I. INTRODUCTION

“The old proverb that you cannot argue about matters of taste may well be true, but that should not conceal the fact that taste can be developed,” says Ernst Gombrich in a famous passage [1]. How taste develops, or, to put it more neutrally, changes, has been examined experimentally recently, and it has been argued that some of these experimental findings about the way our taste changes as a result of repeated past exposure can be used to argue for aesthetic antirealism: the view that there is no fact of the matter about aesthetic value. This claim is the exact opposite of Gombrich’s: It suggests that if we understand how taste changes, we can arrive at an antirealist conclusion. The aim of this article is to assess this argument and point out that this strategy, as it stands, does not work. But we may still be able to use experimental findings about the mere exposure effect in order to engage with the aesthetic realism/antirealism debate. However, this argument would need to proceed very differently and would only support a much more modest version of aesthetic antirealism.

II. THE MERExposure EFFECT

The mere exposure effect is the well-known phenomenon that repeated previous exposure to a stimulus makes the positive appraisal of this stimulus more likely. The research on the mere exposure effect goes back at least as far as the very beginnings of what we now know as experimental psychology [2], but the concept was made famous by Robert Zajonc [3].

The textbook definition of the mere exposure effect, stated above, needs some qualifications and clarifications. First, even unconscious exposure increases the probability of positive appraisal—for example, if the stimulus is flashed for a very short time (under 200 milliseconds) or if the stimulus is masked [4].

Second, the mere exposure effect is sensitive to how we allocate our perceptual attention. Previous repeated exposure to the duck-rabbit illusion, for example, can make subjects show an increased appreciation of rabbits, but only if they saw the duck-rabbit figure as a rabbit [5]. More generally, the properties of the stimulus that we have attended to during past exposure influence whether we show an increased appreciation of the stimulus; and—importantly—if the stimulus during past exposure was unattended, the effect disappears [6].

What the findings show about the importance of attention for the mere exposure effect is that the perceptual learning process that makes the mere exposure effect possible occurs at a relatively late stage of perceptual processing. This conclusion is supported by two independent findings. First, the strength of the effect depends on how familiar the subject had been with the stimulus before the exposure. The more preferences are of the MEE-Superdeterminate kind, whereas what would be needed to support the antirealist conclusions sought by the main advocates of the mere exposure effect regarding aesthetic preferences is the MEE-Determinable version. I close by examining what would count as an example for MEE-Determinable and how it could support (a very weak version of) aesthetic antirealism.
familiar she had been with the stimulus, the less pronounced the effect [7]. This suggests that nonperceptually coded information influences the mere exposure effect. Further, the stimulus the subject is exposed to and the one she evaluates do not even have to occur in the same sense modality [8]: Visual exposure makes the positive assessment of an object recognized by touch more likely (but, curiously, the reverse is not found to be the case). Thus, whatever perceptual process makes the mere exposure effect possible, it must happen fairly late in the perceptual processing—in any case, after multimodal integration.

In short, the mere exposure effect is the manifestation of a perceptual learning process, but, unlike simple instances of perceptual learning that occur in early vision, the perceptual learning that makes the mere exposure effect possible occurs at a fairly late stage of perceptual processing [9].

This result will play an important role in the discussion in section V.

III. AESTHETIC PREFERENCES AND THE MERE EXPOSURE EFFECT

Now we are in a position to assess the attempts to replicate the mere exposure effect in the case of our aesthetic evaluation of artworks. The most important work on this was done by James Cutting in a series of articles [10]. He showed that there is a correlation between exposure to a certain painting and the likelihood of judging it positively.

Cutting's experimental setup was the following. During a class on visual perception, he showed images of paintings for a couple of seconds, throughout the semester, without any explanation or comment, and at the end of the semester he made the students judge the paintings. These judgments showed clear correlation with the frequency of exposure.

Cutting's conclusion is that the reason why the students liked certain paintings and not others is that they had seen the preferred paintings more frequently. And, given that we are more frequently exposed to paintings that are part of the canon, this makes us like these paintings more. In other words, it's not the case that these paintings are part of the canon because they are objectively better than other paintings; rather, we judge them to be better than other paintings because they are part of the canon. But then we have no reason to suppose there is a fact of the matter about which paintings are more aesthetically valuable and which ones are not. Whether we find some paintings aesthetically valuable depends on the frequency of our previous encounters with them—and not on whether they are in fact aesthetically valuable. And what maintains the "canons" of our artworld is not the quality of the artworks but the fact that we are exposed to those artworks that are part of the canon, making us like them more, which reinforces their place in the canon.

This argument could be questioned in a number of ways. First, one may wonder what is meant by "aesthetic judgment" in this experimental paradigm. The subjects answered the question about how much they liked a certain picture very quickly, most of the time in less than one second. This may make some aestheticians suspicious that whatever aesthetic reaction this experiment is measuring is not a carefully considered aesthetic judgment but some kind of gut reaction. Richard Wollheim, for example, famously spent an average of two hours looking at a painting in order to arrive at an "aesthetic judgment" of it and argued that the first-glance impression is often misleading when it comes to assessing the aesthetic value of the painting [11]. But then one may worry that the experimental paradigm Cutting uses (and also the experimental paradigm used by those who aim to question Cutting's conclusions, see below) says very little about this Wollheimian fully considered aesthetic judgment. It tells us something about our first-glance reaction to artworks. But then one can question the relevance of these experiments to the debates about aesthetic value, as, arguably, it is strictly the Wollheimian fully considered aesthetic judgment and not the first-glance preference that has anything to do with aesthetic value. While the distinction between the first-glance preference and an all-things-considered aesthetic judgment is an important one, it is also important to notice that it would be somewhat surprising if the two were completely independent from one another. To counter Wollheim with Greenberg, Clement Greenberg was known for making his assessment about the aesthetic value of a painting in the very first split second of seeing it [12]. The relation between our first-glance impression and our fully formed aesthetic judgment about an artwork is undoubtedly a complicated one, and Greenberg's equivocation of the two as well as Wollheim's radical separation are clearly two extremes. But as long as we accept the very weak premise that the first-glance impression is not entirely irrelevant for aesthetic judgment (something probably not even Wollheim would deny), then the findings about the mere exposure effect can still be used to enrich the debate about aesthetic value.

Second, and more importantly, one could argue that the mere exposure effect only works for good art. The mere exposure to good art makes positive judgment more likely, but the mere exposure to bad art does not [13]—there is a fact of the matter about whether a work of art is good or bad, and these objective value differences influence the mere exposure effect.

I would like to raise an even deeper conceptual worry about Cutting's argument (that also applies to Meskin et al.'s 2013 counterargument).

IV. A CONCEPTUAL AMBIGUITY ABOUT THE MERE EXPOSURE EFFECT

The mere exposure effect is defined as the phenomenon that repeated previous exposure to a stimulus makes the positive appraisal of this stimulus more likely. Note that this formulation hides a token/type ambiguity. Here are the two possible interpretations:

MEE-Token: Repeated previous exposure to a token stimulus makes the positive appraisal of the very same token stimulus more likely.

MEE-Type: Repeated previous exposure to stimuli of a specific type makes the positive appraisal of other stimuli of the same type more likely.
Some textbook examples of the mere exposure effect are MEE-Token: In the simplest and most often reproduced illustration of the mere exposure effect, if you have repeatedly encountered the same person, you are more likely to develop a positive opinion of this person. This is a case of MEE-Token, but most experiments about the mere exposure effect (including Zajonc [14]) are about MEE-Type—a point already noted by Gordon and Holyoak [15].

Unfortunately, deciding whether two stimuli are the very same token or merely two tokens of the same type is especially problematic in the present context—that is, the context of exposure to artworks—because of the lively and still very open debate about the ontological status of artworks. As a result, I will make a different distinction that is less problematic when it comes to artworks:

**MEE-Superdeterminate:** Repeated previous exposure to stimuli of a specific superdeterminate type makes the positive appraisal of other stimuli of the same superdeterminate type more likely.

**MEE-Determinable:** Repeated previous exposure to stimuli of a specific determinable type makes the positive appraisal of other stimuli of the same determinable type more likely.

One way of characterizing the relation between property-types is the determinable-determinate relation [16]. To use a classic example, being red is determinate of being colored, but determinable of being scarlet. There are many ways of being red, and being scarlet is one of these: For something to be scarlet is for it to be red in a specific way. If something is red, it also has to be of a certain specific shade of red: There is no such thing as being red *simpliciter*.

The determinable-determinate relation is a relative one: The same property—for example, of being red—can be the determinate of the determinable being colored, but the determinable of the determinate being scarlet. Thus, the determinable-determinate relation gives us hierarchical ordering of properties in a given property-space. Properties with no further determinates, if there are any, are known as superdeterminates.

In the light of this, we can make a distinction between two different claims about the mere exposure effect. Take exposure to colors as an example. Here is an example for the mere exposure effect: Repeated past exposure to a very specific shade of purple makes it more likely that the subject expresses preference for this specific shade. This amounts to MEE-Superdeterminate. But here is another example: Repeated past exposure to various shades of purple makes it more likely that the subject expresses preference for other shades of purple. This would be an instance of MEE-Determinable. Or, if repeated past exposure to various shades of red makes it more likely that the subject expresses preference for other shades of purple, this would also be an instance of MEE-Determinable.

Which of these two kinds of claims are at stake in the mere exposure effect literature? The experiments in Zajonc [17] are clearly about MEE-Superdeterminate, but this is not true for the literature in general. Here is an example: It was shown that exposure to different objects increases the subject's liking of a composite face derived from the faces seen [18]. That is, if I am exposed to faces A, B and C, this disposes me to prefer a composite face that shares some features of A, B and C, even though the composite is a face I have never seen before. This is clearly an instance of MEE-Determinable.

Now we can return to Cutting's experiments. Crucially, Cutting's main premise is a finding of the MEE-Superdeterminate nature. This may justify claims about our preference of particular superdeterminates: If we are exposed to a particular Sisley painting, our preference for that particular Sisley painting may change. However, the exposure to this particular Sisley has no consequences for our aesthetic evaluation of any other painting, not even other paintings by Sisley. In short, no general antirealist conclusion follows from Cutting's experiments.

For anything even remotely approaching the general antirealist conclusion Cutting is flirting with, one would need experiments of the MEE-Determinable nature. But, somewhat surprisingly, none of the experiments in the mere exposure effect literature on aesthetic preferences are of the MEE-Determinable kind. Even the Meskin et al. 2013 experiments that are supposed to show we do not have mere exposure effect when facing bad art are also of the MEE-Superdeterminate kind. My aim is to refocus the debate about the mere exposure effect in aesthetics from MEE-Superdeterminate to MEE-Determinable, as it is only the latter that could have significant philosophical consequences.

If we can show that, for example, repeated past exposure to early Impressionist paintings increases the likelihood of positive assessment of other early Impressionist paintings, then we can begin to build an argument toward a general antirealist conclusion. As a consequence, those who want to use the empirical findings of the mere exposure effect literature in order to argue for a version of aesthetic antirealism would be better off focusing on MEE-Determinable, rather than MEE-Superdeterminate. I explore how such an argument would go in the remainder of the article.

**V. (MEE-DETERMINABLE) ABOUT AESTHETIC PREFERENCES: SOME HELP FROM WÖLFFLIN**

According to MEE-Determinable, repeated previous exposure to stimuli of a specific determinable type makes the positive appraisal of other stimuli of the same determinable type more likely. The question is: What constitutes this determinable type when it comes to artworks? If the determinable type is too broad, then it is unlikely that we can produce the mere exposure effect: It is unlikely that repeated past exposure to medium-sized objects disposes us to express an aesthetic preference toward medium-sized objects, for example. But if the determinable type in question is too narrow, then we face the problem Cutting faces: The mere exposure effect will not be robust enough to support any kind of antirealist conclusions. We need to find some principled way for identifying a middle ground.
This way of using the mere exposure effect in an aesthetic context was probably first explored by Heinrich Wölflin. In a short essay, published in 1909 [19], he denounced what he called “art historical miseducation,” which is based on the random encounter of various works of art. Exposure to a random set of artworks, even excellent ones, even with the relevant contextual/historical information, leads to “half-education” and “pseudo-connoisseurship.”

Instead, Wölflin encourages art historical education that is based on seeing artworks as belonging to important stylistic categories. When we look at an artwork, we should see it as an example for a certain style. His examples are the linear and painterly style (representative of the 16th and 17th centuries, respectively). When we see a Holbein, we should see it as an example of linear style. And when we see a Rembrandt, we should see it as an example of painterly style. This is the only way that aesthetic education can develop a “feeling for a style as a whole,” based on “comparisons of style.” If we have seen enough artworks as examples of the linear style, then we can recognize pictures that we have not seen before as also belonging to the linear style (and we can assess its value in this reference class). This is how we acquire the “linear” and “painterly” categories of art.

The subtext of Wölflin’s argument is that, in spite of his dismissive remarks about painterly style in his earlier writings, by 1909 he became convinced (as it turns out, mainly for political reasons, see Adler [20]; and also Carrier [21]) that German youth should be encouraged to appreciate painterly style. And his claim was that the way to achieve this is to expose them to artworks belonging to the painterly style. This is an early but clear example of a theoretical formulation of the mere exposure effect in the domain of aesthetics. And, unlike Cutting’s attempts, it is a formulation of MEE-Determinable.

It is a formulation of MEE-Determinable because Wölflin’s aim was to trigger an aesthetic preference for painterly style by repeatedly exposing German youth to various paintings made in painterly style. In other words, the general approach is that exposure to different instantiations of a determinable property would increase the likelihood of assessing a new, not-yet-seen instantiation of this determinable property favorably. To put it simply, seeing something as belonging to the “category of art” of paintings in the style of Cézanne or seeing something as linear or painterly would be susceptible to the mere exposure effect. If we see many paintings in the style of Cézanne, this increases the probability of expressing aesthetic preference for another, thus far unseen, painting in the style of Cézanne. And seeing many paintings in the linear style also increases the probability of expressing aesthetic preference for other linear-style paintings. This would be a clear case of MEE-Determinable.

Note that this gives us a new way of describing MEE-Determinable. MEE-Determinable is really about the perceptual attribution of sensory property-types: If we have perceptually attributed instances of a property-type frequently, we are more likely to react positively to new instantiations of this property-type. For example, if we have perceptually attributed the property of “linear style” frequently in the past, we are more likely to react positively to images that display similar compositional organization. Here is an example. Many currently influential film critics were trained in the 1960s and were exposed repeatedly to the films in the grand era of European modernist cinema. As it turns out, they do show aesthetic preference for contemporary movies that display salient sensory properties found in the 1960s films of European modernist cinema. They like Bela Tarr’s or Abbas Kiarostami’s films, which all share important compositional features with the grand 1960s films by Antonioni or Bergman. One may be tempted to explain this preference by appealing to the critics’ nostalgia, but a more serious explanation would be to say that this is also an instance of MEE-Determinable: If the critics have perceptually attributed certain compositional properties frequently in the past, they are more likely to react positively to images that display similar compositional organization.

A final remark before proceeding to the question of aesthetic antirealism: It needs to be pointed out that we are much less likely to encounter paintings in the style of Cézanne or linear paintings in a value-neutral setting than in a setting where there is an implicit or explicit suggestion that the painting we are looking at is valuable. If we see one of these paintings in a museum, we have an implicit background assumption that it is a “good” painting, as it is displayed in a museum. If we see it in an art book, again we tend to have an implicit background assumption that it must be a “good” painting, otherwise why would it be reprinted in an art album? If we see a picture on a Season’s Greetings card or on the front page of a newspaper, however, we are unlikely to have this implicit assumption. Sometimes these implicit background assumptions about value are not even that implicit—for example, when parents point out to their children in the museum how beautiful a painting is. This makes the word “mere” in mere exposure effect somewhat dubious: It seems that, at least in the case of our encounter with works of art, our exposure is rarely “mere.” This, however, should make it even more likely that our value-laden encounter with certain sensory properties would increase our preference for similar properties.
VI. THE MERE EXPOSURE EFFECT AND AESTHETIC ANTIREALISM

The debate about the relevance of the mere exposure effect for aesthetics has focused on experiments of the MEE-Superdeterminate kind. Both Cutting’s experiments and Meskin et al.’s 2013 experiments were of the MEE-Superdeterminate kind. My aim is to refocus this debate and shift the emphasis from the MEE-Superdeterminate experimental paradigm to the MEE-Determinable one.

Cutting’s claim is that what determines whether we like a painting is not its quality but our past exposure. And what maintains the “canons” of our artworld is not the quality of the artworks, but the fact that we are exposed to those artworks that are part of the canon, making us like them more, which reinforces their place in the canon.

We have seen that this conclusion does not follow from his experiments, because his experiments are of the MEE-Superdeterminate nature. But, as I argue, only MEE-Determinable has a chance of delivering this conclusion. The aim of this last section is to explore how MEE-Determinable could be argued to support an antirealist conclusion and what version of antirealism this would take.

The most important and influential (and, arguably, the oldest) argument in favor of aesthetic realism is that it is the only view that can explain why there seems to be broad (although not complete) agreement on the aesthetic value of some works of art: We value Mozart more than Manilow (and we value Milton more than Ogilby, as Hume argues [22]). If there is no fact of the matter about aesthetic value, then how can we explain this broad agreement about aesthetic value? [23] To simplify things a little, if beauty is in the eye of the beholder, what would guarantee that we all take the same things to be beautiful? Aesthetic realism can explain this: We value Mozart more than Manilow because Mozart is just better; there is an objective fact of the matter that Mozart’s music is more aesthetically valuable than Manilow’s. But aesthetic antirealism, at least on the face of it, does not have a straightforward explanation for this difference.

This is the point at which we can make use of the mere exposure effect. If we take the idea of the mere exposure effect seriously, we can explain why there tends to be broad agreement on the attribution of aesthetic value even within the antirealist framework. As most people have been exposed to similar sensory properties, they will show preference to similar sensory properties. Film critics take the framing of images in Kiarostami’s films to be more aesthetically valuable than that in a sitcom like How I Met Your Mother because the compositional features of Kiarostami’s films are more similar to the compositional features that the critics were repeatedly exposed to in a value-laden context. This explanatory scheme is a genuinely antirealist one: It does not appeal to any objective aesthetic difference between the images of Kiarostami’s films and those of sitcoms. What explains the critics’ preference for the former is their exposure to similar images in the past. And given that the majority of critics were exposed to these images, this explains why critics tend to agree about the aesthetic merits of certain films and also agree about the aesthetic demerits of others. We do not need to appeal to objective aesthetic value in order to explain these aesthetic agreements [24].

This approach also helps explain the existence of aesthetic disagreements. Not everyone agrees that Mozart is better than Manilow. How can we explain the aesthetic preferences of the Manilow fans? The aesthetic realist is forced to follow a somewhat elitist line here: The Manilow fans are just wrong. The antirealist explanatory scheme I propose here is somewhat less elitist: Manilow fans and Mozart fans were exposed to different music. That is why they disagree about the respective aesthetic merits of Mozart and Manilow. There is nothing “wrong” about the Manilow fans; they just listened to different music when they were younger. And those who prefer How I Met Your Mother to Kiarostami (there are many) are not “wrong.” They were just exposed to different films when they were younger—they probably saw fewer Pasolini or Resnais films than did the film critics.

It is important to point out how my argument differs from Cutting’s antirealist argument. Both the premises and the conclusions are different: Cutting uses MEE-Superdeterminate as the main premise, whereas I use MEE-Determinable. And while Cutting’s conclusion is a general and sweeping antirealist one, mine is much more modest: We can give an explanation in terms of MEE-Determinable for broad aesthetic agreements without endorsing aesthetic realism. If this is true, then one of the most important arguments against aesthetic antirealism loses its force. But it does not follow from this that aesthetic antirealism is correct. What does follow from my conclusion is that, given that there is no knock-down argument against it, we may want to take aesthetic antirealism more seriously.

References and Notes

Editor’s Note: For a commentary on this article, please see the associated paper: James E. Cutting, “Mere Exposure and Aesthetic Realism: A Response to Bence Nanay” in this issue of Leonardo.


14 Zajonc [3].
17 Zajonc [3].

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**BENCE NANAY** is Professor of Philosophy and BOF Research Professor at the University of Antwerp, where he is also co-director of the Centre for Philosophical Psychology and Senior Research Associate at Peterhouse, Cambridge University. He is the author of *Between Perception and Action* (OUP, 2013) and *Aesthetics as Philosophy of Perception* (OUP, 2016) and the editor of *Perceiving the World* (OUP, 2010) and of *Current Controversies in Philosophy of Perception* (Routledge, 2016). He has published more than 90 articles on various topics mainly in philosophy of mind, aesthetics and philosophy of science.