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TOUCHING AESTHETICS: A NEUROPHILOSOPHICAL PERSPECTIVE

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Abstract. This paper explores how Patricia Churchland's insights on methodological naturalism might underwrite a deeper understanding of the role of touch in aesthetic experience. Although aesthetics has privileged sight and hearing by relying on philosophical assumptions, we argue that recent research in neuroscience provides evidence of multimodal ingredients in meaningful encounters with art, including aesthetic tactual features. This calls for a substantial reassessment of aesthetic theory informed by contemporary neuroscientific insights. To support our claim, we provide a critical historical overview of the aesthetic tradition that systematically excluded the sense of touch. We present empirical evidence from several neuroscientific studies, where aesthetic experience is portrayed as fundamentally multimodal, especially involving touch. We then apply Churchland's insights on methodological naturalism to aesthetic theory, arguing for her integrative, empirically informed approach in aesthetics. We conclude by exploring some philosophical, artistic, and institutional implications of recognizing touch as an integral dimension of aesthetic experience.

Keywords: aesthetic experience • methodological naturalism • sense of touch • neuroaesthetics

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1. Introduction

Patricia Churchland's (1986) groundbreaking approach advocated for the dissolution of artificial boundaries between philosophical inquiry and neuroscientific evidence, fundamentally transforming how philosophers and cognitive scientists approach the study of the mind. She coined "the term 'neurophilosophy' [...] to characterise an emerging field of cross-disciplinary research [...] whereby high-level theories about the mind interact with neuroscientific results from many levels of brain organisation" (Churchland & Di Francesco 2007, p.179). Her methodological naturalism insists

that philosophical questions, particularly those concerning perception, cognition, and consciousness, cannot be addressed adequately without integrating neuroscientific findings.

In recent decades, this methodological integration has profoundly reshaped various philosophical domains, including ethics, epistemology, and the philosophy of mind. Despite the clear potential of Churchland's framework to revitalize philosophical discussions surrounding aesthetic experience, she recognized that "neuroaesthetics [...] faces special difficulties, mainly due to the elusiveness and vagueness of artistic experience, but also to the variability in aesthetic judgement" (Churchland & Di Francesco 2007, p.180). This paper aims to contribute to further bridging this gap by probing how Churchland's insights might underwrite a deeper understanding of aesthetic theory, specifically through examining the role of the tactual sense[1] in aesthetic experience.

Historically, aesthetic theory has predominantly privileged sight and hearing, relegating touch—alongside taste and smell—to a peripheral position. This sensory hierarchy reflects deeply ingrained philosophical assumptions that endow the visual and auditory senses with intellectual and distant contemplation, while dismissing touch as overly corporeal and therefore aesthetically irrelevant (Classen 2005). Such an exclusion, however, is increasingly difficult to justify considering contemporary research in neuroscience and embodied cognition, fields that emphasize the inherently *multimodal* nature of perception and the central role of tactile processes even in ostensibly non-tactile experiences (Noë 2004; Gallace & Spence 2014).

Motivated by these considerations, our paper argues that aesthetic experience is rarely exclusively visual or auditory, and typically involves the sense of touch, at least implicitly. Our central claim is that the historical marginalization of touch in philosophical aesthetics is grounded in an inherited philosophical prejudice, not in empirical evidence nor in conceptual necessity. Recognizing this, we argue, demands for a substantial reassessment of aesthetic theory informed by contemporary neuroscientific insights.

To defend our claim, the paper is structured as follows. In the second section, we provide a critical historical overview of the aesthetic tradition, tracing how and why sight and hearing came to be prioritized while touch was systematically excluded. In the third section, we present empirical evidence from contemporary neuroscientific studies supporting that aesthetic perception is fundamentally multimodal, with touch playing an indispensable role even in art forms traditionally perceived as non-tactile, such as painting and music. This evidence underscores the neural and cognitive foundations that challenge conventional aesthetic hierarchies. In the fourth section, we apply Churchland's methodological naturalism to aesthetic theory, arguing that her integrative, empirically informed approach provides the necessary conceptual framework for reconsidering the aesthetic significance of touch. We show how adopting

Churchland's neurophilosophical perspective dissolves the rigid dichotomies historically entrenched within aesthetics, thereby enabling a richer, more comprehensive understanding of aesthetic experience as fundamentally *multisensory*. Finally, in the fifth section, we conclude by exploring the broader philosophical implications of recognizing touch as an integral dimension of aesthetic experience. By doing so, we show how incorporating the tactual dimension not only aligns aesthetic theory more closely with perceptual reality but also provides a more nuanced perspective, capable of addressing contemporary artistic practices.

Thus, this paper argues that acknowledging the implicit tactual dimension in aesthetic perception—guided by Patricia Churchland's neurophilosophical approach—has significant implications for aesthetic theory. Such recognition compels us to abandon outdated sensory hierarchies and embrace an integrative understanding of art and aesthetic experience.

2. The aesthetic exclusion of touch

Since its very origins, aesthetic theory has maintained a clear hierarchy among the senses, consistently privileging sight and hearing while relegating touch—alongside taste and smell—to a secondary status. The marginalization of these latter senses has generally been justified by associating them closely with *immediacy*, *corporeality*, and *need*, features traditionally viewed as incompatible with the contemplative ideal of "pure" aesthetic experience (Marks 2002; Classen 2005). This sensory hierarchy has exerted profound and lasting effects on aesthetic theory, shaping both philosophical conceptions of art and the concrete institutional practices governing its appreciation, such as museum policies that explicitly prohibit touching artworks (Candlin 2010). Thus, the marginalization of touch is not a mere oversight but reflects a deeper conceptual framework predicated upon an abstract notion of distance between spectator and artwork.

While many attribute the origins of this sensory hierarchy to Plato, careful examination shows that Plato's direct commentary on touch is limited, and (with few scattered exceptions) explicit statements linking the senses directly to aesthetic contemplation are notably absent. However, Plato's broader epistemological framework does implicitly privilege sight and hearing as avenues toward knowledge, aligning them with rationality and distance from material immediacy (*Republic* 475d–480a). Conversely, tactile perception—intimately tied to bodily desire and need—is implicitly positioned as epistemically inferior, tethering the soul to the corporeal and transitory aspects of existence. This indirect exclusion sets a philosophical precedent, establishing a cloaked and persistent association between touch and the epistemically inferior realm of sensory immediacy and bodily need (Sallis 1996; Burnyeat 2000).

Aristotle's account provides a more straightforward acknowledgment of touch, albeit still nuanced. In *De Anima* (II.2, 413b–414a), he explicitly identifies touch as foundational to animal life, indispensable and shared across species. Yet, significantly, when turning explicitly to aesthetic theory, Aristotle privileges sight and hearing as superior sensory modes. In *Poetics* (6, 1449b–1450a), Aristotle confines aesthetic mimesis (μίμησις) predominantly to these senses, implying that they enable contemplation without direct bodily entanglement. Sight and hearing allow for a detached appreciation of artistic form, consistent with rational cognition and the ideal of philosophical distance (Belfiore 1992; Halliwell 2002). Thus, Aristotle explicitly introduces a philosophical distinction in aesthetics, where tactile engagement, while indispensable biologically, is rendered philosophically inconsequential for aesthetic judgment.

This philosophical ideal of a contemplative distance finds its canonical modern articulation in Kant's *Critique of the Power Judgment* (§§2–5). Kant explicitly asserts that aesthetic judgment requires "disinterest," a state free from any practical or bodily need, desire, or pleasure associated directly with corporeality (Guyer 1997). As touch inherently involves physical engagement and direct bodily experience, Kant excludes it categorically from the aesthetic domain. Only sight and hearing permit the contemplative, reflective stance Kant deems necessary for genuine aesthetic appreciation. Kant's influential conception firmly entrenched sensory hierarchy into the foundations of aesthetic theory, extending its effects into modernity, both philosophically and institutionally (Crawford 1974).

The Kantian legacy continues to resonate within contemporary aesthetic theory, often indirectly through the persistent notion of "aesthetic distance." While there have been critical attempts to rehabilitate tactile perception within aesthetic contexts (Paterson 2007; Gallace & Spence 2014; Jiménez-Rolland & Gensollen 2025), these efforts remain exceptions. The deeper structure of sensory hierarchy continues largely unquestioned, seemingly more a product of conceptual inertia than justified philosophical reflection or empirical evidence. Institutionally, museums and galleries continue to reinforce this visual hegemony. The prohibition of touch is not purely pragmatic—aimed at conservation—but reflects a deep-seated theoretical commitment to visual primacy (Candlin 2010). Even sculpture, with significant tactual properties, is predominantly experienced visually, treated as a three-dimensional visual image rather than a concrete object intended for direct haptic exploration.

Nevertheless, significant challenges emerged throughout the 20th century. Brazilian Neoconcretism notably opposed this visualist paradigm, as artists like Lygia Clark and Hélio Oiticica explicitly required tactile engagement in their artworks, intentionally collapsing the aesthetic distance between artwork and audience. Digital and interactive art has further complicated traditional aesthetic paradigms—incorporating multimodal interaction, tactile feedback, motion sensors, and immersive environ-

ments that challenge conventional sensory hierarchies (Hansen 2006). However, critical discourse still predominantly employs conceptual frameworks rooted in visual contemplation, indicating an ongoing gap between artistic practice and theoretical reflection.

Philosophically, phenomenology and embodied cognition further destabilize the assumed primacy of vision. Merleau-Ponty argues explicitly that visual perception always involves implicit tactual dimensions, suggesting that seeing an object entails kinesthetic anticipation and embodied simulation (Merleau-Ponty 1945). Likewise, Alva Noë's work in enactive cognition underscores how perception inherently involves sensorimotor knowledge, indicating that even visual experience fundamentally incorporates a haptic dimension (Noë 2004). Recent neuroscientific evidence strengthens this phenomenological insight. Empirical studies consistently demonstrate that observing textured surfaces or bodily movements activates somatosensory cortical areas, indicating neural-level tactual engagement even in purely visual tasks (Freedberg & Gallese 2007). Such findings provide compelling empirical support for the philosophical claim that aesthetic perception inherently involves touch, implicitly embedded even when overt tactile engagement is absent. However, the privilege of sight and hearing still thrives in empirical approaches to aesthetics. This is attested by the fact that "most neuroimaging studies [...since the 1990's] concentrated on understanding what happens when music or visual art generate pleasure or displeasure, [...focusing on] modality-specific engagements of auditory [...] or visual processes" (Skov 2023, 18–19).

Thus, all things considered, this traditional exclusion of touch from aesthetic theory arises neither from rigorous philosophical argument nor empirical evidence, but rather from inherited conceptual frameworks privileging *distance*, *abstraction*, and *disinterest*. In the next sections, we will argue that a rigorous reconsideration of aesthetic experience informed by contemporary neuroscientific insights demands fundamentally rethinking the role of touch within aesthetic theory.

3. Touch in aesthetic experience: Cues from neuroscience

Although it is not easy to identify *purely* (or even *mainly*) tactual aesthetic experiences, touch is diversely involved in many significant episodes of our engagement with the arts. Some recent neuroscientific findings suggest that the role performed by touch in many of those episodes exhibits some crucial features of aesthetic experiences: it bestows *aesthetic pleasure*, it provides *meaningful content*, and it furnishes *emotion*. Regardless of their involvement, these features are not exclusively linked to visual or auditory perception. Rather, the way in which artworks are perceived, understood, and valued depends on a sensory interplay. Therein, our sense of touch

seems to operate on an implicit level, in ways that aesthetic theorizing is only beginning to acknowledge. We will address some of those findings in this section and discuss their role as inputs for philosophical theorizing and their relevance for aesthetics in the next sections.

3.1. Pleasing touch

Pleasure is usually considered a central feature of aesthetic experience. It is often characterized as an enjoyable experience, that provides delight and satisfaction. However, the pleasure involved in aesthetic experience is usually contrasted with hedonistic pleasures, such as those typically induced by sex, drugs, and rock n' roll (Nanay 2019, p.7). Although several attempts have been made to identify the distinctive character of aesthetic pleasure and set it apart from hedonistic pleasures, none has gained unanimous consent. A prominent historical suggestion to sharpen this contrast was provided by Immanuel Kant by speaking of aesthetic pleasure as a "disinterested satisfaction" (*Critique of the Power of Judgment* §2), which is indifferent to the existence of the object that prompts it. However, the details of his suggestion remain highly controversial. Insofar as tactual pleasures are rather akin to hedonistic experiences, this has been offered as a ground for excluding touch from the realm of the aesthetic, which—according to an influential idea voiced by Socrates—does not include all kinds of pleasure, but only those "we enjoy through our sense of hearing and sight" (Plato *Hippias Major* 297e).

So far, neuroscientific findings have not offered a principled distinction in brain activity among hedonistic and aesthetic pleasures. There is no evidence of different neural circuitry that distinguishes these kinds of pleasure. Instead, there seems to be a heavy overlap among them, "with a shared mesocorticolimbic circuit or single common neural currency, [...] most faithfully represented by activity in orbitofrontal cortex, particularly in a mid-anterior subregion" (Berridge & Kringelbach 2013, p.295-6). Nonetheless, both in hedonistic and aesthetic instances, "pleasure is never merely a sensation [...since it] requires the co-recruitment of additional [...] neural circuitry [...] that elicits 'liking' reactions. Without them, the same sensation can remain neutral or even become unpleasant" (Berridge & Kringelbach 2013, p.294). This casts doubts over the Socratic surmise that hearing and sight provide a unique kind of pleasure.

Our encounters with some artworks of sculpture and architecture are often described as pleasurable due to the active involvement of our sense of touch.[2] In direct haptic engagement with the surfaces of these artworks, "the skin reads the texture, weight, density and temperature of matter" (Pallasmaa 2024, p.48). Some empirical research has been carried out to investigate the pleasant aspects of touch, as well as the brain mechanisms for tactile pleasure. Some of these studies

> confirm the presence of some basic principles at the basis of human tactile aesthetic judgments [...and] suggest the existence of a complex interaction between tactile pleasantness, the physiology of the haptic system, the microgeometric structure of the materials presented, and the way in which tactile stimuli are delivered. (Etzi et al. 2014, p.187).

Against the suggestion that the previous cases could qualify as instances of aesthetic experiences, it might be pointed out that touch is not required for the aesthetic appreciation of objects such as sculptural and architectural works of art, since they "are in most cases, as a matter of fact, not touched by the beholders" (Kovac 1970, p.98), and "not intended to be" (Koed 2009, p.104). Thus, the aesthetic potential of tactual pleasure in aesthetic experience would seem to be extremely limited. But tactual stimuli are not restricted to haptic interactions. Even without contact, "our skin traces temperature spaces with unerring precision" (Pallasmaa 2024, p.50), triggering both behavioral and autonomic physiological responses for thermoregulation. Besides, tactual sensations are involved insofar as our other senses are "also a means of igniting the imagination and of articulating sensory thought" (Pallasmaa 2024, p.38). Especially, visual information seems to play a role in thermal perception by means of color and lighting. In their review, Mayes and colleagues (2023) describe several experimental approaches to investigate the influence of visual stimuli in the detection and regulation of thermal sensation and thermal pleasantness. Although there is limited experimental research of direct correlations between visual manipulations and physiological responses, they might influence physiological responses through thermal perception. As discussed in the review by Karmakar, Kesh and Muniyandi (2023), many other stimuli produce thermal illusions. Thus, a tactual pleasure could even arise regardless of the existence of an objective thermal source, in line with the Kantian notion of disinterestedness.

3.2. Tactual content

Another salient feature of our aesthetic engagement with the arts seems less sensuous and more intellectual in nature. It involves representation, *aboutness*: the property of some (elements of) artworks of standing for, or being about, something. Several conundrums spawn from attempts to understand the kinds of representation deployed in the arts. However, it is rather uncontroversial that many works of literature, painting, photography, cinema, theatre, and so forth, are representational, and that aspects of their representational nature play significant roles in experiencing them aesthetically. Representational content is usually conveyed by visual or auditory means—such as (written or spoken) language and depiction. Having minimal units and procedures to sequentially combine them, visual and auditory structured communication systems allow to produce an indefinite number of novel represen-

tational contents, easily available for others to grasp. This creative potential allows for an intersubjective and simultaneous engagement with the same representational content.

Before the nineteenth century, a sweeping assessment of the cognitive inferiority of tactile means of representation perhaps might have seemed warranted—as compared to the intellectual potential of sight and hearing. However, the development of tactile writing systems by Charles Barbier de la Serre and Louis Braille revealed this to be a technical and technological impairment, rather than a cognitive limitation for the sense of touch. Their inventions—a testament of human ingenuity—made linguistic representation haptically available, being able to communicate as much as visible or audible language. In their review, Mašić and colleagues (2020, pp.149–51) comment that several studies correlate Braille reading with activation of the visual cortex, suggesting that it is deployed to process tactile, spatial and somatosensory information, and even language. The study conducted by Gaca and colleagues (2025) suggests that tactile Braille engages with typical reading areas of the brain even without explicit instruction. Thus, this network is able process those stimuli as linguistic even if they are provided by an atypical sensory modality.

Other kinds of representations, such as pictures, are also haptically available. Although "pictures are widely viewed as essentially and paradigmatically visual representations" (Lopes 1997, p.427), pioneering work by John M. Kennedy and his colleagues showed that pictorial representation is possible in congenitally or early blind subjects.[3] With no previous experience with pictures of any kind, these subjects are able to recognize the objects in silhouette, and even to produce outline drawings very similar to those created by sighted subjects (Lopes 1997, p.429; 2002, p.192). While they do not offer the same sensuous pleasures of visual pictures (Hopkins 2000, pp.162, 166), the content of "tactile pictures" can be grasped in the absence of vision (Lopes 2002, p.193). To the extent that their content contributes to their aesthetic value, "tactile pictures will share in the aesthetic possibilities of other pictures" (Hopkins 2000, p.161) and, thus, "vision is not, after all, essential to appreciating every picture" (Hopkins 2004, p.158). Studies using neuroimaging techniques have shown that visual cortical processing highly correlates with some specific tasks in normal tactile perception (Zangalaze *et al.* 1999) and that the degree of activation of the visual cortex elicited by tactile stimuli increases with vision loss (Cunningham *et al.* 2012).

But content might be in the reach of touch even in common interactions. Research on speech perception indicates that it does not just involve hearing: it is a multimodal process. Evidence of audio-visual interaction was provided by McGurk and MacDonald (1976), who showed that mismatching visual and auditory signals resulted in a fused response that is called the "McGurk effect". A behavioural experiment carried out by Bicevskis, Derrick and Gick (2016) used air puffs along with video of faces

producing sounding similar syllables to identify visual-tactile integration of speech perception. Their results show that, even in the absence of an audible speech signal, perceivers use aero-tactile information to distinguish speech sounds with an ambiguous visual speech signal. The study carried out by Hansmann, Derrick and Theys (2023) explored the additional beneficial effect of aero-tactile information on the neurophysiological processing of auditory signals, using EEG. Their results suggest that not only visual but also aero-tactile information benefits auditory speech perception, although its effect is comparatively much smaller. Nonetheless, Răutu and colleagues (2023) explore the feasibility of supplementing speech-in-noise perception with haptic inputs to improve intelligibility in noisy environments, even in listeners with no known hearing impairment. This lends support to multimodal accounts of speech perception, and it encourages research on tactile speech aid devices.

3.3. Touching emotions

The last remarkable feature of aesthetic experience we will address in this section is emotion. In our descriptions of artworks, we frequently use emotional terms to portray them as something that conveys meaningful expression and requires interpretation. This is not exclusive of representational works of art, where emotion could result from cognitively engaging with their meaningful content. It also happens—and is deeply intriguing—in the case of music. Even with purely instrumental music (what Richard Wagner called "absolute music"), some musical passages are said to be "heartbreaking", "serene", "triumphant", "sweetly melancholic", and so forth. Here we will not address the question of how musical works of art can express emotion. Rather, we will explore peculiar physiological effects that often accompany emotional responses to music.

Although it is not universally reported, there is a particularly intense physiological response to deeply felt emotion in response to music. It is often called "musical frissons". In an early empirical study of the phenomenon, the pharmacology professor Avram Goldstein studied it under the name of "trills". According to reports of the participants, thrills are a common phenomenon, both in males and females. The sensation they produce is described in tactual terms as a "chill", "shudder", "tingling", or "tickling". It usually originates in the upper spine and back of the neck; it spreads in a radiating or sweeping pattern, over the scalp, toward the shoulders and arms, and down the spine. Although similar "thrilling" experiences are triggered by book passages, scenes in movies, or performances, as well as the appreciation of beauty in nature or art, those produced by music (i.e., musical frissons) were the most reported. As Goldstein noted, they "are invariably associated with sudden changes in mood or emotion. [...In fact,] the single generalization that seems to apply is that the thrills are associated with emotional arousal" (1980, p.127).

From these early experiments, Goldstein observed that the response of the subjects to the same music may be completely different. Thus, it does not seem to be merely a physiological response to sound, but to depend on its meaning for a person. Noting this remarkable phenomenon, "rather than focusing on finding the music that would elicit pleasure in everyone, [...further research focusses] on the spontaneous individual pleasure response elicited by letting people choose their own music" (Zatorre 2023, p.203). Goldstein speculated that even if musical frissons are "perceived at the surface of the body [...], it must be assumed that this is a referred sensation from a central neural focus [...as a consequence of] spreading electrical activity in some brain area with somatotopic organization, and with neural links to the limbic system and to central autonomic regulation" (1980, p.128). Indeed, since they instance a clear and discrete pattern of autonomic nervous system arousal, chills have provided means to the objective verification of peak emotional response to music through psychophysiological measurements (Salimpoor et al. 2011; Koelsch 2014; Reybrouck et al. 2018; McPhetres & Zickfeld 2022). Applying these insights, recent studies have shown that different levels of frisson are correlated with different levels of acoustic features such as amplitude, spectral centroid, and spectral bandwidth—suggesting that dark, loud, and compact sounds induce frisson (Koumura et al. 2020). Also, findings concerning brain activity associated with musical frissons align more precisely with data of consumer preferences than subjective expectations about sales and song ratings (Zatorre 2023, p.208).

In the next section, we provide details on Patricia Chuchland's influential insights about how one should incorporate these findings into philosophical theorizing. We then briefly conclude by exploring their broader philosophical implications for aesthetic experience.

4. Tactual aesthetics: Applying Churchland's methodological naturalism

Since its inception in the 18th century, the field of "aesthetics" made claims concerning human psychology and physiology (Skov 2023, p.7, 15). However, initially it was conceived as an almost exclusively speculative and theoretical endeavor. Patricia Churchland's neurophilosophical framework provides a particularly powerful and empirically robust foundation for reassessing traditional aesthetic theories, especially regarding the historically marginalized sense of touch. Churchland's methodological naturalism explicitly insists on the integration of neuroscientific findings into philosophical theorizing about the mind. This commitment emerges from her conviction that philosophical reflection isolated from empirical science is inadequate, or as she clearly states in her foundational work *Neurophilosophy*:

> The sustaining conviction of this book is that top-down strategies (as characteristic of philosophy, cognitive psychology, and artificial intelligence research) and bottom-up strategies (as characteristic of the neurosciences) for solving the mysteries of mind-brain function should not be pursued in icy isolation from one another. What is wanted is a unified theory of how the mind-brain works (Churchland 1986, p.3).

This applies not only for neurophilosophy at large, but also to cognitive neuroscience, whose "research strategy [...] is neither exclusively from the top down, nor exclusively from the bottom up" (Churchland & Sejnowski 1988, p.741). Instead of pursuing independent and incompatible lines of inquiry, Churchland saw top-down and bottom-up approaches as complementary, "where research at one level provides constraints, corrections, and inspiration for research at other levels" (Churchland & Sejnowski 1988: 741). This explicit methodological stance directly challenges the traditional philosophical approach of separating philosophical inquiry from empirical research.

Although her works are seldom mentioned in this literature, it is not an exaggeration to claim that Patricia Churchland's program heavily influenced the rise of neuroaesthetics. Before its highly influential use by Semir Zeki, the first featured use of the word "neuroaesthetics" in publication goes back to 1988—just two years after *Neurophilosophy*—to identify an emerging field of study of the biological foundations of aesthetics (Skov 2023, p.19). But, arguably "the discipline that exists today under this name was born between 2000 and 2010" (Skov 2023, p.1). Precisely in this period, in 2007, Patricia Churchland edited a special issue of the journal *Functional Neurology*, presumably commemorating the twentieth anniversary of her book. There she stated that "neurophilosophy [...] comprises many important subfields such as neuroeconomics, neuroethics, and neuroaesthetics" (Churchland & Di Francesco 2007: 179), and included a paper on the latter subfield.

Although this legacy might be contested, their goals are undoubtedly similar. Neuroaesthetics, conceived as subfield in cognitive neuroscience (Pearce et al. 2016), demands that theories of perception—central to aesthetic experience—must incorporate insights from neuroscience, thus compelling us to reconsider traditional assumptions about the sensory hierarchy within aesthetics. Explicitly incorporating Churchland's stance could prove fruitful: "once we understand some fundamental principles of brain function, we may see how to reformulate the outstanding problems and address them in ways that are impossible now to predict. Whatever the outcome, the results are likely to surprise us" (Churchland & Sejnowski 1988: 745).

One particularly significant aspect of Churchland's methodological naturalism is her consistent rejection of philosophical dualisms. She argues throughout her work that distinctions between mind and body, reason and emotion, or higher and lower senses, are unsupported by neuroscientific evidence and ultimately reflect histori-

cally entrenched philosophical biases rather than factual realities. This rejection has immediate implications for aesthetic theory. The long-standing marginalization of touch, often defended on grounds of its constrained immediacy, becomes philosophically untenable within Churchland's neurophilosophical framework. Touch, traditionally excluded from aesthetic theory due to its association with immediacy and need, emerges through neuroscience not as philosophically inferior but as fundamentally intertwined with perception and cognition.

In *Touching a Nerve*, Churchland explicitly addresses the integration of cognitive and emotional processes in decision-making and perception, rejecting the notion of their clear-cut separation. However, she warned that:

> None of this means that we should always trust our feelings, disregarding all advice to carefully think things through. Propagandists, demagogues, and advertisers are all too ready to manipulate our passions for their own selfish ends. Reason certainly needs to play a role, but whatever reason is exactly, it also needs the balance of emotions to aid in the evaluation of possible consequences (Churchland 2013, p.223).

Applied explicitly to aesthetics, this insight profoundly reshapes our understanding. It implies that aesthetic judgment, traditionally conceived as an act of isolated contemplation relying solely on rational faculties mediated predominantly by sight or hearing, might also significantly involve dimensions of tactile experience. Indeed, aesthetic perception—even ostensibly visual or auditory—is inherently multisensory, implicating implicit tactile dimensions.

Further, in *Braintrust: What Neuroscience Tells Us about Morality*, Churchland elaborates a similarly integrative perspective regarding the roots of evaluative judgment, drawing explicitly from the tradition of Hume's naturalism. She endorses Hume's recognition that reason alone never constitutes a sufficient motive; rather, reason and affect are integrally intertwined within our neural architecture, thereby grounding human evaluative processes deeply in our biological and emotional makeup (Churchland 2011, p.6–7). For aesthetic theory, this underscores that the evaluation of art is similarly rooted in neural processes, thus supporting a revaluation of tactile perception as essential rather than peripheral.

Empirical neuroscience robustly supports these philosophical claims. Studies in multisensory integration provide ample evidence that the sensory modalities are neurologically interdependent. For instance, Freedberg and Gallese (2007) demonstrate how observing visual images that suggest textures or bodily motion activates the somatosensory cortex, implying a latent tactile dimension in visual perception. Churchland explicitly acknowledges and integrates neuroscientific findings into philosophical discussions, asserting that isolated sensory experiences do not map accurately onto neural realities, which instead show richly integrated sensory processing networks (Churchland 2002, p. 284).

Churchland's methodological naturalism, as presented explicitly in *Neurophilosophy*, demands precisely such empirical integration into philosophical inquiry. She contends clearly that progress in understanding how the mind-brain works will depend on integrating what we know from bottom-up neuroscience with top-down psychology and philosophy. This methodological directive dictates that aesthetics, too, must abandon purely conceptual analyses detached from neuroscientific findings. Features traditionally linked to aesthetic experience such as "disinterest", "aesthetic distance", and "contemplation", all central to Kantian and classical paradigms, must be critically reassessed in light of empirical evidence regarding how the brain genuinely perceives and evaluates aesthetically significant episodes.

Churchland's methodological naturalism thus provides compelling philosophical justification for a shift toward *neuroaesthetics*. It compels us not only to reconsider touch as relevant to aesthetic experience but to acknowledge its implicit and pervasive influence in aesthetic appreciation. In this neurophilosophical context, the artificial separation of tactile perception as inherently inferior or aesthetically irrelevant no longer withstands scrutiny. Instead, recognizing touch as integrally connected to visual and auditory experiences at a neurological and phenomenological level significantly enriches aesthetic theory, aligning philosophical analysis more faithfully with actual aesthetic experience. Artworks, even when experienced visually or auditorily, engage implicit tactile responses through neural pathways integral to perception and cognition.

Thus, by applying Churchland's explicitly stated methodological principles, aesthetic theory can overcome historical biases rooted in sensory dualisms. Doing so yields a richer, empirically grounded, and phenomenologically vibrant understanding of aesthetic experience—one that acknowledges the crucial role of tactile perception as *fundamental* rather than peripheral, and *inherently multisensory* rather than artificially isolated.

5. Concluding remarks

We have argued for methodological naturalism with regards to aesthetic experience, following Patricia Churchland's approach that invites us to explore "the impact of discoveries in neuroscience on a range of traditional philosophical questions about the nature of the mind" (2022, p.1). Our main interest has been to shed light on the role of touch in our encounters with art or sensory objects of aesthetic value. As we saw in section 2, sight and hearing have occupied center stage in the history of aesthetic theory, relegating touch to a peripheral position. However, as our overview in section 3 illustrates, contemporary research in neuroscience emphasizes the inherently multimodal nature of perception, even in ostensibly non-tactile experiences.

We suggested that many of those instances qualify as aesthetic experiences, insofar as they exhibit *aesthetic pleasure*, *meaningful content*, and *emotion*. Furthermore, in the cases we showcased, aesthetic experience typically involved the sense of touch, at least implicitly. Thus, these neuroscientific insights borne out our conjecture that the historical marginalization of touch is merely the result of inherited philosophical prejudice.

Once our philosophical views of the sources of aesthetic experience are so broadened, a more nuanced picture appears. The contributions of specific sense modalities are often blurred. Ultimately, the integration of tactual dimensions into aesthetic theory implies abandoning the conventional distinction between so-called "aesthetic" and "primitive" senses. This shift mandates reconceiving aesthetics as fundamentally multisensory, acknowledging touch as a crucial and often implicit element of aesthetic experiences. Consequently, contemporary aesthetic theory must evolve to reflect these empirical insights, promoting a comprehensive understanding of art and aesthetic engagement that is both philosophically rigorous and empirically grounded.

Revolutionizing contemporary aesthetic theory has also the potential to influence artistic and institutional practices, particularly concerning viewer interaction with art. Traditional aesthetics, which often emphasizes visual contemplation from a distance, neglects the crucial tactual component inherent in engaging with artworks. But our eagerness to touch art might not be (solely) the result of taboo.[4] We yearn haptic exploration in our search for aesthetic value. In recognition of the multi-modal nature of our experiences, many innovations put valuable aesthetic experiences within the reach of people with impairments and limited sensibility (Hinton 1991; Daly 2017; Fletcher 2021). Even with the aid of other senses, technological innovations such as digital art installations and virtual reality systems incorporating haptic feedback, might deepen our aesthetic experiences without compromising the integrity of unique artworks (Albertazzi et al. 2016; Furferi et al. 2024). In sum, Churchland's methodological naturalism invites us to reconceive aesthetics as an intrinsically multisensory enterprise in which tactile processing is not ancillary but constitutive. Recognising this fact not only dissolves inherited sensory hierarchies; it also provides philosophers, neuroscientists, and artists with a shared framework for investigating how the brain actively taps into aesthetic value through touch.

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Notes

[1] We follow Fulkerson (2024) in using "tactual" to refer broadly to what concerns the "sense of touch". The qualification of touch as "haptic" involves some movement (usually voluntary and exploratory) of, or against, sensory surfaces; "tactile" refers to touch when it is mediated entirely through the skin.

[2]Herbert Read even defined sculpture as "an art of *palpitation*—an art that gives satisfaction in the touching and handling of objects" (1956, p.49).

[3]Similar, more detailed, findings are reported by Vinter and colleagues (2020).

[4]Quite in the opposite direction, Constance Classen suggests that the taboo of touch in the modern museum was cultivated in the nineteenth century, by imposing the idea "that touch had no cognitive or aesthetic uses and thus was of no value in the museum, were only cognitive and aesthetic benefits were to be sought" (Classen 2012, p. 145).

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