



ResearchInfinity

WWW.RES00.com

Feeling Fit for Function: Haptic Touch and Aesthetic Experience

Tom Roberts

Traditionally, the sense of touch—alongside the senses of taste and smell—has been excluded from the aesthetic domain. These proximal modalities are thought to deliver only sensory pleasures, not the complex, world-directed perceptual states that characterize aesthetic experience. In this paper, I argue that this tradition fails to recognize the perceptual possibilities of haptic touch, which allows us to experience properties of the objects with which we make bodily contact, including their weight, shape, solidity, elasticity, and smoothness. These features, moreover, may be indicative of how well-suited an object is for its function, and in feeling them we can thus feel the positive aesthetic quality of functional beauty.

1. Introduction

Which of our sensory modalities are capable of delivering distinctively aesthetic experiences? A traditional answer is to defend the possibility of aesthetic experience for the distal senses of vision and audition while excluding the proximal senses of taste, smell, and touch.¹ The distal senses have aesthetic credentials, the thinking goes, because they inform us of complex, public objects, in contrast to the private and rudimentary pleasures of mere internal sensation. Admitting the proximal senses to the aesthetic domain would ‘obliterate’ a distinction that is both long-standing and firmly marked in linguistic usage between genuinely appreciative experiences such as regarding a painting or listening to music on the one hand, and the simple enjoyment of ‘taking a bath’ or ‘drinking lemonade’ on the other (Parsons and Carlson, 2008, p. 178). It is only to the former class of perceptual encounters, facilitated by the ‘higher’ distal senses, that aesthetic attributions

¹ Plato, *Greater Hippias*; Burke (1757/1958); Parsons and Carlson (2008); Scruton (1979). For recent dissent, see e.g. Korsmeyer (1999) on taste; Shiner and Kristovets (2007), Shiner (2020), and Brady (2005) on olfaction; Irvin (2008) on bodily sensation.

such as *beautiful* are warranted, while experiences of the latter sort, derived from the ‘lower’ proximal senses, deserve only to be called *agreeable* or *pleasing*.

In this paper, my concern is with the sense of touch. I will argue that those who have been unwilling to countenance aesthetic experiences in this modality have failed to acknowledge its perceptual potential. Touch has a two-dimensional character. On the one hand, it can involve relatively simple sensations felt on or within the boundary of the skin, such as feelings of warmth, cold, tingling, or prickling. On the other hand, however, touch is capable of delivering richly exteroceptive experiences: that is, experiences of objects and features that are external to the body.² It is this second dimension, known as *haptic* touch, that will be my central focus in what follows. An embodied subject deploys haptic touch when, for instance, they lift and grip an object; squeeze, swing, or flex it in the hands; or run their fingers over its surface. Dynamic and exploratory activities such as these enable the perception of an array of properties that belong to material objects, such as rigidity, elasticity, weight, balance, solidity, tension, pliability, and smoothness.

Furthermore, these are properties that can determine how well an object is formed for its function—including, for example, how well-suited it is for manual manipulation; for wielding, striking, or pulling; for cutting and slicing; for riding upon or driving in; and for performing activities such as throwing, writing, eating, knitting, or running. If we permit that the appearance of being well-formed for a particular function is a positive aesthetic quality—as those who promote the idea of functional beauty have so far defended for the visual attributes of an object³—then we ought also to accept the sense of touch into the aesthetic domain, for this modality allows us to feel this species of positive aesthetic quality. When we weigh in our hand the perfect snowball, ride a well-engineered and well-oiled bicycle, wield a clean-flowing fountain pen, or test the bounce of our new sports shoes, we can derive aesthetic satisfaction from the fact that the item has been manifestly well-formed for its function.

In Section 2, I briefly rehearse the reasons why aesthetic credentials have been denied to the modality of touch. In Section 3, I summarize recent work on the nature and perception of functional beauty, and highlight the visuo-centric thinking that runs through this literature. In Section 4, I show how the sense of touch, too, can give rise to perceptual experiences of functional beauty.

2. Touch and Aesthetic Experience

Why have commentators tended to exclude the proximal senses from the aesthetic domain? Historically, the reasons are several;⁴ but we can capture much of the terrain by considering three principal lines of argument.

Firstly, the sensory deliverances of smell, taste, and touch have been thought to lack the formal complexity that characterizes paradigmatic objects of aesthetic experience.⁵

² Montero (2006) defends the aesthetic character of *interoceptive* sensations of proprioception—the awareness, from the inside, of the posture and movement of one’s own body. The role of touch in aesthetic encounters with genuine historic artefacts is explored in Korsmeyer (2019b).

³Parsons and Carlson (2008); Paris (2020); Sauchelli (2013).

⁴For detailed treatments of this history, see Parsons and Carlson (2008, pp. 177–189) who are sympathetic to the traditional view, and Korsmeyer (1999, pp. 11–37; 2019a) who is critical of it.

⁵E.g. Soucek (2009); Zink (1942, p. 709). See Coleman (1965, p. 321) for a critical discussion. In her defence of the aesthetic character of the experience of itching and scratching, Irvin (2008) concedes the formal-complexity

For touch, it is basic and undifferentiated bodily sensations such as a feeling of warmth on the skin that are thought to have limited internal structure. They have no interesting parts whose relations might yield an experience of balance, harmony, or tension, for instance. Nor do they have a temporal ebb and flow with, say, a satisfying resolution. And whereas even flavours and odours might be mixed, blended, and engineered—by a chef or a perfumier, for example—so as to afford a certain qualitative sophistication,⁶ there are fewer opportunities to enrich what we feel in the body. Like a visual experience that presents only brute colour, simple somatic sensations thus do not reward our attentive engagement and contemplation—there is nothing, as it were, to get our aesthetic teeth into.

Secondly, a challenge arises from the private nature of proximal-sensory states.⁷ For touch, the worry is that tactile sensations are localized within, or at the limits of, an individual subject's body. Because they have no public object that others can access by the same means, these interoceptive experiences cannot be shared, and so they are not available for intersubjective scrutiny, discussion, and disagreement—unlike the standard objects of aesthetic appreciation. There is, as Dowling (2010, p. 239) has put it, nothing in the world to *anchor* whatever felt qualities are reported by the subject of bodily sensations in the way that the material features of a sculpture, for example, provide a mind-independent ground for our aesthetic attributions in the visual domain. Finally, fleeting sensations at the periphery of the body may be too elusive for the subject herself to grasp and articulate, even if the vocabulary were there to do so, and are thus destined to remain private and undisclosed.

Thirdly, there is the argument from linguistic conservatism, which holds that expanding the term 'aesthetic' to encompass experiences derived from the proximal senses would do an injustice to the well-entrenched ways in which this concept is deployed in our discourse. To bestow bodily sensations with aesthetic credentials, that is, is to be excessively permissive: 'the pleasures of exercising, taking a bath, drinking lemonade, or engaging in sexual activity may all count... as aesthetic pleasures' (Parsons and Carlson, 2008, p. 178). But established linguistic usage has—'since ancient times' (2008, p. 185)—carved out a distinction between aesthetic and merely sensuous gratification that acknowledges a fundamental phenomenological difference between these two categories. Any attempt to dissolve this distinction both disregards tradition and runs the risk of trivializing the very concept of the aesthetic (Forsey, 2013, p. 211; Dowling, 2010, p. 226). According to this argument, even relatively non-committal evaluative descriptions such as 'aesthetically pleasing', which fall short of such full-blown accolades as 'beautiful', 'sublime', or 'exquisite', are strained and unnatural when ascribed to the proximal senses (Parsons and Carlson, 2008, p. 180). Where language like this *is* used to describe the objects of the proximal modalities—as it sometimes is for, say, tempting foodstuffs or fine whisky (Davies, 2010, p. 325)—it should be regarded as non-literal. Strictly speaking, we should apply our aesthetic terminology only where it belongs: to what we see and what we hear.

requirement, and argues that somatic experiences such as itches can possess sufficient complexity to satisfy this requirement.

⁶ See, e.g., Shiner (2015, 2020), Korsmeyer (2019a), pp. 362–3).

⁷ See Soucek (2009) and Irvin (2009) for debate on how this argument plays out for the inner sensation of itchiness.

In combination, these three arguments appear to put significant pressure on the idea that the sense of touch, alongside the senses of taste and smell, is capable of generating distinctively aesthetic experience. In Section 4, however, I will argue that they rest upon an impoverished conception of the content and character of this modality, because touch does not only let us feel sensations internal to the body, it enables us to make *haptic* perceptual contact with material features of the extra-mental environment. Once we recognize this, we can see that touch allows us to feel the positive aesthetic qualities that stem from the relation between an object's form and its function.

3. Functional Beauty

Before turning to the perceptual possibilities of the sense of touch, I will unpack the relations between form, function, and aesthetics as they have been understood in recent literature, drawing especially on Parsons and Carlson's influential treatment, *Functional Beauty* (2008). Put simply, this species of beauty is a positive aesthetic quality, the appreciation of which is 'cognitively rich', in that it requires knowledge of the function of the bearer of that quality. To see a sports car as functionally beautiful, for example, one must know that it is a vehicle with the function of driving at high speed (Parsons and Carlson, 2008, p. 96). More precisely, following Walton (1970), knowledge of function allows one to assign the object to an appropriate category and to apprehend its features in terms of those properties that are standard, contra-standard, and variable for that category. A vehicle with only those properties that are standard for a car may appear unremarkable—or perhaps sleek and unfussy—while a vehicle with, say, contra-standardly large wheels has parts that may look dissonant or unbalanced (Parsons and Carlson, 2008, pp. 93–96). The sports car appears well-suited for its function when it is perceived as having 'no contra-standard features at all and as having, to a high degree, certain variable features that are indicative of functionality', such as a spoiler and oversized engine that are indicative of speed (2008, p. 96). In virtue of these features, the car has 'that certain pleasing visual quality that we call "looking fit"' (2008).

While *looking fit* is the fundamental species of functional beauty, it is not the only one to be derived from the Waltonian framework. For example, an object that is seen to manifest only standard features for its kind is likely to be regarded as having 'simplicity, gracefulness, or elegance' (Parsons and Carlson, 2008, p. 96), or to appear streamlined, clean, or restrained for an object of its type. Minimalist design, for instance, prizes those objects that are stripped back to their essentials with an unembellished economy of form. Once again, knowledge of the category to which an item belongs makes these sorts of aesthetic attributions possible: an object with a glass door and a discreet set of burners may appear elegant when viewed under one description ('stove') but not under another ('safe') because the standard features for objects in each category are different (2008, pp. 97–98). Rather than being distinct from the basic property of looking fit, qualities such as elegance, cleanliness, or restraint might, in cases like these, be regarded as ways in which an object looks fit for its function. Either way, the Waltonian model bears fruit in taxonomizing functional beauty.

Lastly, Parsons and Carlson argue that contra-standard features of an object may be aesthetically significant when they have a pleasingly unexpected or incongruous effect. For example, a top-heavy industrial crane may exhibit 'an aesthetically pleasing visual tension' (Parsons and Carlson, 2008, p. 99), when it seems from a distance to lack the

structural integrity required for moving heavy loads. Here, the standard-for-cranes property of sturdiness appears to be missing, giving rise to an intriguing sense of disharmony.

The concept of functional beauty, then, is a productive and informative one. The core idea—that being manifestly well-formed for a certain function is sufficient for an object to have aesthetic appeal—helps us to understand an important range of positive aesthetic qualities found in a wide variety of designed artefacts, tools, and furniture; in architecture; and in the natural and built environment (Parsons and Carlson, 2008, Chapters 5–7). Paris (2020, p. 521) amends Parsons and Carlson’s analysis by adding a further condition: that an object is functionally beautiful when its well-formedness for its function is apt to please a majority of competent judges. This revision is attractive because it allows us to set a higher bar on functional beauty and so avoid having to attribute it too widely—for instance, to functional but aesthetically indifferent objects like pencils or garbage trucks (Paris, 2020, p. 520) or to the unkempt but well-adapted snout of a pig (Burke, 1757/1958; Parsons and Carlson, 2008, pp. 12–18). Everything that follows, however, is consistent with the acceptance or the rejection of this extra condition.

In existing scholarship, functional beauty has been defended as an exclusively *visual* concept. As we saw in Section 2, Parsons and Carlson are among those who strongly repudiate any expansion of the aesthetic beyond the distal modalities of sight and hearing, and this applies equally to the functionally aesthetic. Functional beauty is only ever something that we *see*, it is available in the *look* of an object; the qualities whose standard, variable, or contra-standard character is of aesthetic significance are *visual* qualities. Other proponents of functional beauty share this visuo-centric attitude. Panos Paris (2020, p. 522), for instance, is keen to avoid the ‘worry’ that his analysis might entail the existence of tactile beauty, and argues that the way to block this implication is by recognizing that touch only delivers simple and formally uncomplicated bodily sensations. Stephen Davies (2006, p. 234) distinguishes attributions of functional beauty from those of mere functional goodness or efficiency, and illustrates the latter by appeal to a knife that cuts well—suggesting that, in his view, tactile interaction with an object is unlikely to yield aesthetic experience proper. He allows, however, that a visual judgement of functional beauty may be overturned if the other senses reveal that an object is poorly formed for its function—as when a stylish and graceful-looking chair turns out to be awkward and uncomfortable to sit on (p. 237). Andrea Sauchelli (2013, p. 46), although he does not explicitly rule out the possibility of proximally sensed functional beauty, focuses entirely on visual cases, to the extent that the functional beauty even of a football shoe is to be understood in terms of the look of its shape. A consequence of this visuo-centric emphasis, of course, is that it precludes persons who cannot *see* an object from partaking in the beauty that derives from its function. It is worth exploring ways to avoid this conclusion, as it places unfortunate restrictions on the aesthetic capabilities of those who are blind or partially sighted.

In the next section, I explain why we should not think of tactile perception as being a matter of simple, undifferentiated, private, and internal sensation. By understanding the exteroceptive character of this modality, we make room for the possibility of functional beauty that is *felt*, not seen. And we can do so without threatening a collapse of the traditional distinction between aesthetic and sensuous pleasure.

4. Haptic Touch and Functional Beauty

The sense of touch has a number of experiential dimensions: it involves a sensitivity to pressure, hardness, texture, warmth and cold, and it gives rise to bodily sensations such as tingling, itching, and burning. This complexity has led some commentators to think of touch as comprising several distinct sensory channels,⁸ and we should acknowledge, at least, that touch-like bodily experiences exhibit a diversity of forms. There are those that are not connected to sensory input from the world beyond the skin and have no readily identifiable intentional content, such as a spontaneous feeling of pins-and-needles on the back of the knee. There are those that involve a passive receptivity to cutaneous stimulation, such as the feeling of a fly landing on one's arm, or of the heat from a nearby radiator. Of greater interest for current purposes, moreover, are those experiences that derive from *active* bodily engagement with external things—when we use, for example, the fingers and hands to explore the material constituents of our surroundings. By bringing our body into contact with objects and surfaces, we uncover what is out there in the world: what has edges and corners, what is solid and immobile, what is soft, smooth, pliable, sticky, heavy, or abrasive.

This exteroceptive character is well-attested in psychological literature (e.g. [Lederman and Klatsky, 1987, 2009](#); [Turvey, 1996](#)) and is a central component of recent philosophical analyses of the sense of touch (e.g. [Fulkerson, 2011, 2014](#); [Mattens, 2017](#); [Ratcliffe, 2008, 2012](#); [Richardson, 2013](#)). To the extent that there is disagreement here at all, it concerns what is sometimes called the *bipolar* nature of touch (e.g. [Scott, 2001](#), p. 149): the fact that it involves both bodily sensations and an awareness of the world outside of the skin. There are alternative treatments of how these two elements fit together. On [Richardson's \(2013\)](#) 'simple view', for example, the world-directed character of touch is already captured within many of our tactile sensations, a complete articulation of which must make ineliminable reference to the external object that appears to be in contact with part of the body. This is to say that the sensations must themselves be characterized relationally (2013, p. 142) as feelings of one's body being *in touch* with something that lies beyond the skin. Pressing our hand against a table, for example, gives rise to a feeling whose conscious character cannot be individuated except by appeal to the table, its properties, and the pressure it exerts upon the active body (2013, pp. 142–143). The feeling is not simply a sensation *in* the hand, but a state that represents the presence of a material thing located at the hand's boundary, with qualities such as density, warmth, and texture. A similar perspective is developed by [Brogaard \(2012, pp. 18–19\)](#), who argues that the hardness of a rock held in the palm can be felt in virtue of the sensations of pressure it generates on the skin.

Other accounts place additional emphasis on the diachronic and dynamic character of touch, and the skilled exploratory probing that reveals the tactile world to us ([Noë, 2004](#); [O'Shaughnessy, 2000](#)). We encounter an object by 'picking it up, rolling it around in the hands, squeezing it, ... pressing against it ... tracing its outline' ([Fulkerson, 2011](#), p. 508), and we perceive the object's shape and form as these behaviours unfold over time. For [Noë \(2004, 2009\)](#), there is more to the content of a tactile experience than that which is included in any momentary conscious sensation. Holding a beachball between the outstretched fingers of both hands, for example, yields an occurrent sensation at the tip of

⁸ E.g. [Aristotle \(DA, II.11\)](#); [Loomis and Lederman \(1986\)](#). For discussion see [Fulkerson \(2011\)](#). [Ratcliffe \(2012\)](#) takes this heterogeneity to be a significant conceptual obstacle for the task of individuating the sense of touch.

each digit. But our implicit, embodied knowledge of how to access the rest of the beachball through exploratory movement (our mastery of ‘sensorimotor contingencies’) gives us an awareness of its surface extending beyond the parts with which we are in immediate contact, as well as of its voluminous spherical shape.

These active forms of touch require the agent to have a sense of where her body is and what her body is doing, and so to keep track of kinaesthetic and proprioceptive information.⁹ Following convention (e.g. Fulkerson, 2011; Ratcliffe, 2012), let us reserve the term *haptic touch* for this complex kind of sensory perception; the form of touch that comprises exploratory, active bodily contact with the material world. Haptic touch can be distinguished from the tactile awareness of mere bodily sensations such as pricking, stinging, or throbbing in virtue of its richer content. Haptic experiences give us perceptual access to the material qualities of ordinary things.

If we accept this distinction, then it should be evident that any assessment of the aesthetic credentials of touch ought not to be restricted to the most basic deliverances of this modality—simple interoceptive sensations—but must also give due weight to its world-directed nature. If the material qualities of an object perceived through haptic touch are aesthetically significant, formally complex, and publicly accessible, then we may have the resources to resist the traditional view that this sense does not belong to the aesthetic domain.

Now consider the haptic perception of functional objects such as furniture, tools, vehicles, kitchenware, musical instruments, or sporting equipment. These are, paradigmatically, items with which we engage by bodily means. They are lifted, swung, gripped, twisted, pulled, and otherwise manipulated by hand, and we sit, stand, ride, and lie down on them. When we do so, certain of their qualities show up in haptic experience. There are intrinsic features such as density and hardness, shape and texture. There are properties associated with movement, including being stable, cumbersome, or finely balanced. There are mechanical qualities such as stiffness, tension, or freedom from friction.¹⁰ Do features like these give rise to a kind of functional beauty that can be perceived via haptic touch?

I suggest so. As we will see, applying the Waltonian framework enables us to make sense of what it takes for an object to *feel* functionally beautiful when it has a particular suite of haptically accessible standard, variable, and contra-standard properties. Some preliminary remarks are in order before we get to illustrative examples. Firstly, notice that many physical properties can be both felt and seen. An object’s size and shape, the ways in which its parts are organized, and its spatial orientation are often available to sight and touch. There is an additional class of material features that are not directly accessible to vision but which can be perceived haptically, such as an object’s weight, solidity, softness, or elasticity. This latter class of properties, no less than the former, can determine whether an object is capable of performing its function well. A light, flexible sabre is more effective than a heavy, clunky one; a taut, springy running shoe outperforms one with an unforgiving sole; a firm but supple paintbrush does a better job than one whose bristles are frail or unyielding.

⁹ Kinaesthesia is the sense of the movement of one’s body; proprioception is the sense of the position and posture of one’s body.

¹⁰ These categories are not intended to be exclusive or exhaustive—they simply give a sense of the range of features to which an agent might be haptically sensitive.

We should also observe the distinction between using a functional object and *testing* it. On the one hand, an agent can haptically perceive an item in the course of pursuing some end: wielding the sabre as a weapon, sprinting in the shoes, or colouring a canvas with the brush. On the other hand, the subject can probe and explore the object without putting it to *practical* use in order to get a sense of how it is constituted: flexing a shoe between the hands, or giving the sabre an experimental swipe or two. This is significant because it allows us to forestall the worry that haptic engagement with a functional item can tell us only how well that item is working—a matter of efficiency or performance that might be thought to fall short of aesthetic evaluation. When we test an object through haptic exploration, we become attentive to properties of its form that are indicative of its functionality, and we do so from something approaching the standpoint of a disinterested observer. Active touch reveals how the object is put together, how its parts interlink, how its mechanisms operate, and how well these combine in the service of its function. There is thus a mode of haptic perception that is closer to traditional notions of the aesthetic, enabling the perceiver to take pleasure in the unity of form and function.

Now we are in a position to articulate the haptic equivalent of looking fit. An object *feels fit* for its function when it is perceived through touch as having no contra-standard properties for an object of its type, and as having variable properties, all of which are indicative of a high degree of functionality. Suppose that on a crisp winter's night, you construct the perfect snowball: a faultless sphere that fits neatly in the palm, with just enough heft and texture for throwing without risk of injury to its victim. Not being unusually large or small, and lacking any embellishment of form, the snowball has no contra-standard features. Its variable features are all indicative of how effectively the snowball could be propelled with force and accuracy towards an adversary. As you roll it idly in your hand, it has a pleasing haptic quality that we can call 'feeling fit for function'.¹¹

A similar experience is enjoyed by one who, for example, inspects a classic *Bianchi* racing bicycle. Although its clean lines, low-slung handlebars, and narrow tyres can contribute to its *looking* highly fit for its function, our appreciation of the beauty of the bicycle is not restricted to the visual. Firstly, these same spatial and organizational properties are equally accessible to haptic perception: the dimensions and orientation of the bicycle's parts can be revealed by running one's hands over its fabric only marginally less easily than they can be seen. And there is, secondly, a range of functionally relevant material qualities that are available to haptic touch alone. These include the lightness and flexibility of the steel frame and the firm bounce of the tyres, plus mechanical properties such as the free-flowing ease with which the chain runs through the derailleur and the frictionless operation of the gears. The bicycle feels fit for its function when qualities like these are disclosed through haptic exploration, even though they are contributors to functional beauty that remain inaccessible to vision.

¹¹ Saito (2001, p. 92) argues that 'the aesthetic value of a knife consists not only of its visual qualities and its feel in my hand, determined by its surface texture, weight, and balance but, most importantly, by how smoothly and effortlessly I can cut an object with it'. Parsons and Carlson (2008, p. 190) state that, in Saito's description of the beauty of the knife, 'functionality ... is not viewed as an integral component of aesthetic value, but only as a happy source of additional bodily pleasures ... smooth movements of the limbs, pleasing tactile sensations, and so on'. If we concur, we can regard the proposal of the current paper as giving proper emphasis to functionality in cases like Saito's. If we think that function is already integral to Saito's analysis, we can regard the current project as that of filling out the details of this analysis.

We can also make sense of how Parsons and Carlson's second category of functional beauty—that which arises when an object manifests only standard features for its type—might be perceived through haptic touch. An artefact can feel streamlined, unfussy, or economical when it is taken in the hands and explored. Items of highly engineered consumer electronics, for example, fit this model. A mobile telephone with a compact, ergonomic form can be perceptibly free from unnecessary adornment—with a polished surface and uninterrupted contours. Its sleek frame has a certain pleasing elegance and simplicity that can be revealed to the touch. The same is true for sports equipment or kitchenware items, and for household objects such as cigarette lighters or stationery.

The third species of functional beauty identified by Parsons and Carlson can show up in the haptic domain as well. This quality is exemplified by an object that, while it appears able to fulfil its function, has contra-standard properties that strike the observer as 'at odds' with that functionality, generating a pleasing contradiction or dissonance (Parsons and Carlson, 2008, p. 99). Suppose that you encounter a large and imposing hardwood door, taller and wider than you are. When you apply pressure to the door, you discover that it glides open without effort—despite its bulk, it moves freely, perhaps due to a hidden counterweight.¹² The effect, I suggest, is a gratifying sense of the apparent unwieldiness of the object being confounded by the unexpected ease with which it performs its function. If the expansive surface of the door has been given to you visually, then this pleasing result lies in a cross-modal contrast between what is seen and what is felt. But we can also conceive of a scenario in which both the well-functioning of the door and its contra-standard, outsized dimensions are grasped in haptic perception; in which case, the arresting experience of discrepancy belongs to this single modality. It is not hard to imagine a similar dissonance arising when a functional object is, for instance, unusually small (as with tiny portable versions of tools, say) or unusually light (as with a traditional artefact made from modern materials).

These three varieties of functional beauty are accessible to a person who is blind or partially sighted, or one whose eyes are closed. They are perceived when a subject who is knowledgeable about an object's function comes to feel that object's form, and to apprehend how its material character contributes positively to that function. Felt qualities such as hardness, flexibility, weight, and manoeuvrability are no less capable of grounding attributions of functional beauty than the visual characteristics that have been the focus of existing treatments of this phenomenon.¹³ We can thus assign aesthetic credentials to the modality of haptic touch.

Three arguments against permitting this proximal sense into the aesthetic domain were outlined in Section 2, and we can now respond to these considerations in greater detail. The first proposition was that tactile sensations, alongside simple smells and tastes, lack sufficient formal or structural complexity to be accorded aesthetic status—they are just not rich or interesting enough to form the foundation for aesthetic judgement. While this may be true for bodily feelings that possess a purely interoceptive character, a focus on haptic experience reveals how an agent may perceive rather substantial features of functional objects, including how their parts are organized, how their edges and surfaces extend, how they deform under pressure, how they move, and how their mechanisms

¹² For discussion of the aesthetics of effortlessness, see [Montero \(2016\)](#).

¹³ In fact, an object may feel functionally beautiful while failing to look functionally beautiful. For example, with an elderly, scruffy object that nonetheless retains felt qualities that are indicative of its well-functioning, such as items of vintage cookware.

operate. An episode of exploratory touch can disclose the complex character of an artefact: what its properties are like relative to others of its kind, and how well those properties combine in the service of its function. While these perceptual contents are, perhaps, more rudimentary than those of our most elaborate visual experiences, there is little reason to bracket them alongside very basic proximal-sensory qualities and to regard them as *mere* bodily sensations.

Similarly, haptic experiences are anchored in a public object—the material entity with which a perceiver’s body makes contact—and this allows us to resist the complaint that touch is essentially an inner, private sense. An item can be passed from one person to another, and each can share the experience of that object’s functional beauty, provided that they have the knowledge to assign it to its appropriate category. A musician can invite a bandmate to appreciate the lightweight but robust construction of his new guitar and the lively tension of its strings; a carpenter can allow her apprentice to feel how delicately a cabinet door turns on its hinges; and two writers can both appreciate an elegantly weighted, clean-flowing fountain pen. The individual experiences may not happen contemporaneously, but this is no more problematic than the fact that two people might view the same painting at different times.¹⁴ The public nature of haptically perceived functional beauty opens it up to the intersubjective scrutiny, debate, and disagreement that we expect to see with aesthetic phenomena. Especially among connoisseurs of some category, such as cycling enthusiasts or players in an orchestra, there may be quite finely grained disputes over which of two objects feels more functionally beautiful, which feels more graceful, which gives rise to the most intriguing feeling of dissonance, and so forth.

Lastly, there is the argument that using aesthetic language to describe the sense of touch does an injustice to how such vocabulary has been traditionally employed, and may lead to a dissolution of the distinction between the aesthetic and the merely pleasurable. Neither side of this objection need trouble the proponent of haptic functional beauty. When we explore a functional object with the hands and fingertips, for example, we often describe its feel in aesthetic terms. We say that it is aesthetically satisfying to weigh the perfect snowball in one’s hand, to depress the keys of a vintage typewriter or grand piano, to feel the elegant swish of a well-balanced baseball bat. We speak of the aesthetic pleasure that comes with handling one’s glossy, state-of-the-art laptop, or with operating a carefully restored antique sewing machine. And although there are some aesthetic attributes, such as *handsome* or *resplendent*, that may of necessity be restricted to the visual, we are more liberal with our use of the term *beautiful*. My new hiking boots, for example, can feel beautiful when I try them on and experience how well they support my ankle and grip the floor with their treads. A bicycle can be said not only to look beautiful, but to *ride* beautifully, where this is a matter of how it feels to the user.¹⁵ Aesthetic attributions such as these are not jarring or unnatural; they are an intelligible component of our ordinary aesthetic vocabulary.

We can say all this without the unwanted implication that simple tactile sensations are also appropriate subjects of aesthetic discourse because we have a way of drawing a

¹⁴ See [Montero \(2006, p. 234\)](#) for discussion.

¹⁵ It is likely that some of these examples will strike one as more plausible than others. Perhaps, for example, the feel of a simple household object such as a serving spoon ought never to be described as beautiful, no matter how fitting it seems for its function. I do not hope to persuade a critic otherwise, but we can observe that this is a challenge for the notion of functional beauty in general (can a spoon *look* functionally beautiful?) rather than for haptic functional beauty in particular.

principled distinction between agreeable sensations and the haptic perception of functional beauty. The latter is a kind of pleasure that is taken in the form of a material object located outside of the body; typically, a pleasure in how *well*-formed that object feels for its function. Pleasures that are merely ‘of the body’, on the other hand, do not have this connection to the form of an external entity, and this explains our reluctance to describe them in aesthetic terms.

5. Conclusions

I have argued that it is possible to perceive an object’s functional beauty through the modality of haptic touch, and thus that this proximal sense ought to be admitted to the aesthetic domain. An object *appears* functionally beautiful to an observer who knows its purpose when it has features that are indicative of its ability to perform its job well; when it is an exemplar of its functional type, pared back to its essentials; or when it exhibits a pleasing disharmony of form that does not undermine its functionality. An object *feels* beautiful in this sense when its fittingness for function is manifested in haptically accessible properties such as shape and size, spatial distribution, flexibility, hardness, or heaviness; when it feels streamlined, clean, or free from encumbrance; or when there is a satisfying tension between two or more of its felt qualities.

Tom Roberts University
of Exeter, UK
tom.roberts@exeter.ac.uk

References

- Aristotle and Hamlyn, D. W. (1993). *Aristotle’s De anima, Books II and III (With Passages From Book I)*, Oxford: Clarendon Press.
- Brady, E. (2005). ‘Sniffing and savoring: The aesthetics of smells and tastes’, in Light, A. and Smith, J. M. (eds.), *The aesthetics of everyday life*. New York: Columbia University Press, pp. 156–176.
- Brogaard, B. (2012). ‘What do we say when we say how or what we feel?’. *Philosophers Imprint*, 12, pp. 1–22.
- Burke, E. (1757/1958). *A philosophical enquiry into the origin of our ideas of the sublime and beautiful*. Boulton, J. T. (ed.). London: Routledge and Kegan Paul.
- Coleman, F. J. (1965). ‘Can a smell or a taste or a touch be beautiful?’. *American Philosophical Quarterly*, 2, pp. 319–324.
- Davies, S. (2006). ‘Aesthetic judgements, artworks and functional beauty’. *Philosophical Quarterly*, 56, pp. 224–241.
- Davies, S. (2010). ‘Functional beauty examined’, *The Canadian Journal of Philosophy*, 40, pp. 315–332.
- Dowling, C. (2010). ‘The aesthetics of daily life’. *BJA*, 50, pp. 225–242.
- Forsey, J. (2013). *The aesthetics of design*. Oxford: OUP.
- Fulkerson, M. (2011). ‘The unity of haptic touch’. *Philosophical Psychology*, 24, pp. 493–516.
- Fulkerson, M. (2014). *The first sense: A philosophical study of human touch*. Cambridge, MA: The MIT Press.
- Irvin, S. (2008). ‘Scratching an itch’. *The Journal of Aesthetics and Art Criticism*, 66, pp. 25–35.
- Irvin, S. (2009). ‘Aesthetics and the private realm’. *The Journal of Aesthetics and Art Criticism*, 67, pp. 226–230.

- Korsmeyer, C. (1999). *Making sense of taste*. New York: Cornell University Press.
- Korsmeyer, C. (2019a). 'A tour of the senses'. *BJA*, 59, pp. 357–371.
- Korsmeyer, C. (2019b). *Things: In touch with the past*. Oxford: OUP.
- Lederman, S. J. and Klatsky, R. L. (1987). 'Hand movements: A window into haptic object recognition'. *Cognitive Psychology*, 19, pp. 342–368.
- Lederman, S. J. and Klatsky, R. L. (2009). 'Haptic perception: A tutorial'. *Attention, Perception, & Psychophysics*, 71, pp. 1439–1459.
- Loomis, J. M. and Lederman, S. J. (1986). 'Tactual perception', in Boff K. R., Kaufman L. and Thomas J. P. (eds), *Handbook of Perception and Human Performance*, Vol. 2. Cognitive Processes and Performance. New York: John Wiley & Sons, pp. 1–41.
- Mattens, F. (2017). 'The sense of touch: from tactility to tactual probing'. *Australasian Journal of Philosophy*, 95, pp. 688–701.
- Montero, B. (2006). 'Proprioception as an aesthetic sense'. *The Journal of Aesthetics and Art Criticism*, 64, pp. 231–242.
- Montero, B. (2016). 'Aesthetic effortless', in Irvin, S. (ed.), *Body Aesthetics*. Oxford: OUP.
- Noë, A. (2004). *Action in perception*. Cambridge, MA: The MIT Press.
- Noë, A. (2009). 'Conscious reference'. *Philosophical Quarterly*, 59, pp. 470–482.
- O'Shaughnessy, B. (2000). *Consciousness and the world*. Oxford: OUP.
- Paris, P. (2020). 'Functional beauty, pleasure, and experience'. *Australasian Journal of Philosophy*, 98, pp. 516–530.
- Parsons, G. and Carlson, A. (2008). *Functional beauty*. Oxford: OUP.
- Plato. (1926). *Cratylus, parmenides, greater hippias, lesser hippias*. Translated by Harold North Fowler. Loeb Classical Library 167. Cambridge, MA: Harvard University Press.
- Ratcliffe, M. (2008). 'Touch and situatedness'. *International Journal of Philosophical Studies*, 16, pp. 299–322.
- Ratcliffe, M. (2012). 'What is touch?' *Australasian Journal of Philosophy*, 90, pp. 413–432.
- Richardson, L. (2013). 'Bodily sensation and tactile perception'. *Philosophy and Phenomenological Research*, 86, pp. 134–154.
- Saito, Y. (2001). *Everyday aesthetics*. Oxford: OUP.
- Sauchelli, A. (2013). 'Functional beauty, perception, and aesthetic judgements'. *BJA*, 53, pp. 41–53.
- Scott, M. (2001). 'Tactual perception'. *Australasian Journal of Philosophy*, 79, pp. 149–160.
- Scruton, R. (1979). *The aesthetics of architecture*. London: Methuen & Co.
- Shiner, L. (2015). 'Art scents: Perfume, design and olfactory art'. *BJA*, 55, pp. 375–392.
- Shiner, L. (2020). *Art scents: Exploring the aesthetics of smell and the olfactory*. Oxford: OUP.
- Shiner, L. and Kristovets, Y. (2007). 'The aesthetics of smelly art'. *The Journal of Aesthetics and Art Criticism*, 65, pp. 273–286.
- Soucek, B. (2009). 'Resisting the itch to redefine aesthetics: A response to Sherri Irvin'. *The Journal of Aesthetics and Art Criticism*, 67, pp. 223–226.
- Turvey, M. T. (1996). 'Dynamic touch'. *American Psychologist*, 51, pp. 1134–1152.
- Walton, K. (1970). 'Categories of art'. *The Philosophical Review*, 79, pp. 334–367.
- Zink, S. (1942). 'Esthetic appreciation and its distinction from sense pleasure'. *Journal of Philosophy*, 39, pp. 701–711.