Steciuch, C. C., Feller, D. P., Millis, K., & Siegesmund, R. (2021). Development and validation of the Aesthetic Processing Preference Scale (APPS). *Psychology of Aesthetics, Creativity, and the Arts*. Advance online publication. <https://doi.org/10.1037/aca0000449>

Kotovych, M., Dixon, P., Bortolussi, M., & Holden, M. (2011). Textual determinants of a component of literary identification. *Scientific Study of Literature*, *1*(2), 260-291. <https://doi.org/10.1075/ssol.1.2.05kot>

Logan, S., & Johnston, R. (2010). Investigating gender differences in reading. *Educational Review*, *62*(2), 175-187. <https://doi.org/10.1080/00131911003637006>

Małecki, W., Pawłowski, B., Sorokowski, P., & Oleszkiewicz, A. (2019). Feeling for textual animals: Narrative empathy across species lines. *Poetics*, *74*, 101334. <https://doi.org/10.1016/j.poetic.2018.11.003>

Mar, R. A. (2018). Stories and the promotion of social cognition. *Current Directions in Psychological Science*, *27*(4), 257-262. <https://doi.org/10.1177%2F0963721417749654>

Mar, R. A., & Oatley, K. (2008). The function of fiction is the abstraction and simulation of social experience. *Perspectives on Psychological Science*, *3*(3), 173-192. <https://doi.org/10.1111/j.1745-6924.2008.00073.x>

## Determinants of the Aesthetic Attitude During Reading

- Mar, R. A., & Rain, M. (2015). Narrative fiction and expository nonfiction differentially predict verbal ability. *Scientific Studies of Reading, 19*, 419-433.  
<https://doi.org/10.1080/10888438.2015.1069296>
- Marković, S. (2012). Components of aesthetic experience: Aesthetic fascination, aesthetic appraisal, and aesthetic emotion. *i-Perception, 3*(1), 1-17.  
<https://doi.org/10.1068/i0450aap>
- Menninghaus, W., Wagner, V., Wassiliwizky, E., Schindler, I., Hanich, J., Jacobsen, T., & Koelsch, S. (2019). What are aesthetic emotions?. *Psychological Review, 126*(2), 171-195.  
<https://doi.org/10.1037/rev0000135>
- Miall, D. S., & Kuiken, D. (1999). What is literariness? Three components of literary reading. *Discourse Processes, 28*(2), 121-138. <https://doi.org/10.1080/01638539909545076>
- Moore, M., & Gordon, P. C. (2015). Reading ability and print exposure: Item response theory analysis of the author recognition test. *Behavior Research Methods, 47*(4), 1095-1109.  
<https://doi.org/10.3758/s13428-014-0534-3>
- MRC CBU Wiki (2020). <https://imaging.mrc-cbu.cam.ac.uk/statswiki/FAQ/effectSize>.  
Accessed 31/01/2021
- Mukařovský, J. (1964). *Standard language and poetic language*. Georgetown UP.
- Mukařovský, J. (1977). *The word and verbal art: Selected essays*. Yale UP.
- Panero, M. E., Weisberg, D. S., Black, J., Goldstein, T. R., Barnes, J. L., Brownell, H., & Winner, E. (2016). Does reading a single passage of literary fiction really improve theory of mind? An attempt at replication. *Journal of Personality and Social Psychology, 111*(5), e46. <http://dx.doi.org/10.1037/pspa0000064>
- Pietras, K., & Czernecka, K. (2018). Art training and personality traits as predictors of aesthetic experience of different art styles among Polish students. *Polish Psychological Bulletin, 49*(4), 466-474. <https://doi.org/10.24425/124344>

## Determinants of the Aesthetic Attitude During Reading

Pugach, C., Leder, H., & Graham, D. J. (2017). How stable are human aesthetic preferences across the lifespan? *Frontiers in Human Neuroscience*, *11*, 289.

<https://doi.org/10.3389/fnhum.2017.00289>

Rühling, L. (1996). Fiktionalität und Poetizität [Fictionality and poeticity]. In H. L. Arnold (Ed.), *Grundzüge der Literaturwissenschaft [Essentials of literary studies]* (pp. 25-51).

Dtv.

Samur, D., Tops, M., & Koole, S. L. (2018). Does a single session of reading literary fiction prime enhanced mentalising performance? Four replication experiments of Kidd and Castano (2013). *Cognition and Emotion*, *32*(1), 130-144.

<https://doi.org/10.1080/02699931.2017.1279591>

Schindler, I., Hosoya, G., Menninghaus, W., Beermann, U., Wagner, V., Eid, M., & Scherer, K. R. (2017). Measuring aesthetic emotions: A review of the literature and a new assessment tool. *PLOS ONE*, *12*(6), 1-45. <https://doi.org/10.1371/journal.pone.0178899>

Schlotz, W., Wallot, S., Omigie, D., Masucci, M. D., Hoelzmann, S. C., & Vessel, E. A. (2020). The Aesthetic Responsiveness Assessment (AReA): A screening tool to assess individual differences in responsiveness to art in English and German. *Psychology of Aesthetics, Creativity, and the Arts*. Advance online publication.

<https://doi.org/10.1037/aca0000348>

Schmidt, S. J. (1980). *Grundriß der empirischen Literaturwissenschaft. Teilband 1: Der gesellschaftliche Handlungsbereich Literatur [Fundamentals of the empirical study of literature. Volume 1: Literature as societal system]*. Vieweg.

Shelley, J. (2020), "The Concept of the Aesthetic", *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition), E. N. Zalta (Ed.), URL =

<<https://plato.stanford.edu/archives/win2020/entries/aesthetic-concept/>>.

## Determinants of the Aesthetic Attitude During Reading

- Stanovich, K. E., & West, R. F. (1989). Exposure to print and orthographic processing. *Reading Research Quarterly, 24*(4), 402-433. <https://doi.org/10.2307/747605>
- Thompson, E. R. (2008). Development and validation of an international English big-five mini-markers. *Personality and Individual Differences, 45*(6), 542-548. <https://doi.org/10.1016/j.paid.2008.06.013>
- Tschacher, W., Bergomi, C., & Tröndle, M. (2015). The Art Affinity Index (AAI): An instrument to assess art relation and art knowledge. *Empirical Studies of the Arts, 33*(2), 161–174. <https://doi.org/10.1177/0276237415594709>
- van den Hoven, E., Hartung, F., Burke, M., & Willems, R. M. (2016). Individual differences in sensitivity to style during literary reading: Insights from eye-tracking. *Collabra, 2*(1), 25. <https://doi.org/10.1525/collabra.39>
- van Holt, N., & Groeben, N. (2005). Das Konzept des Foregrounding in der modernen Textverarbeitungspsychologie [The foregrounding concept within modern text processing psychology]. *Journal für Psychologie, 13*(4), 311-332.
- van Krieken, K., Hoeken, H., & Sanders, J. (2017). Evoking and measuring identification with narrative characters—A linguistic cues framework. *Frontiers in Psychology, 8*, 1190. <https://doi.org/10.3389/fpsyg.2017.01190>
- van Peer, W., Hakemulder, J., & Zyngier, S. (2007). Lines on feeling: Foregrounding, aesthetics and meaning. *Language and Literature, 16*(2), 197-213. <https://doi.org/10.1177/0963947007075985>
- van Peer, W., Sopčák, P., Castiglione, D., Fialho, O., Jacobs, A. M., & Hakemulder, F. (2021). Foregrounding. In D. Kuiken, & A. M. Jacobs (Eds.), *Handbook of empirical literary studies* (pp. 145-176). De Gruyter.
- Walters, G. D. (2019). Why are mediation effects so small?. *International Journal of Social Research Methodology, 22*(2), 219-232. <https://doi.org/10.1080/13645579.2018.1517232>

## Determinants of the Aesthetic Attitude During Reading

- Wimmer, L. (2015). *Das ästhetische Paradox bei der Verarbeitung von fiktionalen vs. nicht-fiktionalen Texten [The aesthetic paradox when processing fictional vs. non-fictional texts]*. Dissertation, Heidelberg University [available at <http://www.ub.uni-heidelberg.de/archiv/18232>].
- Wimmer, L., Currie, G., Friend, S., & Ferguson, H. J. (under revision). Opening the closed mind? Effects of reading literary fiction on need for closure and creativity. *Creativity Research Journal*.
- Wimmer, L., Currie, G., Friend, S., & Ferguson, H. J. (in press). The effects of reading narrative fiction on social and moral cognition: Two pre-registered experiments following a multi-method approach. *Scientific Study of Literature*.
- Wimmer, L., Friend, S., Currie, G., & Ferguson, H. J. (2021). Reading fictional narratives to improve social and moral cognition: The influence of narrative perspective, transportation, and identification, *Frontiers in Communication*, 5, 136.  
<https://doi.org/10.3389/fcomm.2020.611935>