

Opposing Art: Rejection as an Action Tendency of Hostile Aesthetic Emotions

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Abstract:

One of Berlyne's many intriguing ideas was that aesthetic feelings have implications for behavior, particularly actions associated with approach, avoidance, and exploration. Later models of aesthetic emotions, however, have not addressed the implications of aesthetic emotions for action. Using controversial contemporary photography, two experiments examined the behavioral implications of negative emotions. Feelings of anger and disgust predicted self-reported indicators of rejection (Experiment 1) and the probability of choosing to receive a controversial postcard as a gift (Experiment 2). These findings illustrate relationships between appraisal, emotions, and action tendencies, and they expand the evidence for the appraisal approach to aesthetic emotions.

Keywords: aesthetics, emotion, action tendencies, anger, disgust, multilevel models

Article:

Decades later, Daniel Berlyne's (1971, 1974a) approach to experimental aesthetics still looms large. Many of the ideas proposed by Berlyne continue to be explored, such as differences between interestingness and pleasingness (e.g., Turner & Silvia, 2006) and the effects of collative features on preferences (e.g., Axelsson, 2007). Other research bears the stamp of Berlyne's tough-minded, experimental approach—for better and for worse—such as studying contrived quasi-art and convenience samples of novices (e.g., Silvia & Barona, in press) instead of people in realistic aesthetic settings (e.g., Mastandrea, Bartoli, & Bove, 2007).

One of Berlyne's central ideas—that aesthetic feelings are connected to motivated action—deserves another look from contemporary researchers. In Berlyne's psychobiological model, subjective feelings of

preference stemmed from biobehavioral systems: preferences, choices, and behaviors were linked. Later theories, however, explain people's aesthetic feelings but have little to say about the consequences of feelings for behavior (Martindale, Moore, & Borkum, 1990; Reber, Schwartz, & Winkielman, 2004). In the present research, we describe how an appraisal approach to aesthetic emotions (Silvia, 2005a, 2005b) explains the links between emotion and action. After describing the appraisal approach, we present two experiments that examine relationships between hostile aesthetic emotions and action tendencies associated with rejection and opposition.

Action and Aesthetics

Berlyne's Psychobiological Model

Berlyne used many measures of behavior in his experiments—a natural decision for a behaviorist (e.g., Berlyne, 1975). For example, Berlyne and his group measured forced-choice decisions (Berlyne & Crozier, 1971), how long people listened to music and viewed images (Crozier, 1974; Day, 1968), and which stimulus people chose to explore when given a choice (Bragg & Crozier, 1974). These behavioral measures of preference were interesting in their own right, but they were particularly interesting when related to physiological and self-report responses. For example, the behavioral measure of viewing time loaded on the same factor as self-reported complexity and electrodermal measures of arousal (Evans & Day, 1971). In other studies, behavioral measures of exploration (e.g., viewing time and listening time) correlated strongly with self-reported interestingness but weakly with self-reported pleasingness (Berlyne, 1974b; Crozier, 1974).

Taken together, Berlyne's work (1) emphasized the effects of aesthetic variables on both feelings and actions, and (2) explored how aesthetic feelings related to action. Behavior was thus not merely an interesting variable in the Berlyne tradition—it was integral to aesthetic processes. Berlyne (1971) argued that feelings of pleasure, interest, and aversion stemmed from the operation of biobehavioral reward systems (see Silvia, 2006b, chap. 2). These reward systems created subjective feelings, rewarded approaching or withdrawing from stimuli, and thus motivated approach and avoidance.

Prototype and Processing Fluency Models

Later theories of aesthetic feelings have had more to say about feelings than about action. Two similar models—the prototypicality model (Martindale et al., 1990) and the processing fluency model (Reber et al., 2004)—explain preference by assuming that people prefer art that is prototypical, easy to process, or meaningful (Halberstadt, 2006; Whitfield, 1983; Winkielman, Halberstadt, Fazendeiro, & Catty, 2006). These theories are

probably too global (Silvia, 2005b): they make predictions only for diffuse feelings of preference, not for specific positive emotions (e.g., interest, happiness, pride, awe). Moreover, Silvia and Brown (2007) pointed out that it is unclear whether low fluency and typicality create neutral states or unpleasant states, and that these theories make no predictions about different negative states (e.g., anger, shame, disgust, sadness).

What do prototype and processing fluency models say about aesthetic feelings and actions? It seems like this question hasn't come up in past work: these theories of aesthetics leave participants stuck in their feelings. The theories make predictions about aesthetic feelings, but they don't contain constructs that connect those feelings to behavior. A prototype approach could borrow the constructs—for example, it could presume that people are more likely to approach pleasing, prototypical art—but they are not part of the theories per se. Indeed, the issue of action receives essentially no treatment in the major papers on prototypicality and processing fluency (Martindale et al., 1990; Reber et al., 2004; Whitfield, 1983).

Appraisals and Aesthetics

An appraisal approach to aesthetic emotions applies mainstream emotion theories to aesthetic experience (Silvia, 2005a, 2005b): the global goal of this approach is to bridge the science of aesthetics and the science of emotion. Appraisal theories propose that each emotion has a distinct *appraisal structure*, the set of evaluations that bring about the emotion (Roseman & Smith, 2001). Interest's appraisal structure, for example, consists of two appraisals: an appraisal of novelty–complexity, and an appraisal of comprehensibility (Silvia, 2005c, 2006b). When people evaluate something as complex yet comprehensible, they will find it interesting (Silvia, 2008). Anger's appraisal structure, in contrast, consists of appraising an event as inconsistent with a goal and as caused intentionally (Kuppens, Mechelen, Smits, & De Boek, 2003; Scherer, 2001).

How are appraisals and emotions connected to action? Appraisal theories of emotion are *componential theories*: they define emotions as coherent clusters of components (Scherer, 2001). These components include expressive behavior (e.g., facial, vocal, and postural expressions); changes in cognition (e.g., appraisals); subjective feelings; physiological changes; and action tendencies, the motivational urge to act. These components are at least loosely linked. For example, the subjective experience of interest covaries with facial expressions of interest, appraisals related to interest, physiological changes related to activation, and behavioral

exploration (see Silvia, 2006b, chap. 1). Similarly, the subjective experience of anger covaries with angry facial expressions, physiological changes preparing the body for confrontation, hostile thoughts, and a motivated tendency toward aggression and self-assertion (see Kuppens et al., 2003).

For the present research, action tendencies—the motivated urges to act—are particularly important. Most emotion theories propose that emotions motivate broad classes of actions. The central function of emotion, according to Lazarus (1991), is to enable people to adapt to a complex and occasionally threatening environment. By motivating actions that are at least broadly functional, emotions help people manage fundamental tasks (Lazarus, 2001), such as achieving goals, building relationships, protecting oneself, enforcing social rules, learning new things, and dealing with loss (Izard & Ackerman, 2000). Labeled *action tendencies* by Frijda (1986, 2007), these motivational components make some kinds of action more likely or more attractive. People do not inevitably act on each emotion, but they will experience a subjective urge or propensity toward action (Brehm, 1999). Overt violence is relatively rare when people are angry, for example, but a subjective urge toward aggressiveness and self-assertion is common. When ashamed, people will feel an urge to withdraw from other people, even if they cannot do so.

According to appraisal theories, then, the relationship between aesthetic emotions and action is straightforward. Both appraisals and motivated actions are components of emotions. Appraisals can bring about emotions, and part of emotion is motivation for a broad class of behavior. For example, appraising an event as complex but comprehensible creates feelings of interest. The purpose of interest, broadly speaking, is to motivate exploration and learning for its own sake (Izard, 1977). Interest's action tendency is thus *exploration*, the urge to seek, inquire, and explore. Many studies have shown that interest predicts behavioral measure of exploration, such as viewing time, attention, task persistence, and learning (see Silvia, 2006b, chap. 1). The cognitive appraisals, the feelings of interest, and the tendency to explore are thus a coherent

The Hostile Emotions

Negative emotions have received little attention in experimental aesthetics. In part, this neglect is due to Berlyne. Despite proposing aversion systems, Berlyne and his research group primarily studied positive feelings of preference, such as ratings of pleasingness and interestingness. As a result, modern work continues to identify aesthetic responses with liking, preference, and pleasingness. Ironically, mainstream emotion psychology has been accused of spending too much time on negative emotions at the expense of positive emotions (e.g., Fredrickson, 1998). Negative emotions deserve more attention in aesthetics research because

they are central to understanding why people reject, condemn, deface, and censor works of art (Silvia & Brown, 2007). It seems unlikely that people deface controversial art because they find it insufficiently pleasing, prototypical, meaningful, or interesting. Instead, people appraise art in ways that evoke hostile emotions, and the action tendencies of hostile emotions involve rejection, self-assertion, and aggression (Izard, 1977; Kuppens et al., 2003)—in short, some art makes some people mad.

Izard (1977) proposed that the emotions of anger, disgust, and contempt form a *hostility triad*, a cluster of emotions associated with aggression, opposition, and conflict. These emotions have interesting differences (e.g., Nabi, 2002; Rozin, Lowery, Imada, & Haidt, 1999), but their similarities are more relevant to the present research. Regarding appraisals, the hostile emotions share appraisals of *goal incongruence*, that something has happened that is bad for one's goals, values, and welfare (Lazarus, 1991). Regarding action tendencies, the hostile emotions share a motivation toward rejection, captured by a felt urge "to move against" (Frijda, Kuipers, & ter Schure, 1989) and "to oppose" (Kuppens et al., 2003) the perceived bad thing.

The goals and values at stake can be abstract. Art rarely threatens physical safety—apart from ill-conceived installation art, perhaps—but it often transgresses against people's values and world views. Conservative audiences, for example, often interpret controversial art as a deliberate affront to their religious values—and they are often right. Many art historians, as another example, are angered by the sappy paintings of Thomas Kinkade, which they interpret as exploiting the public's ignorance and wariness of modern art. Regardless of the values at stake, people will experience hostile emotions when they appraise an event as trespassing against their goals and values. The action tendencies of the hostile emotions, in turn, motivate opposition and rejection.

The Present Research

The present experiments examined whether hostile aesthetic emotions were associated with an action tendency of rejection. Of the hostile emotions, we were particularly interested in anger and disgust. (Contempt is equally interesting, but many research participants misunderstand what *contempt* means; see Ekman & Friesen, 1986; Rozin et al., 1999.) Studying negative aesthetic emotions has two virtues. First, negative emotions offer the sharpest contrasts between theories of aesthetic emotions (see Silvia & Brown, 2007). Other theories make vague predictions or no predictions about negative aesthetic feelings, so studies of negative emotions offer unique support for an appraisal approach. Second, positive emotions and their action tendencies have

received a lot of attention in past work, such as Berlyne's work on behavioral exploration. Examining the action consequences of hostile emotions extends this tradition in a new direction.

In our first study, we showed people a broad range of contemporary photography, including controversial photographs by Andres Serrano and Robert Mapplethorpe. For each photograph, people rated their feelings of anger and disgust as well as their rejecting action tendencies. In our second study, we examined a behavioral measure of rejection: whether people chose to own a postcard of a controversial photograph. In both studies, we expected hostile aesthetic emotions to predict rejection, regardless of whether it is measured as self-reported urges to act (Study 1) or behavioral choices (Study 2).

Experiment 1

Experiment 1 was a first look at the relationship between hostile aesthetic emotions and the action tendency of rejection. People viewed a set of contemporary photographs that varied in tone and content. Some of the photographs were well-known controversial works; others were traditional, somber, or light-hearted. For each photograph, people reported their feelings (e.g., anger and disgust) and answered questions that captured expressions of rejection (e.g., whether the photograph should not be allowed to be shown in public or in museums). The within-person design enabled us to examine the within-person relationship between hostility and rejection. *Participants*

A total of 80 undergraduate students (12 males, 67 females, 1 unreported) at the University of North Carolina at Greensboro (UNCG) participated in this study. Students received credit toward a research option in their General Psychology course.

Materials

Fourteen full-color photographs were selected for use in this study. The pictures were selected based on their potential to elicit a variety of responses: mundane photographs were interspersed with controversial photographs by Andres Serrano and Robert Mapplethorpe. Table 1 lists the photographs.

Procedure and Design

Students participated in the study in groups of 3 to 8. Students were seated at individual tables, where they reviewed and signed a consent form introducing them to the study. The experimenter explained that the purpose of the study was to explore the various responses that could be elicited by different works of art. Students were advised that some of the art could be found offensive or aversive, and that they were free to

withdraw their participation at any time without penalty. It was emphasized, however, that the purpose of the study was to understand all

reactions to art, both positive and negative, and that the study was not intended to offend anyone. The students were encouraged to be as sincere as possible with their responses, and they were assured that their confidentiality would be maintained.

After an opportunity for questions, students received a booklet containing the fourteen full-color photographs. All photographs were labeled at the bottom of the pages (Picture 1, Picture 2, and so on). Titles and brief descriptions of each photograph were provided at the top of each page. Students then received a questionnaire with one page corresponding to each picture (labeled Picture 1, Picture 2, and so on). Students were asked to view each picture and to rate how much they agreed with each of the thirteen statements.

Measures

Within-person measures of emotion and rejection. Anger was measured with the statement “This picture makes me angry.” Disgust was measured with the statement “I find this picture disgusting.” Degree of rejection for each picture was measured with three items: “Should this picture be shown at the Weatherspoon Art Museum?” (the Weatherspoon Art Museum is the university’s campus museum), “Should the government provide grants to financially support this kind of art?”, and “Should this kind of art be displayed in public museums?” People responded to these items on a 7-point scale (1 = *not at all*, 7 = *yes, definitely*).

Between-person measures. We examined between-person measures of personality that maybe relevant to hostile emotions and rejection of art. We measured right-wing authoritarianism (RWA)—an ideology associated with rigid conventionalism, respect for authority, and traditional moral values (Altemeyer, 1981)—with a 15-item scale (Zakrisson, 2005). Sample items include “If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within” and “The society needs to show openness toward people thinking differently” (*reverse-scored*). We measured trait curiosity—the tendency to find new things interesting—with the 10-item Curiosity/Interest in the World subscale of the Values in Action

Inventory (see Kashdan, 2004; Litman & Silvia, 2006). Sample items include “I find the world a very interesting place” and “I have many interests.” Trait curiosity is strongly related to openness to experience, an important variable in aesthetics and creativity (Feist, 1998; McCrae, 2007). RWA and curiosity were measured with a 5-

point scale (1 = *strongly disagree*, 5 = *strongly agree*). We measured interest in art by simply asking “Overall, how interested are you in art?” (1 = *not at all*, 5 = *very interested*).

Results

Analytic Strategy

The data from this study were analyzed using multilevel modeling, also known as hierarchical linear modeling (Hox, 2002; Luke, 2004; Nezlek, 2001; Silvia, 2007). The within-person scores (rejection, hostility) are nested within people, so there are within-person and between-person variables. Readers new to multilevel modeling can think of it as a generalization of the traditional mixed-model ANOVA. Like the ANOVA framework, multilevel models account for the interdependence of within-person observations and explore how between-person and within-person variables interact. Unlike the ANOVA framework, however, multilevel models more easily accommodate continuous variables and missing data.

We formed two new variables prior to analysis. First, we formed a *hostility* variable by combining scores for anger and disgust. The within-person correlation between anger and disgust was quite high, $r = .74$, so they captured essentially the same construct. Second, we reverse-scored the three items measuring rejection and combined them into a *rejection* composite: high values indicate greater levels of rejection. The items for the RWA scale and trait curiosity scale were averaged to form overall scale scores.

At the within-person level, self-reported hostility was a predictor of rejection. Hostility scores were centered at each person's mean (i.e., group-mean centering; see Enders & Tofighi, 2007), and the effect of hostility on rejection was modeled as a random effect. At the between-person level, several variables—right-wing authoritarianism, interest in art, curiosity, and gender—were predictors of rejection and of the effect of hostility on rejection. All between-person variables were centered at the sample's mean (except gender, which is a categorical variable). The model was estimated with Mplus 5, using full-information maximum likelihood with robust standard errors.

Hostility and Rejection

We first examined whether hostile feelings predicted rejection. As expected, hostility and rejection were significantly related, $b = .425$, $SE = .122$, $z = 3.48$ $p < .001$. As people expressed more hostility toward a photograph, their ratings of rejection increased.

Between-Person Predictors of Rejection

In multilevel models, both within-person variables and between-person variables can predict the outcome. We have already seen that hostility, a within-person variable, predicted rejection; did the between-person variables predict rejection? We included RWA, curiosity, interest in art, and gender as predictors of rejection. Except for gender, each variable significantly predicted rejection. Table 2 shows these results.

As we would expect, people high in RWA reported more rejection. The positive coefficient ($b = .612$) indicates that high RWA people rejected the photographs in general. In contrast, both curiosity ($b = -.387$) and interest in art ($b = -.241$) negatively predicted rejection: on the whole, people high in curiosity and interest in art were less likely to express rejection toward the photographs. These effects match past research, which has found that people high in openness to experience and expertise typically find art more pleasing and interesting (e.g., Kozbelt, 2006; Locher, Smith, & Smith, 2001; Silvia, 2006a).

Cross Level Interactions: Predicting the Hostility–Rejection Relationship

Finally, we examined whether the between-level variables explained variability in the relationship between hostility and rejection. This kind of effect is known as a cross-level interaction in multilevel modeling; it's analogous to an interaction between a within-person variable and a between-person variable in a mixed-model ANOVA. In both cases, a within-person relationship varies across levels of a between-person variable.

Only the cross-level interaction involving RWA was significant; gender, interest in art, and trait curiosity did not predict the hostility–rejection relationship (see Table 2). The RWA effect was positive, $b = .172$, $SE = .062$, $p = .005$: as RWA increased, the relationship between hostility and rejection became stronger. Stated differently, hostility and rejection were more highly correlated for people high in right-wing authoritarianism.

Discussion

Experiment 1 found support for rejection as an action tendency of hostile aesthetic feelings. At the within-person level, hostility strongly predicted rejection: as hostility toward a photograph increased, rejection increased. Intriguingly, right-wing authoritarianism (RWA) was an important between-person variable. People high in RWA were more rejecting of the photographs overall, and they had a stronger hostility–rejection relationship. When feeling hostile, they were more likely to respond with rejection. The cluster of values and ideologies that make up RWA are clearly contrary to broad aesthetic interests. People high in RWA are traditional, dogmatic, deferential to authority, conservative, and critical of marginal members of society

(Altemeyer, 1981; Zakrisson, 2005); in many respects, they are the opposite of people high in openness to experience (see McCrae, 1996).

One obvious limitation of Experiment 1 is its self-reported measure of rejection. In appraisal research, it is common to measure action tendencies using self-reports (e.g., Frijda et al., 1989; Kuppens et al., 2003). This approach is respectable—if action tendencies are “felt urges” to act, then people ought to be capable of describing them using self-reports—but our measure of rejection is certainly not a true behavioral measure. The self-report scales do capture a felt urge to act against the photographs, but a behavioral measure would provide a clearer demonstration of the implications of hostile emotions for rejection. Experiment 2 thus used a different design and a behavioral measure—choice of which photograph to receive as a gift—of rejection.

Experiment 2

Following a strategy often used in intrinsic motivation research (e.g., Sansone, Weir, Harpster, & Morgan, 1992), Experiment 2 measured rejection through the selection of a gift offered at the end of the study. People completing the study were offered the chance to receive a postcard of a photograph used in the study; one of their options was *Piss Christ*, the target photograph. People could choose to own only one of the options, so choosing versus not choosing *Piss Christ* is a good behavioral measure. We expected that people’s hostile feelings in response to *Piss Christ* would predict whether or not they chose it or rejected it.

Participants

A total of 78 undergraduate students (15 males, 61 females, 2 unreported) at UNCG participated in this study. Students received credit toward a research option in their General Psychology course.

Procedure and Design

Eight photographs were selected for this study (see Table 1). Serrano’s *Piss Christ* was the target photograph; the others were essentially filler images for the purpose of this study. Students were introduced to the experiment in the same manner as Experiment 1, with one exception: they were told that at the end of the experiment they would be offered a small gift for their participation. At this point, they were not told what the gift would be. They learned that this gift would be mailed to them later in the semester, so that the experimenters could know how many to buy. The students were asked for their postal addresses, but they were assured that their confidentiality would be maintained and that their personal information would be separated

from their questionnaires. (After coding which gift people chose, the experimenter separated the identifying information from the questionnaires.)

Students were given booklets similar to the booklets in Experiment 1. Each photograph in the booklet was labeled and accompanied by its title and a brief description. There were seven filler photographs and one target photograph—*Piss Christ*. There were a total of eight orders of presentation for the photographs, so that the target photograph appeared as Picture 1 through Picture 8. The order of the photographs around the target was randomly assigned and was different for each booklet.

Students then received a questionnaire with one page corresponding to each picture. Students were asked to view each photograph and to rate how much they agreed with a series of emotion statements. All statements were measured on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*yes, definitely*). The hostile emotions were measured with the items “This picture makes me angry” and “This picture disgusts me.”

The questionnaire’s final page depicted four images and told the participants that they could receive a high-quality postcard of one of the images as a gift. One of the options was *Piss Christ*. Our behavioral measure of choice was whether or not participants chose to receive *Piss Christ* as their free postcard: this choice was scored simply as *yes, chose Piss Christ* (0) or *no, did not choose Piss Christ* (1). After the conclusion of data collection, the experimenter mailed participants the postcard that they requested.

Results and Discussion

We predicted that the more anger and disgust people reported in response to *Piss Christ*, the less likely they were to choose to own a postcard of it. We first explored parametric and nonparametric correlations between the ratings of anger and disgust and the choice of postcard (see Table 3). As in Experiment 1, anger and disgust were strongly correlated. The positive correlations indicated that high anger and disgust were associated with rejecting *Piss Christ*. Of the 78 people in the study, one-third did not choose any of the four postcards. This posed an analytic issue: should people who didn’t select a postcard be treated as missing and omitted from

the analyses, or should they be considered to have rejected the *Piss Christ* postcard? Because there was no way to know which option would be best, we conducted analyses that excluded people who made no choice ($n = 53$) and that coded no-choice as not choosing the *Piss Christ* postcard ($n = 76$; two were missing for other reasons). In both analyses, the results were similar (see below). Only 5 people selected the *Piss Christ* postcard, which is 6.4% of all people and 9.4% of people who chose a postcard.

Because the outcome variable for the study was binary—selecting versus rejecting *Piss Christ*—logistic regression analyses (Long, 1997) were conducted to estimate the effects of anger and disgust on the probability of a person selecting the target postcard. When anger was entered as the sole predictor, it significantly predicted postcard selection when the missing cases were excluded ($b = 0.65$, $SE = 0.29$, $Wald(1) = 4.96$, $p < 0.03$) and when they were coded as rejecting *Piss Christ* ($b = 0.57$, $SE = 0.28$, $Wald(1) = 4.22$, $p < 0.05$). Table 4 lists the probabilities of rejecting the *Piss Christ* postcard given a particular anger rating. The probabilities show that the angrier people reported being, the less likely they were to select the *Piss Christ* postcard. Interestingly, the probability of rejecting the *Piss Christ* postcard was at chance level at an anger value not represented by the 7-point scale used in the study. For the probability of selecting versus rejecting *Piss Christ* to be 0.50, the anger rating reported by any given person would have to be 0.071 if $n = 53$ or -1.32 if $n = 76$. This indicates that anger influenced the probability of rejection, but people were generally likely to reject the postcard.

When disgust was entered as the sole predictor, it too significantly predicted postcard selection when missing cases were excluded ($b = 0.61$, $SE = 0.276$, $Wald(1) = 4.90$, $p < 0.03$) and when they were coded as rejecting *Piss Christ* ($b = 0.54$, $SE = 0.26$, $Wald(1) = 4.19$, $p < 0.05$). Table 4 also gives the probabilities associated with disgust and rejection of the *Piss Christ* postcard. Like anger, disgust significantly influenced the probability that someone would not choose *Piss Christ*.

The high correlation between anger and disgust (Table 3) suggests that they ought to be combined into an global *hostility* variable, as in Experiment 1. We thus averaged the ratings of anger and disgust and then used hostility to predict postcard choice. A logistic regression analysis found that hostility significantly predicted postcard selection when missing cases were excluded ($b = 0.703$, $SE = 0.303$, $Wald(1) = 5.40$, $p < 0.03$) and when they were coded as rejecting *Piss Christ* ($b = 0.644$, $SE = 0.305$, $Wald(1) = 4.46$, $p < 0.035$). The probabilities associated with varying rates of hostility can also be seen in Table 4. As hostility increased, so too did the probability of rejection.

General Discussion

What do aesthetic emotions do? Theories of aesthetics vary in how they explain the link between emotion and action. To Berlyne (1971), the motivation to approach or avoid stimuli was central to aesthetics—behavior was important in his behavioral model. In later theories, however, the role of action in aesthetic experience seems less important. Theories founded on prototypicality and processing fluency make predictions only for

feelings of liking and preference, not for negative emotions or for other positive emotions (e.g., interest, awe, pride). These theories have not said much about the implications of preference for action, but past work suggests that liking and preference are not strongly tied to measures of exploration and choice. In Berlyne's studies, for example, interestingness explained much more variance in viewing time and behavioral choice than pleasingness did (e.g., Berlyne, 1974b; Crozier, 1974).

A virtue of the appraisal approach to aesthetic emotions is that it makes straightforward predictions about emotions and action. Action tendencies—like appraisals, facial expressions, and subjective feelings—are components of emotion (Frijda, 2007; Lazarus, 1991; Scherer, 2001). Appraisals, feelings, and urges to act thus typically go together. The present studies showed that the experience of hostile aesthetic emotions—anger and disgust—predicted action tendencies related to rejection and opposition. In the first study, hostile feelings predicted self-reported

action tendencies; in the second study, hostile feelings predicted whether people chose to own a postcard of a controversial photograph. Taken together, these studies illustrate the relationship with different outcomes (i.e., self-reports and behavioral choices) and with different designs (i.e., within-person and between-person).

This research highlights the value of studying negative aesthetic emotions. The historical emphasis on mild positive feelings has obscured people's negative responses to art. Studying hostile emotions should enhance our understanding of why people reject, condemn, censor, and deface art. In addition to hostile feelings, researchers should explore negative emotions such as sadness, guilt, shame, and embarrassment in response to art. These negative emotions have received essentially no attention in empirical aesthetics. According to an appraisal approach, these emotions should have different implications for action. Hostile emotions involve an action tendency of rejection and opposition; emotions such as shame and embarrassment, in contrast, involve action tendencies of withdrawing from other people and seeking solitude. An appraisal approach can make subtle predictions about the causes and consequences of distinct aesthetic emotions.

References

- Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg, Canada: University of Manitoba.
- Axelsson, Ö. (2007). Individual differences in preferences for photographs. *Psychology of Aesthetics, Creativity, and the Arts, 1*, 61–72.
- Berlyne, D. E. (1971). *Aesthetics and psychobiology*. New York: Appleton-Century-Crofts.

- Berlyne, D. E. (1974a). The new experimental aesthetics. In D. E. Berlyne (Ed.), *Studies in the new experimental aesthetics* (pp. 1–25). Washington, DC: Hemisphere.
- Berlyne, D. E. (1974b). Verbal and exploratory responses to visual patterns varying in uncertainty and in redundancy. In D. E. Berlyne (Ed.) *Studies in the new experimental aesthetics* (pp.121–158). Washington, DC: Hemisphere.
- Berlyne, D. E. (1975). Behaviorism? Cognitive theory? Humanistic psychology? To Hull with them all. *Canadian Psychological Review*, *16*, 69–80.
- Berlyne, D. E., & Crozier, J. B. (1971). Effects of complexity and prechoice stimulation on exploratory choice. *Perception and Psychophysics*, *10*, 242–246.
- Bragg, B. W. E., & Crozier, J. B. (1974). The development with age of verbal and exploratory responses to sound sequences varying in uncertainty level. In D. E. Berlyne (Ed.) *Studies in the new experimental aesthetics* (pp. 91–108). Washington, DC: Hemisphere.
- Brehm, J. W. (1999). The intensity of emotion. *Personality and Social Psychology Review*, *3*, 2–22. Crozier, J. B. (1974). Verbal and exploratory responses to sound sequences varying in uncertainty level. In D. E. Berlyne (Ed.) *Studies in the new experimental aesthetics* (pp. 27–90). Washington, DC: Hemisphere.
- Day, H. I. (1968). Some determinants of looking time under different instructional sets. *Perception and Psychophysics*, *4*, 279–281.
- Ekman, P., & Friesen, W. V. (1986). A new pan-cultural facial expression of emotion. *Motivation and Emotion*, *10*, 159–168.
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, *12*, 121–138.
- Evans, D. R., & Day, H. I. (1971). The factorial structure of responses to perceptual complexity. *Psychonomic Science*, *27*, 357–359.
- Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review*, *2*, 290–309.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, *2*, 300–319.
- Frijda, N. H. (1986). *The emotions*. Cambridge: Cambridge University Press.

- Frijda, N. C. (2007). *The laws of emotion*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Frijda, N. C., Kuipers, P., & ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology*, *57*, 212–228.
- Halberstadt, J. (2006). The generality and ultimate origins of the attractiveness of prototypes. *Personality and Social Psychology Review*, *10*, 166–183.
- Hox, J. (2002). *Multilevel analysis: Techniques and applications*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Izard, C. E. (1977). *Human emotions*. New York: Plenum.
- Izard, C. E., & Ackerman, B. P. (2000). Motivational, organizational, and regulatory functions of discrete emotions. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 253–264). New York: Guilford.
- Kashdan, T. B. (2004). Curiosity. In C. Peterson & M. E. P. Seligman (Eds.), *Character strengths and virtues: A handbook and classification* (pp. 125–141). New York: Oxford University Press.
- Kozbelt, A. (2006). Dynamic evaluation of Matisse's 1935 Large Reclining Nude. *Empirical Studies of the Arts*, *24*, 119–137.
- Kuppens, P., Mechelen, I. V., Smits, D. J., & De Boek, P. (2003). The appraisal basis of anger: Specificity, necessity, and sufficiency of components. *Emotion*, *3*, 254–269.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S. (2001). Relational meaning and discrete emotions. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 37–67). New York: Oxford University Press.
- Litman, J. A., & Silvia, P. J. (2006). The latent structure of trait curiosity: Evidence for interest and deprivation curiosity dimensions. *Journal of Personality Assessment*, *86*, 318–328.
- Locher, P. J., Smith, J. K., & Smith, L. F. (2001). The influence of presentation format and viewer training in the visual arts on the perception of pictorial and aesthetic qualities of paintings. *Perception*, *30*, 449–465.
- Long, J. S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage.
- Luke, D. A. (2004). *Multilevel modeling*. (Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07–143). Newbury Park, CA: Sage.
- Martindale, C., Moore, K., & Borkum, J. (1990). Aesthetic preference: Anomalous findings for

Berlyne's psychobiological model. *American Journal of Psychology*, 103, 53–80.

Mastandrea, S., Bartoli, G., & Bove, G. (2007). Learning through ancient art and experiencing emotions with contemporary art: Comparing visits in two different museums. *Empirical Studies of the Arts*, 25, 173–191.

McCrae, R. R. (1996). Social consequences of experiential Openness. *Psychological Bulletin*, 120, 323–337.

McCrae, R. R. (2007). Aesthetic chills as a universal marker of openness to experience. *Motivation and Emotion*, 31, 5–11.

Nabi, R. L. (2002). The theoretical versus the lay meaning of disgust: Implications for emotion research. *Cognition and Emotion*, 16, 695–703.

Nezlek, J. B. (2001). Multilevel random coefficient analyses of event- and interval-contingent data in social and personality psychology research. *Personality and Social Psychology Bulletin*, 27, 771–785.

Reber, R., Schwartz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*, 8, 364–382.

Roseman, I. J., & Smith, C.A. (2001). Appraisal theory: Overview, assumptions, varieties, controversies. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, method, research* (pp. 3–19). New York: Oxford University Press.

Rozin, P. R., Lowery, L., Imada, S., & Haidt, J. (1999). The CAD triad hypothesis: A mapping between three moral emotions (contempt, anger, disgust) and three moral codes (community, autonomy, divinity). *Journal of Personality and Social Psychology*, 76, 574–586.

Sansone, C., Weir, C., Harpster, L., & Morgan, C. (1992). Once a boring task always a boring task? Interest as a self-regulatory mechanism. *Journal of Personality and Social Psychology*, 63, 379–390.

Scherer, K. R. (2001). Appraisal considered as a process of multilevel sequential checking. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, method, research* (pp. 92–120). New York: Oxford University Press.

Silvia, P. J. (2005a). Cognitive appraisals and interest in visual art: Exploring an appraisal theory of aesthetic emotions. *Empirical Studies of the Arts*, 23, 119–133.

Silvia, P. J. (2005b). Emotional responses to art: From collation and arousal to cognition and emotion. *Review of General Psychology*, 9, 342–357.

Silvia, P. J. (2005c). What is interesting? Exploring the appraisal structure of interest. *Emotion*, 5,

- Silvia, P. J. (2006a). Artistic training and interest in visual art: Applying the appraisal model of aesthetic emotions. *Empirical Studies of the Arts*, *24*, 139–161.
- Silvia, P. J. (2006b). *Exploring the psychology of interest*. New York: Oxford University Press.
- Silvia, P. J. (2007). An introduction to multilevel modeling for research on the psychology of art and creativity. *Empirical Studies of the Arts*, *25*, 1–20.
- Silvia, P. J. (2008). Interest—The curious emotion. *Current Directions in Psychological Science*, *17*, 57–60.
- Silvia, P. J., & Barona, C. M. (in press). Do people prefer curved objects? Angularity, expertise, and aesthetic preference. *Empirical Studies of the Arts*.
- Silvia, P. J., & Brown, E. M. (2007). Anger, disgust, and the negative aesthetic emotions: Expanding an appraisal model of aesthetic experience. *Psychology of Aesthetics, Creativity, and the Arts*, *1*, 100–106.
- Turner, S. A., Jr., & Silvia, P. J. (2006). Must interesting things be pleasant? A test of competing appraisal structures. *Emotion*, *6*, 670–674.
- Whitfield, T. W. A. (1983). Predicting preference for familiar, everyday objects: An experimental confrontation between two theories of aesthetic behavior. *Journal of Environmental Psychology*, *3*, 221–237.
- Winkielman, P., Halberstadt, J., Fazendeiro, T., & Catty, S. (2006). Prototypes are attractive because they are easy on the mind. *Psychological Science*, *17*, 799–806.
- Zakrisson, I. (2005). Construction of a short version of the Right-Wing Authoritarianism (RWA) scale. *Personality and Individual Differences*, *39*, 863–872.

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Table 1

Photographs Used in Experiments 1 and 2

	Title	Artist	Year
Experiment 1	<i>Aeronaut 2</i>	Maria Friberg	2002
	<i>Self-Portrait</i>	Robert Mapplethorpe	no date
	<i>Element 2</i>	Mary Woodall	2002
	<i>Jane Doe Killed By Police</i>	Andres Serrano	1992
	<i>Thomas</i>	Robert Mapplethorpe	1987
	<i>Aware But Still There 2</i>	Maria Friberg	2002
	<i>Ken Moody</i>	Robert Mapplethorpe	1983
	<i>Madonna and Child 2</i>	Andres Serrano	1989
	<i>Element 10</i>	Mary Woodall	2002
	<i>Fatal Meningitis</i>	Andres Serrano	1992
	<i>Parrot Tulips</i>	Robert Mapplethorpe	1988
	<i>Rat Poison Suicide</i>	Andres Serrano	1992
	<i>Hermes</i>	Robert Mapplethorpe	1988
	<i>Piss Christ</i>	Andres Serrano	1987
Experiment 2	<i>Aeronaut 2</i>	Maria Friberg	2002
	<i>Aware But Still There 2</i>	Maria Friberg	2002
	<i>Chicago</i>	Harry Callahan	ca. 1950
	<i>Dogs on Wheels</i>	Robert Doiseau	1977
	<i>Element 2</i>	Mary Woodall	2002
	<i>Japanese Bath</i>	Louise Dahl Wolfe	1954
	<i>Piss Christ</i>	Andres Serrano	1987
	<i>Untitled (#314F)</i>	Cindy Sherman	1994

Note. The photographs for Experiment 1 are listed in the order in which they were presented; the photographs in Experiment 2 are listed in alphabetical order.

Table 2

Multilevel Effects for Experiment 1

Outcome	Predictor	<i>b</i>	<i>SE</i>	<i>Z</i>	<i>p</i>
Rejection	RWA	.612	.140	4.36	.001
	Curiosity	-.387	.175	2.21	.027
	Interest in Art	-.241	.091	2.63	.008
	Gender	-.083	.264	.31	.753
Hostility–Rejection Slope	RWA	.172	.062	2.79	.005
	Curiosity	.088	.067	1.32	.188
	Interest in Art	-.022	.034	.65	.518
	Gender	.140	.128	1.09	.277

Note. RWA = right-wing authoritarianism.

Table 3

Pearson's r and Kendall's τ_b Correlations for Experiment 2

	Postcard	Anger	Disgust
Postcard	1	$r = .363^{**}$	$r = .350^*$
Anger	$\tau = .293^*$	1	$r = .817^{**}$
Disgust	$\tau = .307^*$	$\tau = .709^{**}$	1

* $p < .05$, ** $p < .01$

Table 4

Probabilities of Not Choosing the Piss Christ Postcard: Experiment 2

Emotion	Rating	Probabilities	
		<i>n</i> = 53	<i>n</i> = 76
Anger	-1.3176		.5000
	.0713	.5000	
	1	.6662	.7905
	2	.7918	.8700
	3	.8788	.9223
	4	.9325	.9547
	5	.9634	.9739
	6	.9805	.9851
	7	.9897	.9916
Disgust	-1.2766		.5000
	-.0705	.5000	
	1	.6381	.7717
	2	.7644	.8523
	3	.8566	.9079
	4	.9166	.9439
	5	.9529	.9664
	6	.9738	.9800
	7	.9856	.9882
Hostile	-0.6475		.5000

-.3912	.5000	
1	.6054	.7429
2	.7560	.8462
3	.8622	.9129
4	.9267	.9523
5	.9623	.9743
6	.9810	.9864
7	.9905	.9928

Note. Some people did not choose to receive any postcard. One set of analyses was conducted excluding these people ($n = 53$). A second set of analyses was conducted with the missing values coded as rejecting the *Piss Christ* postcard ($n = 76$).