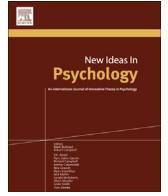




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## Up the nose of the beholder? Aesthetic perception in olfaction as a decision-making process

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### ABSTRACT

Is the sense of smell a source of aesthetic perception? Traditional philosophical aesthetics has centered on vision and audition but eliminated smell for its subjective and inherently affective character. This article dismantles the myth that olfaction is an unsophisticated sense. It makes a case for olfactory aesthetics by integrating recent insights in neuroscience with traditional expertise about flavor and fragrance assessment in perfumery and wine tasting. My analysis concerns the importance of observational refinement in aesthetic experience. I argue that the active engagement with stimulus features in perceptual processing shapes the phenomenological content, so much so that the perceptual structure of trained smelling varies significantly from naive smelling. In a second step, I interpret the processes that determine such perceptual refinement in the context of neural decision-making processes, and I end with a positive outlook on how research in neuroscience can be used to benefit philosophical aesthetics.

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### 1. Introduction: aesthetic perception as observational refinement

Is the sense of smell a subject for aesthetic theorizing? Orthodox ideas about aesthetics focus on visual and auditory objects, where philosophical interest in aesthetic values concerns the sophisticated structure of aesthetic experience (Carroll, 2001). These debates aim at a measure of objectivity for aesthetic judgment by asserting fathomable features in the objects of perception, such as harmony in music or proportion in paintings or sculptures. Olfaction has been almost univocally excluded in this context, in particular for its inherently affective nature. Odors are seen as lacking a sufficiently objective basis as well as a structural differentiation in their perceptual content that is required for their cognitive appraisal in an aesthetic sense. Nonetheless, the dismissal of smell in aesthetic studies is striking, especially given the rich history of olfactory and aromatic artifacts such as perfumes, whiskey, or wine (Classen, Howes, & Synnott, 1994).

This article integrates the undervalued topic of odor perception into the general debate about aesthetics. The central point concerns the importance of *refinement* for aesthetic experience as an active engagement with stimulus features in perceptual processing.

Drawing on olfaction, I argue that such refinement fundamentally shapes perceptual content, so much so that it sufficiently discerns the phenomenological structure of trained from naive smelling. In support of this claim, I bring together insights from two separate domains of work on olfaction. My analysis builds on recent research in sensory neuroscience, showing that smell is not a brutish sensation but subject to a range of cognitive processes (Shepherd, 2004, 2012). This scientific understanding is complemented with traditional knowledge about fragrance and flavor assessment in perfumery and wine tasting (Ellena, 2012; Smith, 2007a,b; Todd, 2010). By linking scientific with artisanal expertise this article aims to highlight the flexibility of perceptual bias as the central element through which to investigate aesthetic experience in olfaction as an interactional process of observational refinement.

In a second step, I elaborate on the model of aesthetic experience as a refinement of perception by engaging with its empirical basis. Here, I offer an interpretation of the processes that determine such perceptual refinement in the context of decision-making mechanisms. Decision-making is a central component of perceptual processing and has received growing interest in research on the neural basis of cognition (Gold & Shadlen, 2007; Shadlen & Kiani, 2013). It is fundamental to organismal behavior, and the underlying neural mechanisms operate at several levels to facilitate the discrimination of and attention to certain stimulus features. Decision-making, I suggest, allows for a more precise framing for

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the cognitive processing of selective attention that we see in aesthetic perception.

Overall, the article's purpose is twofold and divided into two thematic parts. The first part embeds olfaction in philosophical studies of aesthetic perception. The second part builds on the first part's support from neuroscientific studies to offer a positive outlook on how research in neuroscience can be used to benefit philosophical aesthetics. More specifically, section 2.1 begins by identifying the reason for the dismissal of olfaction in aesthetics, namely its apparent lack of objectivity. Section 2.2 corrects the underlying misconceptions about odor perception by drawing on recent neuroscientific studies, further combining these scientific insights with traditional knowledge from perfumery and wine tasting. Section 2.3 analyzes the perceptual content of smell in terms of its aesthetic dimensions. The article then moves on to its second part and in section 3.1 frames the previously highlighted process of perceptual refinement with regard to studies of neural decision-making. Section 3.2 concludes by briefly addressing philosophical concerns about the use of neuroscientific studies for aesthetics in light of the emerging field of neuroaesthetics.

## 2. Part 1: Olfactory aesthetics

### 2.1. Can odors be an object of aesthetic theorizing?

Can the sense of smell communicate aesthetic experiences? Tradition in aesthetic studies will have you believe that it cannot. What constitutes aesthetic perception is open to different perspectives. In essence, aesthetic experiences are considered to have a cognitive dimension in the sense that they are assumed to sharpen our rational access to the world through a sophisticated perception of particular features or objects (Carroll, 2001). Odors are not commonly thought of as representing the kind of sensory experience that admits of such cognitive value. This exclusion of smell from aesthetic theorizing draws on two convictions. First, olfaction is not considered to provide objective measures of its aesthetic qualities because the objects of odor perception are not accessible independently from their subjective perceptual experience. Rather, they are subject to individual judgment. Second, such individual judgment about smell perception does not offer a sufficiently objective basis or distinct phenomenological structure either. In light of this, the integration of olfaction into a discussion about the internal and external characteristics of aesthetic experiences is the first necessary step towards an understanding of the aesthetic dimension of smell.

To begin with, we must recognize that the strict opposition between objective and subjective experiences, which led to the general exclusion of smell from aesthetic studies, represents an older, intellectualized conceptualization of aesthetics. This conceptualization situates the grounds for aesthetic experiences as being external to the perceiver (e.g., to properties of objects), and the justification for such objectivism mirrors the domain in which most aesthetic debates are held. This domain is predominantly confined to the arts. Although, theoretically, objects of aesthetic experiences need not be objects of art (Mandoki, 2007; Saito, 2015), many considerations about what constitutes aesthetic perception derive from art studies (Carroll, 2001). Aesthetic perception in this context represents a particular form of cognitive appraisal underlying the judgment of art. Central to such judgment are the intellectual and potentially moral virtues of art, as found in David Hume's aesthetics. Occasionally, this view is associated with the idea that aesthetic appraisal is of a disinterested nature, that is lacking in self-interest and practical wanting. Here, we sometimes encounter the old assumption that beauty and reason must share a common cognitive and even normative dimension, and one of the

most prominent and early advocates for this view was Immanuel Kant.<sup>1</sup> On the whole, the underlying idea is that aesthetic experiences are intentional in the sense that they convey information about objects that is not bound to the individual's subjective perception. Thus, aesthetic experiences are about features of objects, not personal preferences.

From this perspective, smells do not present an obvious subject for aesthetic theorizing. According to philosophical introspection, odors do not account for objective properties of objects but appear primarily as individual experiences and somewhat instinctive. Some philosophers like Clare Batty (2010), therefore, refer to smells as mere phenomenological 'feels.' Moreover, smells do not seem to possess sufficient cognitive content. Other philosophers, for example William Lycan (2000), consider smells to be poor in information because they lack clear spatial dimensions such as in visual perception (e.g., accounting for an object's position, orientation, or directness). For these and similar reasons, smell still stands in the reputation of being a lower sense that engages in "mere physical sensation - the mindless 'pleasures' of the body (Classen, 2001)." It shares this fate together with the senses of touch and taste. In contrast with the 'higher senses' of vision and audition, which are seen as being closer to the faculty of reason, the so-called lower senses have thus been dismissed from aesthetic studies based on their appeal to animal instincts. Indeed:

"The devaluation of smell in the contemporary West is directly linked to the reevaluation of the senses which took place during the eighteenth and nineteenth centuries. The philosophers and scientists of that period decided that, while sight was the pre-eminent sense of reason and civilization, smell was the sense of madness and savagery. In the course of human evolution, it was argued by Darwin, Freud and others, the sense of smell had been left behind and that of sight had taken priority. Modern humans who emphasized the importance of smell were therefore judged to be either insufficiently evolved savages, degenerate proletariat, or else aberrations: perverts, lunatics or idiots." (Classen et al., 1994, pp. 50–51)

Is such dismissal justified? Contemporary views about the human sense of smell keep to similar sentiments. However, this understanding of olfaction rests more on misconceptions than facts. In fact, we have done research on the senses and perceptual experience a major disservice by neglecting the sense of smell, as the human sense of smell has not 'been left behind.' Neither is smell in evolutionary decline nor is it cognitively insignificant. To the contrary, its importance and processing have changed from orthonasal (inhaling) to retronasal (mouth breathing) olfaction, a process that is fundamental to our refined capacities in flavor perception (Shepherd, 2004, 2012). Our abilities in flavor discrimination and their appraisal are highly cultivated, and the development and varieties of human cuisine is one of the most central cultural achievements (Spence & Piqueras-Fiszman, 2014).

The trade with fragrances and flavors has always been one of the most lucrative and influential constituents of human culture. Historically, the spice trade and the ongoing hunt for new flavors have shaped our modern socio-economic landscape (Freedman, 2007). From a contemporary point of view, we have become flooded with

<sup>1</sup> Notably, Kant explicitly dismissed olfaction from yielding any positive value or benefitting from closer inspection: "Which organic sense is the most ungrateful and also seems the most dispensable? The sense of *smell*. It does not pay to cultivate it or to refine it at all in order to enjoy; for there are more disgusting objects than pleasant ones (especially in crowded places), and even when we come across something fragrant, the pleasure coming from the sense of smell is fleeting and transient." (Kant, 2006 [1798], pp. 50–51; italics in original).

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