Art in Its Experience: Can Empirical Psychology Help Assess Artistic Value?

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There are two extreme views when it comes to the role of empirical sciences in evaluating a work of art: One view states that researchers only need to ask respondents—often undergraduate students—how much they like a piece of art in order to determine its artistic value. An example was presented in the presidential address to the Congress of the International Association of Empirical Aesthetics by Colin Martindale. He presented findings that experimental participants who were untrained in art liked paintings by academic painters, such as Bouguereau (Fig. 1) or Alma Tadema, more than paintings from impressionist or postimpressionist painters. He concluded that the “high esteem in which our subjects held academic art suggests that its bad reputation among art critics comes from prestige suggestion rather than from anything intrinsically bad in the paintings themselves” [1]. Martindale questioned the artistic value of modern art, arguing that it does not please people untrained in art; they prefer to see representative art, like the example by Bouguereau shown in Fig. 1. In a similar vein, Steven Pinker disqualified much of modern art because it does not appeal to the senses [2]. He noted that modern art is evaluated by elites who exert institutional power, which has nothing to do with how our minds are built to understand and evaluate artistic creations.

Another view is represented by George Dickie, who concluded that psychological research so far has not provided any information that is relevant to aesthetics [3]. There is virtually no exchange between empirical psychology and art theory, and philosophers either do not mention psychology at all or separate it from art theory [4]. Danto stated that there “is doubtless a psychology of everyday aesthetics to be worked out, and if there are what one might call laws of aesthetic preference, it would be greatly to our advantage to learn what they are” [5]. However, according to many art theorists, including Danto, this is not the whole story, and testable aesthetic preferences have played a minuscule role in modern philosophical discussions about artistic value. What follows is a discussion of the question: Under which conditions could empirical psychology be useful for the evaluation of an artwork?

EXPECTED AND ACTUAL EXPERIENCE

The starting point is a definition of artistic value in terms of experience. A reasonably broad definition that suits the purpose of this article is that a knowledgeable audience understands a piece of art in its experience, which includes cognitive, perceptual, emotional and imaginative processes [6]. Moreover, aesthetic experience is supposed to be immediate, without the intervention of reason [7]. Based on this definition of artistic value [8], I am going to present an approach of shared evaluation of experience in art in that art theorists—philosophers, art historians, art critics or artists—define the criterion of what the experience is expected to be; scientists—most often psychologists—provide a test of whether this criterion is fulfilled, in that they examine the actual experience of recipients and its match to the criterion. I do not specify who expects the experience: It could be the artists themselves who intend to elicit a certain experience with their artwork, but some art theorists do not assign any importance to the intention of the artist when they assess the artistic value of a work of art [9]. However, art theorists might be in a position to state what is intended by a certain work of art, or what a work of art means today. Such an artistic intention serves as a criterion that has to be matched in order to evaluate a work of art. Note that I only consider intentions related to experiences of recipients; intentions of an artist to give a truthful representation or to convey a political or moral message are not within the scope of intentions discussed here. According to this approach, neither reasoning nor some objective criteria should influence artistic evaluation, but only whether a knowledgeable person has the predicted experience.

This approach is similar to naturalizing epistemology. Quine argued that epistemology should incorporate knowledge from cognitive psychology in order to determine the justification of beliefs [10]. Goldman put this proposal into practice and showed how studies in cognitive science crucially contribute to determine epistemic justification of beliefs [11]. The criteria are set by philosophers: Goldman, for example, presented a relativist view of justification, stressing the necessity of cognitive processes that yield an above-chance probability of true beliefs. Empirical research can examine whether a certain belief is justified only if the criteria for epistemic justification are given.

Similarly, I argue that empirical research can examine whether the predicted experience matches the actual experi-
ence only if the criterion in terms of a predicted experience is given. For example, if a work of art in a certain context is supposed to lead to an experience of being novel [12], a work of art is valuable if it can be shown that it results in an experience of novelty and even surprise; it would be—according to this criterion—less valuable as a piece of art if people experience the work as familiar and unsurprising.

Basically, if an artist or art theorist predicts that recipients experience a work of art in a certain way, it is possible in principle that this claim can be tested empirically. If the artist or art theorist claims that a work of art is fully understood in this predicted experience, then the experience is not spontaneous, but guided by the demands of art theory. Whether demand characteristics are a problem or not depends on the theory of art one adheres to: If such a theory states that recipients should have the predicted experience spontaneously, then having to try hard to get into this experience would not qualify as something genuine. However, learning relaxation techniques often is aimed at certain experiences, and those practicing relaxation techniques train to get closer and closer to the “right” feeling. In this sense, it does not disqualify a piece of art if recipients have to learn how to experience it, as long as they really have the experience. Therefore, demand characteristics are not necessarily a problem; they may be an integral part of understanding a piece of art in its experience.

In contrast, self-presentation concerns are a real problem because recipients claim to have the experience without really having it. Part of the attack by scientists is founded on the notion that recipients do not really feel what the art establishment tells them they should, but that they claim to have a certain experience in order to distinguish themselves from lower classes, whose members apparently are less literate in art [16]. Therefore, recipients have to find a piece of abstract art more beautiful than a piece of representative art if they want to keep the status of connoisseur. This poses an important methodological problem: Asking knowledgeable people about their experience may produce answers that correspond to their knowledge, but not to their real experience. One way to reduce concerns of self-presentation is giving respondents the assurance that the answers remain anonymous and by asking both what they know about the relevant knowledge do not have the intended experience when confronted with this work.

This raises the methodological issue of demand characteristics [14] and self-presentation [15] in reporting the experience. One can distinguish three ways recipients report an experience: First, they spontaneously had the experience predicted from the theory of art; they did not notice that they had been influenced by their prior knowledge of art and art history. There is not much of a problem here, because there is a match between predicted and observed experience without some kind of meta-knowledge. Second, recipients may have the predicted experience, but only because they know that they are supposed to have this, and not another, experience; in other words, they deliberately try to experience the work of art as is expected of them. This would be a case of demand characteristics: The experience is not spontaneous,

**Assessing Experience**

One criticism of surveying undergraduates in order to assess artistic value is that only a handful—if any—of those students have suitable knowledge about art and art history. It is not the experience per se that counts, but an experience informed by the context in which this art was made, about the intentions that are behind this piece of art, and the history that led to these intentions [13]. It is simply irrelevant to the evaluation of a piece of art if those who do not have the relevant knowledge do not have the intended experience when confronted with this work.

Fig. 1. Adolphe-William Bouguereau, The Little Knitter, 1882.
physiology is a study in which perceptual fluency—the ease with which a stimulus is perceived—influenced the activity of the Zygomaticus Major, the muscle whose contraction makes people smile [20]. Such techniques could be used to assess affective reactions to artworks. For example, Danto noted, “someone told me that she found beauty in the maggots infesting the severed and seemingly putrescent head of a cow, set in a glass display case by the British artist Damien Hirst. It gives me a certain wicked pleasure to imagine Hirst’s frustration if hers were the received view” [21]. The artist apparently wanted the work (Fig. 2) to elicit disgust, which cannot be elicited in accordance with nature without destroying all aesthetic satisfaction [22].

Psychophysiological techniques could answer the question: Do recipients find Damien Hirst’s installation really beautiful and pleasant, or do they feel disgust, as intended by the artist?

Recently, researchers used brain-imaging techniques to assess the affective influence of music on emotional pictures [23]. They observed a marked increase in both ratings and brain activity that indicated emotional processing when music excerpts were played together with pictures, compared with the condition in which pictures were shown without music. Another research group used imaging techniques to assess brain activity when participants gave aesthetic versus symmetry judgments for patterns [24]. Interestingly, the brain regions underlying aesthetic judgments partially overlapped with brain regions that had been previously reported for social and moral evaluative judgments on persons and actions.

One problem of all of these techniques is that they cannot yet reliably assess the experience of an individual recipient for an individual artwork. However, artworks are mostly intended to be experienced by a wider audience than just one person, and thus researchers should be able to examine a group of knowledgeable recipients. Moreover, artists often create several exemplars of similar works aimed at similar experiences. A case in point is the German painter Georg Baselitz, who created a series of paintings with humans and animals turned upside down (Fig. 3).

**CRITERIA FOR ASSIGNING ARTISTIC VALUE**

From what has been said so far, one can conclude that, if an artist or an art theorist predicts a certain experience, empirical psychology can assess the actual experience. If a work of art is supposed to be understood in the predicted experience, then the artistic value of this artwork is higher when knowledgeable recipients have this experience than if they do not have it, as assessed with behavioral or biological methods.

However, what is the value of a work of art if an artist has an intention that turns out to be wrong, in the sense that the experience of the recipient does not match this intention? Let us look at an example (see Fig. 3). In an interview with Henry Geldzahler, Baselitz claimed:

I have always seen my paintings as independent from meanings with regard to contents—and also independent from associations that could result from them. If one pursues the logical conclusion of that thought, then it follows that if one needs a tree, a person, or a cow in the picture, but without meaning, without contents, then one simply takes it and turns it upside down [25].

Fig. 2. Damian Hirst, A Thousand Years, (detail), steel, glass, flies, maggots, mdf, insect-o-cutor, cow’s head, sugar, water, 213 × 427 × 213 cm, 1990. (© Damien Hirst/Science Ltd.)

Fig. 3. Georg Baselitz in front of his portrait of Elke Baselitz (1972). (© Georg Baselitz. Photo © Angelika Platen.)
However, as can be illustrated by the so-called Thatcher illusion (Fig. 4), an inverted face has meaning [26]. Most people think that Margaret Thatcher looks relatively happy when the face is inverted. Interestingly, the upright face looks very angry, as can be seen by turning the page 180°. The effect is achieved by turning the mouth and eyes of a face by 180°. Psychological research thus suggests that Georg Baselitz’s paintings do not yield the experience he would wish to convey.

We could compare an artist with a scientist who is testing a certain hypothesis—in the case of Baselitz, that a painting turned upside down is without meaning. This is a reasonable hypothesis that can be tested by assessing whether those who see the painting indeed do not pick up meaning from it. However, as a falsification of a scientific hypothesis may be as useful as data in its favor [27], an effect different from what was expected may be interesting in developing new techniques. Baselitz may not have found a way to create representative art without content, but he may have found an intriguing way of changing the meaning by turning pictures upside down.

There is an interaction between art and science, and not a unidirectional link from scientific findings to artistic value. An artist has a vision of an experience he or she wants to convey. The scientist examines this experience and finds that it is not what the artist predicted it to be. Like a failed attempt at rendering support to a scientific hypothesis, this work of art is a failed attempt at conveying an experience. The artist would be ill-advised to stick with his or her interpretation and to ignore the scientific evidence. However, the work of art may still be an interesting example of how not to convey the wanted experience, or even a step towards the development of a technique that is more successful at conveying the intention of the artist. Indeed, some of Georg Baselitz’s later paintings still are representative and turned upside down, but might be quite close to being representative without having an immediate meaning (Fig. 5). Even if Baselitz did not achieve his goal completely, he may have been the artist who came closest to painting representative art without meaning.

If intended and actual experience matches, we can conclude that the artistic value of a work is high, given the criterion. It does not mean, however, that empirical psychology can assess whether the criterion is good. Let us look at an example: In 1910 and 1912, the art critic and modernist painter Roger Fry organized two notorious exhibitions on “Post Impressionist” art. The critics vented their dislike and contempt in unequivocal terms. Fry postulated that “new work of creative design is ugly until it becomes beautiful” [28]. Therefore, people who repeatedly see a piece of modern art not only get used to it but find it more and more beautiful. According to Fry, a modern painting would be a valuable work of art if it were beautiful after the recipient has seen it repeatedly. Indeed, psychological research shows that Fry was right: If one sees a painting repeatedly, one finds it more beautiful [29]. Thus, judging art according to whether it becomes beautiful after some time is valid from the empirical standpoint. As Fry got it right from the viewpoint of empirical psychology, does this mean that modern art must always be judged according to the criterion that a work is experienced as beautiful after repeated exposure?

No, says Arthur Danto, who advocates criteria other than beauty. The reliance on beauty stems from the often-unquestioned criterion that art has to please the senses. For example, the famous urinal by Marcel Duchamp may not satisfy the beauty criterion even after one has seen it several times. To postulate that it will be beautiful after repeated exposure may be beside the point, even if the recipients without the necessary knowledge in art come to experience it that way. This kind of beauty has its right in the equipment of restrooms, but not when it comes to why this is a piece of art. Here, critics need to consider the meaning of the urinal, such as the intention of the artist to create art without aesthetics [30]. If we took the latter criterion, we would have to assess whether the artwork at hand indeed precludes an aesthetic experience in those who have the necessary knowledge in art.

In sum, art theorists set different criteria for what a good work of art is. Scientists evaluate those criteria with regard
to their plausibility and examine their fit to the reality of art. If there are several theories of art that all accurately predict how the work could be understood in its experience, empirical psychology is in no position to decide which theory is best. More generally, psychology can determine artistic value, given a criterion, but not whether the criterion itself is a good or a bad one.

**ARTISTIC VALUE AND EMPIRICAL PSYCHOLOGY**

Fechner, by 1876, already had the idea that empirical studies help us to evaluate art, as implied in his “bottom-up aesthetics” [31]. However, the criterion implicitly used in such studies was mostly liking or beauty. From the very beginnings of empirical aesthetics, participants—most often laypeople—had to judge the beauty of visual objects, sometimes works of art, but mostly simple geometric patterns [32]. Most studies in empirical aesthetics have dealt with questions of interest for cognitive psychology or the neurosciences. The above-mentioned studies, which used brain-imaging, for example, were interested in finding brain areas related to aesthetic processing and did not claim any relevance for assessing artistic value.

The way some scientists, such as Martindale or Pinker, determine artistic value applies to works of art whose sole criterion is that it pleases the eye of a person untrained in art. This contradicts the notion that recipients with relevant art knowledge understand a work in its experience. Empirical psychology today is not any closer to being relevant to questions of aesthetics than Dickie claimed some decades ago. Only recently have more comprehensive theories of the psychology of art been presented that take dimensions other than beauty and liking into consideration, such as emotions a work of art might elicit [33]. Other branches of scientific aesthetics have looked at how organization in visual perception and the organization of perceptual systems in the brain help explain aesthetic qualities [34]. This progress in theory—together with recent developments in scientific methods—broadens the scope of psychological research in a way that could help assess actual experience, given the experience an artwork is predicted to elicit.

There are at least three limitations to the proposed process of evaluating art, and all have to do with the criterion not being testable: First, a criterion may have been valid in the past, but as time goes by, the public experiences a work of art in a different way. What shocked the public when it saw the above-mentioned “Post Impressionist” art exhibition nearly 100 years ago does not shock a 21st-century audience. Works of art intended to shock the aesthetic senses decades ago may even be seen as beautiful today. As it is not possible to examine people back in time, scientists cannot assess the value of an old piece of art in its original historical context. In order to determine artistic value at that time, they have to rely on historical records; these often are not sufficiently systematic and provide only anecdotal evidence. However, art theorists may explore the meaning of an old work of art for the present time and set experiential criteria that could be assessed with scientific rigor.

A similar problem of non-testability emerges if the criterion refers to the internal state of the artist. For example, if an artist with schizophrenia wants to express personal feelings, the only person who can gauge the match between intention and achievement is the artist him- or herself. In this case, scientists do not have any objective data in order to test the match between criterion and experience. This is possible only if the artist states that he or she wants to express the feelings of schizophrenics in general; in this case, scientists can study whether the experience of the work of art matches feelings reported by schizophrenics.

Finally, my proposal is based on understanding a work of art in its experience. Such a notion does not cover artistic value that is defined in terms of, for example, an institutional framework [35]. Indeed, such a framework would not profit from psychological aesthetics, and it remains to be seen how much a critical examination of artistic value that derives from the institutional theory could be done with methods from other disciplines, such as sociology.

I have kept my analysis simple; for example, I have not discussed what happens when complex experiences or combinations of simple experiences are intended, or combinations of artistic intention with, for example, political or moral intention. This may admittedly limit the applicability of the present analysis to the actual practice of art, but...
it does not undermine in principle the arguments made here.

**CONCLUSION**

I have sketched how scientists can assess the artistic value of a work of art, given criteria established by art theorists. Scientists are not in a position to set the criteria for artistic value. Moreover, criteria may change and render artistic values obsolete even if they stand the test of scientific inquiry.

Provided that one day the scientific means to assess artistic value are available with sufficient precision, does this mean that one now could rank works of art according to their artistic value, a vision McDowell thought to be somewhat comical [36]? Yes and no. By examining art empirically, scientists can rank works of art that are measured by the same criteria. If beauty as judged by recipients untrained in art is the criterion, works by Bouguereau will be more valuable than Hirst’s installation of the rotten cow head. If the absence of aesthetic feelings or disgust is one of the criteria, Hirst’s installation is the more valuable piece of art. However, scientists cannot—or at least not easily—determine whether the works of Bouguereau or Hirst’s installations are more valuable if they assess the first according to the beauty criterion and the latter according to the disgust criterion. Moreover, as time goes by, art theorists may find new ways of seeing an old picture, and the audience may change its taste due to the unique experiences each era yields.

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**References and Notes**

Unedited references as provided by the author.


8. Art theories that result in a different definition of artistic value include formalism, see Clive Bell, Art (London: Chatto & Windus, 1915), and the institutional theory of art, see George Dickie, The art circle: A theory of art (New York: Haven, 1984). For these approaches to artistic value, intention of an artist does not play any role, and therefore Dickie’s [5] notion that aesthetics would not profit from empirical psychology applies to these two approaches.


21. Danto [5], 49f.


28. Cited in Danto [5], 34.


30. Danto [5], 94–96.


35. Dike [8].


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