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PERCEPTUAL LEARNING, THE MERE EXPOSURE EFFECT AND AESTHETIC ANTIREALISM

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It has been argued that some recent experimental findings about the mere exposure effect can be used to argue for aesthetic antirealism: the view that there is no fact of the matter about aesthetic value. The aim of this paper 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.

Keywords: mere exposure effect, perceptual learning, aesthetic antirealism, aesthetic realism, aesthetic disagreements, Wölfflin

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 (Gombrich 1950/1972, p. 17). 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 paper 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.

The plan of the paper is the following. In Section II and Section III, I examine the empirical literature on the mere exposure effect and differentiate between two versions of it: (MEE-superdeterminate) and (MEE-determinable). I argue in Section IV that all the existing empirical findings about our aesthetic preferences are of the (MEE-superdeterminate) kind, whereas what would be needed to support the antirealist conclusions the main advocates of the mere exposure effect about aesthetic preferences seek to establish is (MEE-determinable). I close by examining what would count as an example of (MEE-determinable) and how it could support (a very weak version of) aesthetic antirealism.

II. The mere exposure 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 (Fechner 1876 and Titchener 1910). But the concept was made famous by Robert Zajonc (Zajonc 1968, 2001).

The textbook definition of the mere exposure effect is the phenomenon that repeated previous exposure to a stimulus makes the positive appraisal of this stimulus more likely. But this definition needs some qualifications and clarifications. First, even unconscious exposure increases the probability of positive appraisal – say, if the stimulus is flashed for a very short time (under 200 milliseconds) or if the stimulus is masked (a couple of milestone examples from the vast literature: Bornstein & D’Agostino, 1992; Kunst-Wilson & Zajonc, 1980; Monahan et al., 2000).

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 (Craver-Lemley & Bornstein, 2006). More generally, what properties of the stimulus we were attending to during past exposure influences whether we show an increased appreciation of the stimulus and, importantly, if the stimulus during past exposure was unattended, the effect disappears (Yagi and Kikuchi 2006).

What the findings about the importance of attention for the mere exposure effect show is that the perceptual learning process that makes the mere exposure effect possible occurs at a relatively late stage of perceptual processing. A nice set of findings that demonstrates this is that the stimulus the subject is exposed to and the one she evaluates do not even have to occur in the same sense modality (Suzuki & Gyoba 2008): visual exposure makes the positive assessment of an object recognized by touch more likely (but, curiously, not the other way round). Thus, whatever perceptual process makes the mere exposure effect possible, it must happen fairly late: 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 (see Seamon et al. 1998). This result will play an important role in Section V.

III. Aesthetic preferences and the mere exposure effect

Now we are in the 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 and a book (Cutting 2003, 2006a, 2006b, 2007). 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, without any explanation or comment throughout the semester 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 what explains why the students liked certain paintings and not others is that they had seen them more frequently before. 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 that 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, I assume, amounts to a fairly strong antirealist stance, which comes out quite clearly in places (see esp. Cutting 2003, p. 335, Cutting 2006b, p. 202 and also by the approving quotation of some straight antirealist works in Cutting 2003, p. 335 and Cutting 2006b, n. 14 on p. 205). But it needs to be acknowledged that Cutting refrains from an all out antirealist stance, see esp. Cutting 2006b, p. 201. I leave it to him to clarify just how antirealist his position is in his response.

Cutting's argument could be questioned in a number of ways. First, one may wonder what is meant by 'aesthetic judgement' 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 judgement 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 (Wollheim 1987, p. 8 and personal communication 1999-2003). But then one may worry that the experimental paradigm Cutting uses (and also the experimental paradigm those use 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 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 judgement 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 (see Danto 1996, p. 109, Hoving 1993, p. 256). The relation between our first glance impression and our fully formed aesthetic judgement 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 the aesthetic judgement (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 judgement more likely, but the mere exposure to bad art does not – 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 (see Meskin et al., 2013 for an argument along these lines).

I would like to raise an even deeper conceptual worry about Cutting's argument (that also apply to Meskin et al. 2013's 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 type/token 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 about (MEE-Token): the simplest and most often reproduced illustration of the mere exposure effect is that 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 1968's) are about (MEE-Type) – a point already noted by Gordon and Holyoak, 1983).

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 (see Wollheim 1980's locus classicus). 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 (Johnston 1921, Funkhouser 2006). 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 of 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 1968 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 faces increases liking of the composite face (Rhodes et al. 2001). That is, if I am exposed to face A, B and C, this disposes me to prefer a composite face that shares some features of A, B and C, but that 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. But 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 (again, this may or may not worry Cutting).

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 is of the (MEE-Determinable) kind. And even the Meskin et al. 2013 experiments that are supposed to show that 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 towards 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 rest of the paper.

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 express an aesthetic preference towards medium-sized objects, for example. But if the determinable type in question is too narrow, then we face the problem that 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 Wölfflin. In a short essay, published in 1909 (*Über kunsthistorische Verbildung*), he denounces what he calls ‘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, Wölfflin 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 of a certain style. His examples are the linear and painterly style (representative of the 16th and 17th Century, 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’ category of art.

The subtext of Wölfflin’s argument is that in spite of his dismissing remarks about painterly style in his earlier writings, by 1909, he became convinced (as it turns out, mainly for political reasons, see Adler 2004, see also Carrier 1992) that the German youth should be encouraged to appreciate painterly style. And his claim is that the way to achieve this is to expose them to artworks as 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 Wölfflin’s aim is to trigger an aesthetic preference for painterly style by repeatedly exposing the 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 a lot of 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 a lot of 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 pictures in linear style that we have not seen. The important question about (MEE-Determinable) then is: what can play the role of these sensory property-types.

So far, I was focusing on sensory property-types like ‘linear’ and ‘painterly’ or ‘in the style of Cézanne’, but these are not necessarily the only, and maybe not even the most interesting candidates. Maybe we can go a step further. Maybe some of the sensory property types that (MEE-Determinable) works on are sensory properties that we can attribute to a wider variety of works of art. Take some formal properties, for example, like composition. If we have perceptually attributed certain compositional properties frequently in the past, we are more likely to react positively to pictures that display this compositional property. And the pictures we were exposed to in the past do not even have to be from the same period as the one that we display aesthetic preference towards.

Here is an example. Many film critics who are influential now 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 some contemporary movies that display salient sensory properties that the 1960s films of European modernist cinema had. They like Bela Tarr’s or Abbas Kiarostami’s films that share all 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’. But this 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 been focusing on experiments of the (MEE-Superdeterminate) kind. Both Cutting’s experiments and Meskin et al. 2013’s 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-Determinate) 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 argued, 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 favour of aesthetic realism is that it is the only view that can explain why there seems to be broad (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, Hume 1757/1985, Goldman 1995). If there is no fact of the matter about aesthetic value, then how can we explain this broad agreement about aesthetic value? (Bender 1996, Schellekens 2006, Young 1997) 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.

And this is the point where 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 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 they were repeatedly exposed to in a value-laden context than the compositional features of sitcoms. 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 they 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.

This approach also helps us to 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 then? The aesthetic realist is forced to follow a somewhat elitist line here: the Manilow fans are just wrong. The antirealist explanatory scheme I am proposing 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 a lot of them) are not 'wrong'. They were exposed to different films when they were younger than the film critics – they probably saw less Pasolini or Resnais films.

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 (see also Nanay 2015).

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