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Perceptual Learning and Aesthetic Criticism

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ABSTRACT. A crucial and old problem in aesthetics concerns whether critical discourse should be conceived as an argumentative practice starting from some premises and rationally leading to a conclusion (Beardsley, 1962), or rather as an invitation to experience an object (typically an artwork or, more broadly, an artistic performance) in a certain way (Sibley, 2001). The clash between these two approaches is patent: on the one hand there is the intuition that aesthetic criticism is a rational activity that can draw on shared principles and rational arguments. On the other hand, the idea is defended that aesthetic criticism should make people agree on what an artwork looks like. In this article I unpack the disagreement in terms of a different stand on the nature of perceptual experience and I exploit the notion of *perceptual learning* to mitigate this apparently inescapable contrast. In particular, I argue that certain aesthetic experiences involving the perceptual detection of aesthetic properties qualify as reason-responsive perceptual experiences and conclude that a theory of perceptual experience that admits the phenomenon of perceptual learning can better do justice to both the rational and the perceptual nature of critical aesthetic discourse.

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1. Introduction

A crucial and old problem in aesthetics concerns whether critical discourse should be conceived as an argumentative practice starting from some premises and rationally leading to a conclusion (Beardsley, 1962), or rather as an invitation to experience an object (typically an artwork or, more broadly, an artistic performance) in a certain way (Sibley, 2001). While the outcome of a successful argument is meant to be a belief endorsed by a subject, the result of an invitation to perceive, or to notice an aspect, is arguably a perceptual, or, more broadly, experiential state entertained by her.

The clash between these two approaches is patent: on the one hand there is the intuition that aesthetic criticism is a *rational activity* that can draw on shared principles and rational arguments. On the other hand, the idea is defended that aesthetic criticism should try to make people agree in their *experiential* appreciation of what a work of art is like. Both these intuitions seem to capture important aspects of criticism that, ideally, one should want to preserve equally in a satisfactory theoretical proposal. However, as Robert Hopkins has questioned: "How can there be an argument with a perception as its conclusion?" (Hopkins, 2006, p. 137).

In this talk, I exploit the phenomenon of *perceptual learning* to mitigate this apparently inescapable contrast. Making room for the possibility that the perceptual contents of one's experience are subject to changes upon training, rather than being stable and encapsulated throughout, perceptual learning promises to account for the gradual acquisition of detection capacities. As such, it may help to explain how we learn to grasp complex properties such as values, and to justify some of our aesthetic ascriptions.

To begin with, I will unpack the disagreement between defenders of critical discourse as a rational endeavour and upholders of art criticism as an invitation to perceive in terms of differences in their stance on the nature of perceptual experience. Then, I will introduce the notion of perceptual learning and focus on perceptual learning prompted and sustained by *conceptual feedback*. Drawing on recent contributions in the philosophy of mind, I will argue that perceptual learning allows us to treat some perceptual experiences as responsive to reasons. Besides helping to account for a fundamental aspect of aesthetic expertise, the phenomenon of perceptual learning promises to do justice to both the rational and the perceptual nature of critical aesthetic discourse.

2. Critical Discourse: Perception and Beliefs

Although it is not a monolithic practice with its own consistent rules, art criticism has been struggling for most of its history with the issue of how to produce rational judgments about objects whose appreciation requires: "the exercise of taste, perceptiveness, or sensitivity, of aesthetic discrimination or appreciation." (Sibley, 1965, p. 421). On the one hand art criticism seems to offer arguments towards (or against) the aesthetic appreciation of artworks, like when one *derives* the claim that an actress's performance is "deliciously eccentric" or "amazing and hilarious" based on a series of remarks pointing at her "faintly jerky head movements and unselfconscious gait – awkward and yet somehow elegant at the same time" (Bradshaw, 2024). On the other hand, critical discourse seems to be dealing with properties that cannot be argued for – no more than one can argue for or against the actress' dress being blue. Such a claim – that the actress's dress is blue – does not seem to be supported by reasons. Instead, it appears as the mere ascertainment of a fact. Therefore, one may come to *believe* that the actress's performance is actually amazing in virtue of the way she is described as moving on the screen. Yet, for this to be an aesthetic judgment of the artist's performance, it should be stating something that requires the recipient to *experience it* as such.

One way to make this contrast salient is to suppose that disagreement emerges about the actress's performance. Suppose some critic says that in that same performance the actress simply is given opportunities "to spread open her legs and reveal more than her acting ability. Degradation, sadness and horror—she embraces every negative emotion stark naked, devouring raw oysters and rutting like a pig – the critic says, to the point that they ask: This is acting?" (Reed, 2023). What would be the correct way of settling the disagreement? By urging more refined arguments and better justifications? Or rather by exhibiting aspects of the acting performance that, supposedly, cannot but manifest themselves in the recipients' experience?

This conundrum can be seen as stemming from a sharp distinction between perception and beliefs based on reasons. Perceptions are considered paradigmatically impermeable to reasons. To mention a classic example: no matter how good a reason one may have for believing that the two

segments of the arrows depicted in the Müller-Lyer illusion are congruent, one's perceptual experience will still be of two lines of different lengths. Reasons, on the other hand, are usually conceived of as providing epistemic justification for certain mental states, especially beliefs. While beliefs are rationally evaluable as justified or unjustified, perceptions are not.

Yet, although perception is standardly considered outside the scope of rational evaluability, many attempts have been made in the philosophy of mind to question this distinction. In particular, moral and aesthetic practices – that is, activities in which we deal with *values* – challenge this picture, requiring a particular treatment as features that are perceivable but at the same time seem to be epistemically evaluable (Bergqvist & Cowan, 2018). Even if they appear in our experiences as perceptible saliences, moral and aesthetic values have at least two sides. On the one hand, we access them through perception, i.e. through our senses, while, on the other hand, they can be justified or unjustified, i.e. epistemically evaluable. This makes it particularly difficult to explain moral and aesthetic values in purely perceptual terms – which would overlook the evaluative side – or in purely evaluative terms – which would not do justice to the kind of experiences in which they are instantiated.

Among the hypotheses that have been put forward to explain the nature of perceivable yet evaluable properties, one that seems still little explored appeals to *perceptual learning*. As I will try to show, this phenomenon allows one to think of at least certain perceivable properties as something one can *gradually learn to detect*, rather than as something that is simply given in one's experience. The upshot is a more flexible view of perception that promises to make it available for rational evaluation.

3. Perceptual Learning

In philosophy of mind and in the cognitive sciences, the label *perceptual learning* refers to changes in perception that result from practice or experience. Although the definition traces back to Eleanor Gibson's article "Perceptual Learning" (1963), the intuition that perception is subject to change is old and widespread. Already in the third century, when Diogenes Laertius described Stoicism, he made a clear reference to the idea that the trained eye of a sculptor sees the same statue in a different

way from that of the ordinary man (1925, p. 161). In the 18th century Thomas Reid spoke profusely of "acquired perceptions", referring to perceptual skills that can be gained through repeated experiences and cross-modal correlations (1997, p.171). In 1890, William James wrote that an expert sommelier may become able to distinguish between the top half from the bottom half of a bottle of a particular type of wine by relying on his taste (1980, p. 509), and John Dewey's discussion of habits seems to lever precisely this idea when he writes that "to have a clear-cut sensation […] is a sign of training, skill, habit" (Dewey, 1922, p. 31).

However, not all changes in perception can be counted as the result of perceptual learning. Hence, in the philosophical and psychological literature on the subject, some criteria are adopted to distinguish cases of perceptual learning from other phenomena that can be explained by different mechanisms. Standard criteria are, first, that the changes result from practice or experience; second, that they are long-lasting; and third, that they are genuinely perceptual (Connolly, 2019).

3.1. Some Requirements

First, the requirement of training, or practice, as a necessary condition for a change to be considered a result of perceptual learning means that the effects of physical modifications, such as injuries to the perceptual apparatus, cannot count as perceptual learning. As a consequence of being operated on, a formerly myopic person will perceive the world differently, and this change will undoubtedly be long-lasting. Yet, such changes are not due to any learning or training processes.

Secondly, by requiring that a perceptual change be long-lasting in order to be considered the effect of learning, one can exclude short-term perceptual changes from the category of perceptual learning. Suppose we enter a dark room after having been in blinding sunlight. Adapting to the new lighting conditions may take some time, so our perceptual experience may undergo some changes, but this will last only for a few seconds. Although genuinely perceptual, these changes are neither long-lasting nor do they result from any practice and, therefore, would not count as the result of perceptual learning.

Third, requiring the changes to be genuinely perceptual allows us to retain the distinction between perceptual learning and post-perceptual modifications, that is, changes based on

perceptual experiences whose content remains unaltered while related beliefs change. Suppose one is taught to recognize the perceivable look of concrete in architectural works. At the end of the training, it seems that one can perceptually distinguish a building made of concrete from one made of rammed earth. Arguably, this will not count as perceptual learning until the recognition will occur without the application of conceptual instruction to "interpret" the perceptual material. Notably, a purely phenomenological perspective that appeals to introspection to establish whether one's recognitional capacity is the result of perceptual learning or, rather, the application of updated beliefs to unchanged perceptual contents is doomed to uncertainty. In such cases, empirical tests can determine the extent to which first-person changes align with significant neural modifications in perception (Gilbert et al., 2009).

Finally, the debate about perceptual learning intersects with the discussion about whether perception is permeable to concepts. A classic example is our tendency to attribute emotional expressions to expressively neutral faces based on contextual knowledge. Those who argue that perception is encapsulated and paradigmatically non-conceptual explain such examples in terms of inferential knowledge based on perception, while those who insist that concepts can enter and shape perceptual contents appeal to cognitive permeation (Siegel, 2012). Cognitive permeation and perceptual learning can overlap in some cases (Arstila, 2016; Ransom, 2020; Landers, 2021). However, typical examples of cognitive permeation do not meet the long-term requirement for being the result of perceptual learning: if I see someone as angry because I believe they are, this will not be a case of perceptual learning, for it is not a long-term change.

3.2. Outcomes of Perceptual Learning

For the most part, perceptual learning results in creating new perceptual units or – as some have put it – in *chunking reality* in different ways (Stokes, 2020; Jenkin, 2022). In psychological literature, different kinds of chunking are discussed. I will briefly introduce three of them and suggest that the arts offer good examples for each one.

Differentiation is the acquired ability to distinguish between properties that, before training, seemed indistinguishable. For example, after years of practice, a professional photographer will

immediately detect the degree of exposure of an image. A beginner, on the other hand, will simply observe the respective darkness or brightness of the same image without detecting the correct lighting.

Unification is the counterpart of differentiation. In unification, one comes to perceive as a single property what was previously perceived as two or more distinct properties. Let us take an example from proprioception. Before learning to perform a given movement, a dancer will have to learn its different motor components, i.e. how to move their arm, how to coordinate it with their legs, how to bend their back, how long to stand still. While at the beginning of the learning process, the dancer will execute the movements disconnected from each other and therefore feel them as if they were separated, at the end of the training the movement will appear to them as unified.

In *attentional weighting*, through practice or experience one comes to systematically pay attention to certain objects and properties and move away from others. Historians of painting who become capable of attributing paintings to their authors by looking at the works' features acquire the capacity to *automatically* allocate their attention to certain particulars while overlooking other, less relevant ones. The automaticity of this process is crucial for distinguishing it from standard attention allocation. That is, one can be told to look at certain features over others and learn to do this every time one sees a painting. Yet until this process is automatic it would not count as perceptual learning. Automaticity – it is said – *is* the product of the learning process (Stokes, 2020).

3.3. Perceptual Training and Reason-Responsiveness

Thus, I have listed the criteria for identifying a perceptual learning process and illustrated some of the possible effects according to different mechanisms for *chunking*. Now, in order to further explain the phenomenon, it remains to describe the training processes that make it possible.

It is commonly agreed that perceptual learning requires repeated exposure to perceptual stimuli. Consistent with the original Gibsonian framework, the ecological approach to perceptual learning maintains that perceptual learning is the result of *direct perception* of already rich information available in one's environment (Gibson, 1966). According to this view, one becomes increasingly better at selecting the right informational variables in order to achieve a definite goal.

Thus, perceptual learning amounts to repeated interactions with the stimuli of an informational space that does not need any cognitive or higher-level integration in order to succeed. Rather, perceptual training exposure and interaction with the environment improves one's capacity to choose an appropriate goal, to focus one's attention on the appropriate cues and adjust one's behavior to the constraints imposed by the environment (Raja, 2019).

Notably, ecological psychology is not the sole framework that allows for perceptual learning that does not require any cognitive integration. One example of perceptual learning that is explained entirely by perceptual exposure (although combined with emotional reaction) is the so-called "mere exposure effect", i.e. the phenomenon that repeated previous exposure to a stimulus makes the appreciation of that stimulus more likely (Zajonc, 1968). Moreover, studies on the classic mere exposure effect have shown that heightened liking also results from exposure to stimuli that, although novel, comply with some internalized system of rules (Gordon & Holyoak, 1983).

However, it has been noticed that mere exposure is insufficient to improve perceptual capacities in a significant way, that is, in a way that makes one an *expert* perceiver. Perceptual "expert performance" (Stokes, 2020) is usually taken to require conceptual categorization.

Birdwatchers, for instance, become experts in recognizing birds if they receive systematic feedback about the categories the detected animals belong to (Tanaka & Taylor, 1991). Radiologists, who are trained in diagnostics, perform better than x-ray technologists in perceiving the relevant saliences in radiographic images, although the latter are more exposed to the images (Nodine et al., 1999). Chess masters can reconstruct chessboards after viewing them for 5 seconds thanks to their capacity to unitize the pieces based on the moves they afford, that is, the conceptual rules of the game (Jenkin, 2022).

Perceptual learning that results in perceptual expertise is accordingly the outcome of a combination of repeated and systematic exposure to stimuli accompanied by conceptual categorization which functions as feedback and as a guide for further perceptual experiences. Thus, when perceptual learning occurs, the training process leading to automatic attentional unification, differentiation, or attentional weighting requires the intervention of concepts and beliefs that, paradigmatically, respond to reasons.

Conceptual categorization of perceptual stimuli is admittedly an intricate issue. Concepts are not univocal, and neither is the way in which they interact with perceptual stimuli when we perform categorization tasks. This is why I can only gesture towards a proposal by assuming that concepts are the building blocks of beliefs. Thus, intuitively, part of what it is to categorize is to make perceptual material available for belief grounding. And, as said, beliefs paradigmatically respond to reasons.

According to philosopher of mind Zoe Jenkin "A mental state can be based on epistemic reasons only if it is formed or sustained by a mechanism that is responsive to the agent's epistemic reasons" (Jenkin, 2022, p. 15). Therefore, perceptual mechanisms can be seen as responsive to reasons through perceptual learning, that is, thanks to the fact that perceptual learning is prompted by and sustained by reasons. For example, she claims that "as chess players learn to perceive chunks their visual systems store information in response to reasons provided by their experiences of chess boards and their beliefs about available moves." (Jenkin, 2022, p. 16).

Even if it is far from uncontroversial, this proposal invites us to think that, although perceptual experiences are not paradigmatically subject to rational evaluation, at least some of them resulting from perceptual learning can be reason-responsive and therefore rationally evaluated.

4. Perceptual Learning, Expertise, and Criticism

To conclude, I shall point out how the nature of perceptual learning I have just outlined can help shed light on two interconnected aspects of the problem of aesthetic criticism introduced at the beginning.

First, insofar as aesthetic criticism is a practice that requires certain experience, the phenomenon of perceptual learning can clarify the notion of *expertise*, very often invoked by theories of aesthetic judgement. According to the Humean *topos*, what can converge the aesthetic taste of the non-expert with that of the ideal critic is the practice acquired in the evaluation and comparison of aesthetic objects: "Strong sense, united to delicate sentiment, improved by practice, perfected by comparison, and cleared of all prejudice, can alone entitle critics to this valuable character" (Hume, 1874, p. 278).

What this overview suggests is that this process of improvement, perfectioning, and clearness can be explained by appealing to the phenomenon of perceptual learning as a kind of practice that requires exposure coupled with conceptual feedback. In essence, the ability to make aesthetic judgements about works of art involves processes of exposure to features of artworks accompanied by conceptual categorization. Achieving this expert aesthetic point of view would then be the result of perceptual learning processes that makes one chunk and organize the contents of one's experiences accordingly. This assertion, which may seem trivial when examining actual educational strategies in the field of art, could find a rigorous theoretical formulation as well as be backed by empirical confirmation.

Second, the reconfiguration of perception as something that is complex, changes over time, and can be supported by reasoning helps reconcile the clash between the approaches to criticism we began with. Critical discussions in aesthetics can actually follow the rational rules of argumentation starting from non-evaluative perceptual premises (the faintly jerky head movements) and getting to evaluative perceptual conclusions (the amazing performance), and be *justified* in such conclusions, as long as they are the upshot of a perceptual learning process that incorporates reasons. This suggests that the ability to appreciate and critique artworks can be taught and learned, emphasizing the importance of education and exposure in developing aesthetic sensibilities. Accepting the idea that perceptual capacities can be improved by conceptual instructions allows us to carve out some minimal space for rationality within perceptual experiences. An experienced perceiver contributing to the aesthetic discourse may be more or less *justified* in perceptually detecting certain characteristics. Such a detection process would, in other words, comply more or less with the epistemic reasons of the subject (or of their community) and, as such, be assessable as more or less "correct". As a corollary and a possible reply to Hopkins' worry, accepting this thesis is tantamount to accepting that certain perceivable properties – those whose recognition is the result of a perceptual learning process sustained by concepts – may actually figure as the conclusion of a critical argument.

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