

How Temporal Distance Changes Novices' Attitudes Towards Unconventional Arts

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The authors suggest that, just like other attitudes, attitudes toward art may be malleable, and may thus also depend on situational factors. In particular, the authors propose that thinking styles vary within the situation and that an abstract versus concrete thinking style has an influence on attitudes toward conventional (e.g., *Mona Lisa* by da Vinci) versus unconventional (e.g., *Fat Corner* by Beuys) artworks. Construal Level Theory predicts that when people think about the distant future they automatically start thinking in a more abstract way, relative to when people think about the near future, which is supposed to elicit a concrete thinking style. In an experiment, the authors asked participants to think about their lives a year from now or tomorrow. Afterward, in an allegedly unrelated task, participants were asked to evaluate conventional and unconventional artworks. Results showed that participants that had thought about distant events and presumably thought more abstractly were more likely to include unconventional artworks into the category of arts than participants that had thought about near events, and thus presumably thought in more concrete terms. Implications for applied settings are discussed.

Keywords: psychological distance, thinking style, attitudes, aesthetic judgment

In 1988, Joseph Beuys' influential installation *Fat Corner* (1982; i.e., fat piled into a corner of space, left to melt and turn rancid over a number of days) was accidentally refurbished and thereby destroyed by a member of the cleaning personnel of the Düsseldorf art academy, presumably because the person did not perceive the object as a piece of art ("faz.net", 2006). This is only one drastic example of what can happen if people exclude contemporary or what we call unconventional art from the category of arts. However, milder versions of this phenomenon are reflected in statements like "this is not art," which are usually equivalent to deprecation. But why do certain people consider such unconventional artworks (e.g., *Fountain* by Marcel Duchamp) as art while others do not? Taking a social psychological perspective, we suggest that attitudes are not simply represented in long-term memory but rather are malleable and can be influenced by situational circumstances (Schwarz & Strack, 1999; Strack, 1992). Whereas the influence of personality variables on aesthetic appreciation has been well examined (e.g., Feist & Brady, 2004; Furnham & Bunyan, 1988), little is known about the situational circumstances and the underlying psychological mechanisms regarding attitudes toward art. Thus, the overall intent of the present paper is to examine one psychological mechanism, namely construal level, which may be responsible for different typicality estimates of conventional versus unconventional art.

Based on Construal Level Theory (Liberman & Trope, 1998), we propose that peoples' construal level, which can change momentarily, has an impact on attitudes toward works of art. More specifically, we predict that, if people construe objects or events on a higher level (e.g., more abstractly), then inclusion of unconventional arts is more likely compared to when people construe them on a lower level (e.g., more concretely). We tested our hypothesis in an experiment that induces construal level via temporal distance, since it has been shown that temporally distant events are construed more abstractly than temporally close events (Trope & Liberman, 2003). We expected that participants thinking about the distant future consider unconventional as more typical than participants thinking about the proximal future.

We chose Construal Level Theory for the present project because it provides a theoretical framework on the antecedents and consequences of abstract versus concrete thinking (Liberman & Trope, 1998). Moreover, it is one of the best-examined recent theories in social psychology (for an overview see Liberman, Trope, & Stephan, 2007). Construal Level Theory suggests that thinking styles are malleable and can be influenced by situational circumstances, namely by varying psychological distance. Moreover, Construal Level Theory outlines the various effects of different thinking styles, thereby providing a good basis for the derivation of our own hypotheses. It has been shown that, with increasing psychological distance, the construal level of actions (Liberman & Trope, 1998), the self (Nussbaum, Liberman & Trope, 2006), objects (Liberman, Sagristano, & Trope, 2002), and people (Nussbaum, Trope, & Liberman, 2003) becomes more abstract. Our own research demonstrated the effects of psychological distance on performance measures, showing that thinking about the distant future enhanced the performance in abstract creativity tasks (Förster, Friedman, & Liberman, 2004).

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Conventionality as a Meaningful Dimension

What is the distinguishing characteristic between *Fat Corner* and those artworks that are easily included in the category “art”, such as the *Mona Lisa*? We suggest that one salient distinction might be their level of conventionality. Conventional artworks (e.g., *Mona Lisa* by da Vinci) correspond to a traditional concept of art and are usually characterized by great artistic mastery. Unconventional artworks (e.g., *Fat Corner* by Beuys), on the other hand, are associated with a softening of the traditional concept of art, which makes it sometimes difficult to regard them as such. Moreover, in unconventional art, the use of everyday objects is quite common, which might lead to them being indistinguishable from their real life counterparts. In *Fat Corner*, for instance, Beuys explored an unusual material, which is difficult to interpret by itself, but had specific symbolic value for Beuys. Beuys’ interest in fat as a sculptural material is said to have grown out of a wartime experience: Accordingly, after a plane crash in Crimea, he was rescued by nomadic Tartars who rubbed him with fat and wrapped him in felt to heal and warm his body (Tisdall, 1998). So it is the use of unusual materials, the impossibility to distinguish the work of art from its real life counterpart, the hidden meaning, and thus the small correspondence to classical, academic art, which makes *Fat Corner* an unconventional object. And indeed, Beuys’ art is one of the best examples for the softening of the traditional concept of art, as stated by himself: “Only on condition of a radical widening of definitions will it be possible for art and activities related to art [to] provide evidence that art is now the only evolutionary-revolutionary power” (Tisdall, 1974, p. 48).

In the present project, the classification of an artwork as conventional versus unconventional is determined by asking participants for the conventionality level of the artworks and by relating this to other dimensions (for a similar procedure see Amabile, 1982).

Let us now describe what happens on a cognitive level when categorizing an unconventional artwork such as *Fat Corner*.

Empirical Aesthetics and Prototypes

From a cognitive perspective, people may have represented the category of art in their memory system. Like all categories, people’s category of art varies in abstraction level (Mervis & Rosch, 1981): people may have a more abstract as opposed to a more concrete representation of the category. In feature-based theories of categorization (Rosch, 1975; Rosch & Lloyd, 1978), more abstract categories (e.g., bird) have fewer features and are hence more inclusive than concrete ones (e.g., robin). Thus, more abstract categories of art may similarly enhance the likelihood of acceptance (of even atypical members), whereas concrete categories enhance likelihood of exclusion. Whether an object is included into the category further depends on how prototypical it is for the respective category. A prototype can be defined as the “best example of a category” or the “clearest case” (Rosch & Mervis, 1975, p. 574) and can serve as a benchmark against which the surrounding poorer instances are categorized. Exemplars that are similar to the prototype will be included easily, whereas those that are more atypical may be included or excluded depending on the breadth or abstractness of the category.

Furthermore, research on prototypes shows a general inclination to favor members of a category that fit the prototype. This

“preference-for-prototypes” principle (Martindale, 1984, 1988; Whitfield, 1983, 2000; Whitfield & Slatter, 1979) further implies that acceptance of fringe members to a certain group or category increases the likelihood for favorable evaluations. Martindale (1988) has applied the preference-for-prototypes model to the *cognitive theory of aesthetic preference* (Martindale, 1988; Martindale & Moore, 1988; Martindale, Moore, & West, 1988), specifying its underlying processes. Based on semantic network models (McClelland & Rumelhart, 1981), aesthetic preference is assumed to be a positive function of the degree to which a mental representation of a stimulus is activated. Martindale, Moore, and Anderson (2005) argue that preference should be positively related to prototypicality, as mental representations of typical stimuli are activated more frequently and thus are activated more strongly.

Empirical findings generally support this notion. To give only some examples, a positive monotonic linear relationship between prototypicality and aesthetic evaluations was found for faces (Tversky & Baratz, 1985), as well as for furniture (Whitfield, 1983), interior designs (Pedersen, 1986), houses (Purcell, 1984), music (J. D. Smith & Melara, 1990), colors, and forms (Martindale, Moore, & Borkum, 1990), as well as for surrealist (Farkas, 2002) and cubist paintings (Hekkert & van Wieringen, 1990).

From a social psychological perspective, the use of broad and abstract or narrow and concrete categories not only depends on personality characteristics or in other words on concepts of art that are (inflexibly) represented in long-term memory, rather individuals may broaden or narrow their conceptual scope in certain situations. In general, all individuals have the capacity to perceive objects in a more global (they see the forest) or local (they see the trees) way, and situational circumstances can determine whether they think more abstractly or concretely. These ways of perceiving and construing the world may affect breadth of categorization, and Construal Level Theory (by Liberman & Trope, 1998) specifies some psychological mechanisms by which people switch from one to the other depending on the situation.

Construal Level Theory

Construal level theory advanced by Liberman and Trope (1998; Trope & Liberman, 2000; for a review see Trope & Liberman, 2003 and Liberman et al., 2007) deals with the impact of psychological distance on cognitive variables. Psychologically distant things (objects, events) are those that are not present in the direct experience of reality and can refer to four different dimensions, namely temporal distance, spatial distance, social distance, and hypotheticality (Liberman et al., 2007). For example, temporal distance, defined as the perceived proximity of an event in time, changes peoples’ responses to future events by altering their mental representations of those events. The greater the temporal distance, the more likely events are to be represented in terms of more abstract, general, and decontextualized features that convey the perceived essence of the events (high-level construals), rather than in terms of more concrete, contextual, and incidental details of the events (low-level construals). To illustrate, a person thinking about attending a concert a year from now might imagine it in terms of more superordinate goals, such as “having a wonderful experience” or “learning more about the composer”, whereas thinking about a concert that takes place tomorrow might be construed in terms of more subordinate and concrete goals like “ironing one’s

pants". Liberman and Trope (Liberman, Sagristano, & Trope, 2002; Liberman & Trope, 1998; for a review see Liberman et al., 2007) suggested that the tendency to construe near future events concretely and distant future events in abstract or holistic terms evolves as a generalized heuristic, as a result of differences in what people typically know and do about near and distant future situations. Specifically, in everyday life, details about concrete, secondary aspects of future events, including the context in which they occur, alternative scenarios and courses of action, become available only as the events draw closer in time. An association may thus be formed between temporal distance and level of construal. This association may be overgeneralized, causing people to continue using high-level construals when thinking about distant future events and low-level construals when thinking about near future events, even when the information about the near future and distant future events is the same.

In an extensive research program, Liberman and Trope (see Liberman et al., 2007) have adduced ample evidence for their general notion. To illustrate, in one of their studies (Liberman & Trope, 1998, Study 1, Part 1), participants imagined themselves engaging in various activities (e.g., reading a science fiction book, taking an exam) either "tomorrow" or "next year" and described these activities. The analysis of the content of these descriptions was based on the assumption that superordinate, high-level descriptions of an activity fit the structure "[description] by [activity]," whereas subordinate, low-level descriptions fit the structure "[activity] by [description]" (Hampson, John, & Goldberg, 1986). For example, a description of the activity "reading a science fiction book" as "broadening my horizons" fits the first structure ("I broaden my horizons by reading a science fiction book."): this description was therefore classified as a high-level construal of the activity. In contrast, the description "flipping pages" fits the second structure ("I read a science fiction book by flipping pages.") and thus constitutes a low-level construal of the activity. Consistent with Construal Level Theory, it was found that participants used more high-level (i.e., abstract) descriptions in the distant future condition compared to the near future condition, and that the reverse was true for low-level descriptions.

This study was replicated with an adapted version of Vallacher and Wegner's (1989) "Level of Personal Agency" questionnaire, which was originally designed to assess stable individual differences in action identification (Liberman & Trope, 1998, Study 1, Part 2). The questionnaire presented a list of activities, each followed by two statements, one corresponding to the "why" (high-level) aspects of the activity and the other to the "how" (low-level) aspects of the activity (see Strack, Schwarz, & Gschneidinger, 1985). For example, "locking a door" was followed by a choice between the alternative statements "putting a key in the lock" and "securing the house". Participants were asked to choose which alternative description best characterized the activity. Temporal perspective was manipulated by adding a time indicator to each activity, either "tomorrow" or "sometime next year". As predicted by Construal Level Theory, participants chose significantly more high-level, "why" statements in the distant future condition than in the near future condition. The results of these studies support the hypothesis that individuals use terms on a higher level of abstraction to describe distant future activities than near future activities.

More recently, it has been shown also that temporal distance affects the breadth of object categorization. For instance, in one study (Liberman et al., 2002, Study 1), participants were asked to imagine an event (e.g., a camping trip; a yard sale, a visit to NYC) either on the upcoming weekend or a weekend a few months later and to classify 38 objects related to the event (e.g., in the case of a camping trip: tent, toothbrush, flashlight) into as many mutually exclusive and exhaustive groups as they deemed appropriate. As a dependent measure, the authors tallied the number of groups into which participants classified the objects. The results showed that participants used fewer (i.e., broader) categories when they imagined the event occurring in the more distant future.

These findings suggest that distant future perspective promotes abstract and general object representations, whereas near future perspective promotes relatively concrete and specific object representations. Thus, the process of abstraction from the concrete seems to be facilitated by distant time perspective. Building upon this work, we suggest that thinking more abstractly—compared to thinking more concretely—may directly and automatically lead to higher typicality estimates of unconventional arts. To test our assumption, we used an experimental design because the overall goal of the study was to examine the *psychological* mechanisms responsible for different attitudes toward conventional versus unconventional art. This experimental approach allowed us to causally interpret possible effects in terms of our assumed psychological processes. We tested our hypothesis by asking participants to rate the typicality of conventional versus unconventional art. Before doing this, we asked them to think about an event in their life that will happen a year from now or tomorrow. We framed these two phases of the experiment as unrelated tasks within an experimental battery to see whether the assumed process even occurs beyond participants' awareness.

Method

Participants and Design

Twenty-eight (15 male, 13 female, gender had no effects) university students from the Bremen area majoring in disciplines other than psychology were recruited. The study had a 2×2 mixed factorial design with psychological distance (proximal vs. distal) as a between participants factor, and art type (conventional vs. unconventional) as a within participants factor. Typicality estimates for conventional versus unconventional artworks served as the dependent variables.

Stimulus Material

The stimulus material consisted of prints of 12 art objects (circa 9.55×7.62 cm) that were all pretested with regards to their conventionality level ("In your opinion, does this art object correspond to a conventional concept of art?") on a scale from 1 (*not at all*) to 7 (*very much*; see Schimmel, 2006; for more details). The three conventional objects were represented by *Daphne and Apollo* ($M = 5.80$, $SD = 1.08$) by Gian Lorenzo Bernini (1622, Villa Borghese, Rome), *Lady with Flowers* ($M = 5.58$, $SD = 1.18$) by Andrea del Verrocchio (1480, Museo del Bargello, Florence), and *Portrait of a Woman* ($M = 5.54$, $SD = 1.34$) by Antonio Pollaiuolo (1470, Museo Poldi Pezzoli, Milan). Unconventional art-

works included *Untitled No. 7* ($M = 2.36$, $SD = 1.61$) by Agnes Martin (1997, Private Collection), *Brillo Boxes* ($M = 3.36$, $SD = 1.78$) by Andy Warhol (1969, Norton Simon Museum, Pasadena), and *The Pack* ($M = 3.80$, $SD = 1.42$) by Joseph Beuys (1964, Staatliche Museen, Kassel). We ensured that conventionality levels differed significantly between the conventional and unconventional objects. In order to provide a medium-level anchor and to keep participants unsuspecting of the research question, we also included some objects that were rated neutrally. Objects with conventionality levels in between were *Countryside* ($M = 5.02$, $SD = 1.44$) by Erich Heckel (1907, Private Collection), *Young Girl with Dog* ($M = 5.35$, $SD = 1.55$) by Antoine Coytel (1710, Musée National du Louvre, Paris), *South Bank Cycle* ($M = 4.20$, $SD = 1.38$) by Richard Long (1991, Tate Gallery, London), *Reflection of the Big Dipper* ($M = 4.73$, $SD = 1.40$) by Jackson Pollock (1947, Stedelijk Museum, Amsterdam), *Torso Garbe* ($M = 5.03$, $SD = .98$) by Hans Arp (1958, Kunstsammlung LRP, Mainz), and *The Bull* ($M = 4.67$, $SD = 1.55$) by Pablo Picasso (1946, Norton Simon Museum, Pasadena).

Procedure

Participants completed tasks unrelated to the present experiment for about 50 minutes. The manipulation of temporal perspective was similar to the one used by Förster et al. (2004). Participants in the proximal condition were asked to imagine their life tomorrow (near future perspective), whereas participants in the distal condition were asked to imagine their life one year from now (distant future perspective). Participants had approximately four minutes to write down their thoughts and were interrupted after this time. In order to prevent participants from speculating about how these tasks were related and in order to prevent demand or reactance effects, participants were led to believe that this task was unrelated to the dependent measures that followed. Then participants were invited to participate in a study on categorizing artworks. After a mood assessment ("How do you feel right now?" on a scale from 1 = *not good at all*, to 7 = *very good*), they received a folder containing 12 different art objects and were asked to rate them with respect to their typicality for art ("How typical is this object for the category art?") on a scale from 1 (*not typical at all*) to 7 (*very typical*). Upon completion, participants were asked to complete a questionnaire containing several control measures. First, participants again answered a question assessing their current mood ("How do you feel right now?") on a scale from 1 = *not good at all* to 7 = *very good*. Even though myriads of studies found no elicitation of full-blown mood by temporal distance, we wanted to control for mood as potential mediator for the predicted effects. Second, because it is assumed that interest in art and knowledge about art might have an influence on attitudes toward art, several variables capturing art interest and knowledge were examined ("How much are you interested in art?"; "How often did you go to art exhibitions in the last half year?"; "Do you know object no. 1, 2, . . . 12?"; "Do you know the artist who created object no. 1, 2, . . . 12?"). All quantitative control questions were answered on a scale from 1 = *not at all* to 7 = *very much*. Participants were fully debriefed and paid after the entire session. None of them mentioned having noticed any relation between the temporal construal task and the evaluation of art.

Results

Typicality Ratings

Three participants were excluded from the analysis because they refused to do the imagination task. For each participant, the average mean of the three typicality estimates for the highly conventional art and the three typicality estimates for the highly unconventional art pieces were computed respectively and used as dependent variables (see Table 1) in a mixed design ANOVA. There was no main effect for psychological distance, $F < 1$, indicating that overall thinking about the distant or the near future did not have a differential impact on the evaluations. There was however a significant main effect for conventionality, showing that participants in general preferred conventional ($M = 5.50$, $SD = 1.31$) over unconventional ($M = 3.25$, $SD = 1.34$) artworks, $F(1, 23) = 40.00$, $p < .001$, $\eta^2 = .64$ (partial eta squared¹). This main effect mirrors a well-documented finding that representational art is preferred over abstract and contemporary art (Konecni, 1984; McWhinnie, 1987; Millis, 2001; Tobacyk, Bailey, & Myers, 1979). Confirming our predictions, this main effect was qualified by a significant interaction, $F(1, 23) = 5.25$, $p = .03$, $\eta^2 = .19$. Participants in the proximal condition rated conventional art as more typical ($M = 5.76$, $SD = 1.06$) than did participants in the distal condition ($M = 5.22$, $SD = 1.53$); participants in the distal condition, however, rated unconventional art as more typical ($M = 3.81$, $SD = 1.64$) than did participants in the proximal condition ($M = 2.74$, $SD = .76$). Post hoc tests showed that the conditions did not differ in their evaluation of conventional art, $F(1, 23) = 1.08$, $p = .15$ (one-tailed)², $\eta^2 = .05$, but that they differed significantly in their evaluation of unconventional art, $F(1, 23) = 4.45$, $p = .05$ (one-tailed), $\eta^2 = .16$.

Art Interest, Knowledge About the Art Objects, Mood

We first calculated the means for art interest ($M = 3.13$, $SD = 1.60$), art knowledge ($M = .42$, $SD = .09$), frequency of art exhibition visits in the past half year ($M = .70$, $SD = .82$), and mood ($M = 5.52$, $SD = .82$). From these data we can assume that our sample mainly consisted of novices in art: they were not interested in art (their average mean was below the midpoint of the scale); they recognized less than one artwork out of the 12 presented and they visited exhibitions less than once the last half year, on average. A MANOVA revealed that there was no influence of temporal perspective on mood, interest in art and knowledge about art ($F_s < 1.82$).

To check whether the above reported interaction between psychological distance and typicality ratings for unconventional and conventional art objects is due to differences in the control variables, we separately added the control variables as covariates in the mixed model ANOVA. In every ANCOVA, the reported interaction, namely the effect of temporal perspective on typicality estimates, remained significant after controlling for mood, $F(1, 22) = 4.50$, $p = .05$, $\eta^2 = .17$, art interest, $F(1, 22) = 4.42$, $p = .05$, $\eta^2 = .18$, as well as knowledge of the artworks, $F(1, 22) = 4.40$, $p = .05$, $\eta^2 = .18$.

¹ Note that all etas to be reported are partial etas squared.

² Because of testing a directed hypothesis, we used one-tailed tests for these analyses.

Table 1
*Mean Typicality Ratings as a Function of Art Type and
 Temporal Perspective (N = 25)*

Temporal perspective	Art type	
	Conventional art	Unconventional art
Proximal	5.76 (1.06)	2.74 (.76)
Distal	5.22 (1.53)	3.81 (1.64)

Note. Standard deviations for the means are shown in parentheses.

Discussion

In the present study, we manipulated participants' construal level by asking them to think about their life tomorrow or a year from now and then asked them to evaluate the typicality of conventional versus unconventional artworks. We found that participants were more likely to accept unconventional artworks to the category of art after they had thought about the distant future compared to participants who had thought about their proximal future, presumably because their level of construal changed (see Liberman & Trope, 1998). These effects on evaluation took place outside of participants' awareness, contributing to the vast literature on attitude change by demonstrating systematic changes in attitudes in the situation (e.g., Schwarz & Strack, 1999). To be sure, we do not suggest that the process we describe is the only one that enhances or impedes categorization, nor do we claim that this process is useful for everybody. However, our data suggest that construal level is one psychological mechanism that facilitates inclusion to a category. In the following, we will discuss some obvious limitations of our research, possible future lines of research and implications of our research for real life.

Limitations of Our Work

Participant sample. Our sample mainly consisted of novices in art, a fact which was made clear in our control questions on frequency of exhibition visits and the (lack of) familiarity with the artworks. One may suggest that effects are quite different for experts, since research shows that attitudes toward unconventional artwork dramatically change with expertise (e.g., Cupchik, Shereck, & Spiegel, 1994; Hekkert & van Wieringen, 1996; Konecni, 1984; Locher, J. K. Smith, & L. F. Smith, 2001; Nodine, Locher, & Krupinski, 1993; O'Hare, 1976). For example, whereas an expert may judge an artwork on the basis of his or her knowledge of artistic epochs or art styles, a novice has to use the more vague category of art objects in general (see Hekkert & van Wieringen, 1996; Leder, Belke, Oeberst, & Augustin, 2004). Furthermore, research shows that inexperienced observers pay much attention to the realism of content (O'Hare, 1976), whereas experienced observers interpret a painting in terms of form, style, abstract message or meaning (Gombrich, 1960). Thus, for example, an expert may variably judge an expressionist painting against the prototype of expressionist paintings or any other category that he or she has available, whereas a novice would be more restricted and would have to stick to a rather commonsense notion of arts. In other words, it is reasonable to suggest that experts in art already

possess a broader, more abstract category of art, which includes valuable specific sub categories that facilitate inclusion processes. Given these differences in perception, one may wonder whether some of our suggested processes could still apply to experts: Would an expert in expressionism, when thinking about the distant future, categorize an atypical expressionist painting as more typical and thus like it better compared to when he or she thinks about his life tomorrow? Caution is advised in making such a prediction, since research suggests that experts, contrarily to novices, sometimes value divergence from the prototype. Consistently, Hekkert, Snelders, and van Wieringen (2003) found that typicality and novelty were significantly negatively intercorrelated for untrained participants, whereas for experts they were not (see also Purcell, 1984; J. D. Smith & Melara, 1990). More research is needed to make claims on how exactly construal level would influence experts' attitudes toward unconventional artworks. Suffice it to say that our current research is more informative with respect to how novices perceive and judge art.

Conventionality as a dimension and the use of actual artworks. Our research project started with an initial interest in the perception of real artworks. Therefore, in the studies we used existing pieces of art in order to find out when people liked them and when not. We chose judged conventionality as a dimension because it is an easily accessible and meaningful *psychological* dimension that applies to a multitude of attitude objects. Previous studies on aesthetic judgment varied dimensions such as degree of realism (e.g., Kettlewell, Limpscomb, Evans, & Rosston, 1990) or artistic epochs (e.g., Cupchik & Gebotys, 1990). By varying degree of realism, only a relatively confined spectrum of artworks could have been covered, because the dimension is not applicable to contemporary art. Dimensions related to date of origin of an artwork, such as artistic epochs, might have been an alternative. Indeed, unconventional art is closely related to what art historians call contemporary art (Kleiner, Mamiya, & Tansey, 2001), a correlation which is also reflected in our studies, in which the unconventional pieces were more recent than the conventional ones. Yet, as Berlyne (1974, p. 181) stated, "any two paintings [...] must differ in at least a thousand respects. If we find a reliable difference between [...] two paintings, any one of these factors, or any combination of them, could be responsible for the difference." For artworks, these factors may further include form of artistic expression, genre, and perceptual variables such as complexity (Frith & Nias, 1974), symmetry (Locher & Nodine, 1987), figure-ground contrast (Leder, 2002), and color (Martindale & Moore, 1988), to name only a few. Because of this *multilevelness of artworks*, some studies on aesthetic appreciation used simple stimuli (e.g., polygons), in order to gain more experimental control over their stimulus material (e.g., Rawlings, Twomey, Burns, & Morris, 1998).

Quite frankly, in our study, we cannot be completely sure that it was conventionality alone that drove the effects or any other distinction that we might have missed assessing. Note, however, that both the conventional and unconventional artworks we used originated from different periods, were stylistically different, depicted different scenes and colors, and, according to the pretest, did not differ that much on other meaningful dimensions. One natural "confound" however may arise because unconventional paintings are usually less intelligible than more conventional arts. Whereas the conventional artworks we used may lead to an immediate

ascription of meaning (even though from an art historian's view the interpretation may be completely incorrect), the unconventional artworks may have baffled our participants (see Leder et al., 2004). The importance of Warhol's Brillo Boxes, to give an example, may not be obvious to a naïve beholder since it is made of mundane objects. On the other hand, some contemporary art may be more accessible, like for example Gerhard Richter's almost photographic portraits, and may be included into the category without hesitation, whereas paintings by Hieronymus Bosch may pose problems to the perceivers even though they are "classics". However, this example may point to the usefulness of our dimension of conventionality, since a Bosch painting would probably receive lower conventionality ratings than a Richter portrait. Thus, the use of artistic epochs would have fallen short of examining the present question, because certain artists do not represent their epochs well. To sum up, conventionality is related to contemporary versus classic arts, but it is not the same. For our argument, it is the puzzling part of unconventional artworks that prevent their inclusion into the category. However, this assumption was not directly tested, but will be discussed in the following.

Mediating Variables

Understanding art—particularly unconventional or contemporary art—has been compared to a creative problem solving process (Arnheim, 1969) which is, for example, reflected in Joseph Beuys' statement "art is a riddle, man is the answer" (Beuys, 1986, p. 38). Similarly, Leder et al. (2004) suggest that appreciation of unconventional art with its "individualized styles, innovativeness and conceptuality" requires "cognitive mastering", which is a search for meaning (see also Dewey, 1934; Tyler, 1999). Whereas the perceiver may immediately get a feeling that he or she understands the meaning of a more conventional artwork, contemporary, unconventional art often requires some active thinking process or some ascription of meaning.

Thus, one means by which an abstract thinking style enhances the inclusion of unconventional in the category art might be by the ascription of meaning or by "resolving the artistic riddle" (Arnheim, 1969). This assumption should be further examined in future research. Studies from empirical aesthetics provide ideas on how to assess meaningfulness, for example by simply asking participants how meaningful a stimulus (e.g., polygons, Martindale et al., 1990, Study 3) or an artwork is (e.g., Martindale et al., 1990, Studies 6 and 7). Munsinger and Kessen (1964), instead, had participants generate different possible meanings and used the total number of generated meanings as an indicator for meaningfulness. Notably, this task strongly reminds one of classical tasks on creative generation or divergent thinking such as the brick task (Guilford, 1967, 1986). Another possibility would be adding meaning to unconventional artworks as done by Landau, Greenberg, Solomon, Pyszczynski, and Martens (2006) and checking whether our effects diminish.

Typicality Breeds Liking

In the present study, we used typicality ratings as a measure for aesthetic appreciation. As outlined in the theoretical part, preference-for-prototype models (e.g., Martindale, 1984) suggest that aesthetic appraisal of objects is a function of how prototypical

they are. Thus, our results should not only account for typicality estimates but for other measures capturing aesthetic appreciation such as liking or behavioral attitudes measures (e.g., the price one would spend for an artwork). In line with this assumption, in a study not presented here we found that the effect of thinking styles on liking of unconventional artworks was mediated by typicality ratings (Förster & Schimmel, under review).

Implications for Real Life

Admittedly, we introduced thinking styles in a rather artificial way. So what are the implications of this research for "real life"? First and foremost, varying temporal distance is not the only way to induce thinking styles. For example, recently Liberman et al. (2007) could show that different thinking styles can be induced by using all kinds of distances. For instance, it is possible that spatial distance also triggers a more global or abstract thinking style so that one "sees the forest rather than the trees". Thus, unconventional artworks may be understood and appreciated more easily when they are presented farther away from the perceiver. More research is needed to see which kinds of distances (social, spatial, temporal distance, and hypotheticality) are useful in implementing abstract versus concrete thinking styles.

Furthermore, there are certain ways to induce abstract thinking styles more indirectly. For example, it has been theorized and shown that good mood, positive environments, and benign situations enhance abstract processing and inclusive categorization whereas bad mood, threatening environments, and insecure situations enhance a more concrete thinking style and exclusive categorization (Gasper & Clore, 2002; Isen & Daubman, 1984; Friedman & Förster, 2000, 2001, 2005; Förster & Higgins, 2005; for a review see Friedman & Förster, 2007). Recently, we (Förster & Schimmel, under review) were able to show such subtle influences on attitudes toward conventional and unconventional arts. Specifically, in one experiment, half of the participants had to complete an easily solvable paper and pencil maze in which they were asked to lead a cartoon mouse depicted in the center of the maze to a piece of cartoon cheese located outside the maze. The other half of the participants completed an analogous maze in which they were to lead out of the maze to escape a cartoon owl. These rudimentary tasks were meant to elicit a sheer focus on attaining a desired end-state or avoiding an undesired end-state, respectively. Completion of the "owl" maze is assumed to activate the semantic concept of seeking security as well as to procedurally prime avoiding threat, whereas completion of the "cheese" maze is assumed to activate the semantic concept of seeking nurturance as well as to procedurally prime approaching a reward (Friedman & Förster, 2001; Neumann & Strack, 2000). After participants had finished these tasks, they were asked to evaluate conventional and unconventional artworks. Results showed that participants, after having worked on the "cheese" maze, liked unconventional (but not conventional) artworks more than participants that had worked on the "owl" maze. Similarly, Isen and Daubman (1984) showed that participants in good moods were more likely to accept fringe exemplars (e.g., a camel) to the category (e.g., vehicles).

So, is one implication of this study that we should make mental time travels to the distant future before we go to the museum? Should galleries and museums present artworks from a distance, should they create a benign environment in order to enhance

appreciation of their unconventional works? We believe that this should not be the goal. Rather than enhancing the appreciation for one or the other artwork, museums and galleries should create opportunities for the public to experience the diversity of artistic forms of expression. Nevertheless, for the beholder of an artwork, it might be helpful to know that appreciation of a work of art is not only dependent on the artwork itself, but is influenced by a variety of situational parameters. Furthermore, the knowledge on the situational influence on attitudes might be applied in advertising, for example when introducing an innovative, unconventional product.

Generally, we are optimistic that our model will hold in more realistic situations. The subtle difference that we created just by asking participants to think about their near or distant future obviously changed their attitudes and such unconscious effects may also be observed in more complex environments. We hope that our preliminary studies inspire more research examining in more detail the relationship between thinking styles and aesthetic appreciation.

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