

## **FUNCTIONAL BEAUTY: SOME APPLICATIONS, SOME WORRIES<sup>1</sup>**

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### **Introduction**

Glenn Parsons and Allen Carlson have recently developed an insightful account of the concept of functional beauty, and articulated a comprehensive and unified theory.<sup>2</sup> After examining how to formulate properly the concept of functional beauty (chapters 3 and 4), Parsons and Carlson explore the application of the concept to a variety of issues. In particular, they discuss central issues in aesthetics, such as the appreciation of architecture and the built environment (chapter 6) as well as of artworks (chapter 8). But they also examine in detail the appreciation of nature and the natural environment (chapter 5) as well as of artifacts and everyday aesthetic objects (chapter 7). As Parsons and Carlson argue, functional beauty has a long tradition within aesthetics, from classical Greek philosophy to contemporary aesthetic theory (chapters 1–2). But theirs is by far the most thorough and systematic treatment that the concept of functional beauty has received in the literature. The result is both impressive and insightful in the way it brings together considerations from aesthetics and philosophy of science (particularly philosophy of biology) to provide a comprehensive and unified account of aesthetic experience.<sup>3</sup>

Central to the project is the idea that functionality is a crucial aspect of aesthetic appreciation. If we know the proper function of a given object (or event), we can appreciate it better and have a more favorable response to it. Consider, for instance, why a car with a flat tire looks so displeasing; the account in terms of functional beauty can readily explain why this is so. The proper function of a car—to allow us to move quickly and efficiently between two locations—cannot be realized with a flat tire. The result, we can say, is not pretty.

There is much going for Parsons and Carlson's approach. But there are some worries as well. In this paper, I explore some applications of the concept of functional beauty, examining its relevance to some areas that Parsons and Carlson did not cover, in order to determine how far their approach can be extended. As I indicate, the approach has far-reaching consequences. But I will also raise some worries, particularly in the context of art appreciation. I will start by covering some background.

1. My thanks go to Allen Carlson, Stephen Davies, and Glenn Parsons for very helpful comments.

2. G. Parsons and A. Carlson, *Functional Beauty* (Clarendon Press, 2008).

3. *Ibid.*, pp. 57–61.

### Background: Functional Beauty

The very idea of functional beauty, similarly to so many philosophically tantalizing ideas, can be traced back to Hume.<sup>4</sup> As Hume notes:

This observation extends to tables, chairs, scritoires, chimneys, coaches, saddles, ploughs, and indeed to every work of art; it being a universal rule, that their beauty is chiefly deriv'd from their utility, and from their fitness for that purpose, to which they are destin'd.<sup>5</sup>

As Hume makes it clear, the beauty of an object emerges from the object's utility, from its fitness to realize the purpose for which the object was designed. Aesthetic appreciation, then, assigns central role to the knowledge of the function of that object.<sup>6</sup> Clearly, not any odd function would be suitable for this task, given that objects can be put to uses for which they were not originally designed. The object's central function—its *proper* function—should do the work here. But how should the concept of proper function be characterized?

At this point, drawing on the work that Peter Godfrey-Smith<sup>7</sup> has done in the philosophy of biology, Parsons and Carlson offer the following account:<sup>8</sup>

*(Proper function for natural objects)* A certain trait has *proper function* if and only if this trait currently exists because, in recent past, ancestors to those who now have this trait were successful in enhancing their fitness because they performed that function, leading to the reproduction of the genotype for that trait.

In other words, it is in virtue of realizing the proper function of a given trait that certain organisms enhanced their fitness, and were then capable of reproducing the genotype for the trait in question. We have here a biological account of proper function.

By identifying the proper function of a given trait, we are then in a position to appreciate its beauty. In fact, recognition of the beauty of an object emerges from knowledge of its proper function. Talking about bats, Richard Dawkins notes that their

faces are often distorted into gargoyle shapes that appear hideous to us until we see them for what they are, exquisitely fashioned instruments for beaming ultrasound in desired directions.<sup>9</sup>

4. Ibid., pp. 8–12.

5. D. Hume, "Of our esteem for the rich and powerful," in L.A. Selby-Bigge (ed.), *A Treatise of Human Nature*, (1960; repr., Oxford University Press, 1739–1740), Book II, Part II, Section V, p. 364.

6. Note, however, that despite the central role that knowledge of function plays in aesthetic appreciation, Hume's passage allows for beauty to be derived from something other than utility. After all, as Hume recognizes, "beauty [of objects] is *chiefly* deriv'd from their utility" (Ibid., p. 364; italics added). Clearly, Hume recognizes that beauty need not always be tied to functionality—although it typically is.

7. P. Godfrey-Smith, "A Modern History Theory of Functions," *Noûs*, 28 (1994), pp. 344–62.

8. Parsons and Carlson, *Functional Beauty*, p. 72.

9. R. Dawkins, *The Blind Watchmaker* (Norton, 1986), p. 24.

Here, we clearly have functional beauty at work in a biological context.<sup>10</sup>

But it is not enough to formulate the concept of functional beauty only for biological contexts. The concept also needs to be extended to artifacts. Drawing on an account developed by Beth Preston,<sup>11</sup> Parsons and Carlson explicitly address this issue:<sup>12</sup>

*(Proper function for artifacts)* An artifact has *proper function* if and only if it currently exists because, in recent past, its ancestors were successful in meeting some need or want in the marketplace because they performed that function, leading to the manufacture and distribution of that artifact.

In the case of artworks, in order to identify their proper function, it is important to be able to determine which functional category the works under consideration belong to. For example, religious, historical, or mythological paintings exhibit very distinctive proper functions, given their ties to the communities that produced them and kept them in existence. A religious work is typically produced to yield certain feelings of devotion or awe;<sup>13</sup> a historical work is often produced to depict, celebrate, or record a particular historically significant event, whereas a mythological work aims to represent faithfully certain myths. Clearly, when we consider artworks, we appreciate their aesthetic qualities differently depending on our knowledge of the functional categories these artworks belong to. Moreover, we assess these works more sensibly as a result, by being sensitive to what these works were supposed to achieve.

Having provided some of the background for the concept of functional beauty, as Parsons and Carlson articulate it, I will explore three applications of the concept in some areas they have not addressed, and in which functional beauty arguably plays a role.

### Some Applications

#### *Functional Beauty: Assessing Plastic Surgery*

The first case explores an example that combines the proper function of natural objects and of artifacts, requiring an interesting combination of each. It is the case of plastic surgery. Here we have a case in which the appreciation of beauty emerges from the knowledge of the proper function of the object in question. Understanding the proper function of the nose, say, allows the surgeon to appreciate its beauty, and make suitable adjustments accordingly.

The trouble emerges, however, when we realize that even if we identify the proper function of the nose (e.g., to channel air in and out of the body), this

10. Parsons and Carlson, *Functional Beauty*, pp. 123–4.

11. B. Preston, “Why Is a Wing Like a Spoon? A Pluralist Theory of Functions,” *Journal of Philosophy*, 115 (1998), pp. 215–54.

12. Parsons and Carlson, *Functional Beauty*, p. 75.

13. *Ibid.*, pp. 220–1.

does not uniquely determine, in a fine-grained way, which specific size or shape consistent with its proper function a given nose should have. After all, the nose's proper function can be realized in multiple equally adequate ways. And when a plastic surgeon is deciding how to intervene on a particular nose, crucial considerations regarding the nose's beauty seem to be left unsettled despite the fact that the nose's functionality is secured. Should the nose be thinner and smaller? If so, how much? Of course, some cases are clearly ruled out: A nose with no holes will not be appealing, nor will be one that leaves no room for the air to be inhaled into the body. But other than these extremely broad exclusions based on the proper function of the nose, we have an embarrassment of richness in terms of potential choices for intervention from the plastic surgeon's point of view. And these choices—that clearly matter regarding the nose's beauty—seem to be grounded on considerations that go beyond the nose's proper function. For example, the harmony of the overall face is an important consideration that will help in deciding how large or small, thick or thin a nose should be. But considerations of this sort seem now to have moved the analysis beyond the nose's proper function into considerations of the overall symmetry and equilibrium of the face as a whole.

In response, it should be noted that the correct application of functional beauty here ultimately depends on invoking the appropriate level of description. If instead of considering the proper function of the nose *per se* we focus on its function in the context of the face, it becomes clear that considerations of symmetry and equilibrium become the relevant issue to emphasize. In *this* context, clearly, the nose realizes its proper function by being suitably located in the face with the appropriate size and shape. And if symmetry and equilibrium have an adaptive advantage—as they clearly seem to have—the nose does realize its proper function by having the sort of shape and size it has.

Consider a different example. Suppose that a patient has lost completely one of his eyes in a car accident. Instead of having an empty cavity on his face, the plastic surgeon inserts an implant, a prosthetic eye, in place of the old one. Clearly, the prosthetic eye does not satisfy the proper function of the eye: The patient cannot see with it. But the result is clearly better, and more beautiful, than the alternative of having a hole on the patient's face. Once again, we seem to be operating here with a certain concept of beauty that goes beyond considerations of functionality. As noted above, even in Hume's formulation of the view, there is room for a concept of beauty that is not tied to the function of the object. But the worry in these plastic surgery cases is that the central part of the work is being done by a nonfunctionally constrained concept of beauty.

In response, once again, we need to identify the proper level of analysis. In the context of the face, because of symmetry and equilibrium considerations, it is clearly more beautiful to have a prosthetic eye than an empty hole on one's face, even if one cannot see with the implant. In the context of the face, the proper function of the eye is to contribute to the suitable symmetry and balance of the components of the face. This clearly explains why a face that has a missing eye does not look beautiful. As a result, functional beauty clearly applies here.

These examples from plastic surgery suggest the need for an interesting combination of the proper function of natural objects (a nose) and artifacts (the implants and interventions resulting from surgery) with careful attention to the right level of analysis of the proper function of the objects under consideration. In the end, we have here an interesting role for functional beauty, and the way it highlights the intriguing combination of nature, science, and art that is at work in these cases.

### *Functional Beauty and Scientific Practice*

The second case offers an example of a different sort of artifact. Whereas the beauty of most ordinary objects can be assessed in terms of their proper function, the second case involves artifacts of a more abstract sort: scientific theories. These are artifacts created in very specific contexts in which explanatory demands are at stake.

But what is the proper function of a scientific theory? It is hard to answer that question without invoking some conception of what science is. Realists tend to understand scientific activity in terms of its search for true (or approximately true) descriptions of the world. Antirealists tend to characterize scientific activity in terms of weaker goals, such as empirical adequacy.<sup>14</sup> But perhaps it is possible to characterize the proper function of a scientific theory in a way that is neutral on the different understandings of science offered by realists and antirealists. Here is a possible way of doing this:

*(Proper function for scientific theories)* A scientific theory has *proper function* if and only if it currently exists because, in recent past, its ancestors were successful (in part) in accommodating the relevant data because they performed that function, leading to the formulation and development of the new theory.

On this formulation, the proper function of a scientific theory is characterized in such a way that both realists and antirealists can agree that a particular theory exhibits its proper function, even though they may describe what that proper function is in different terms. Realists, for instance, may understand that proper function in terms of the search for true (or approximately true) descriptions of the world, whereas antirealists may emphasize the search for empirically adequate descriptions. But both will pick out the same theories as exemplifying the proper function in question.

Consider, for instance, the case of Newtonian theory. We can say that it exists because its ancestors (e.g., Kepler's and Galileo's laws) were successful (in part) in accommodating the relevant data, which then led to the development of Newtonian theory itself. In fact, when Newton was formulating his theory, he explicitly took into account Kepler's and Galileo's laws. In bringing together physical domains that, up to his time, were thought to be independent from each other (such as movements of objects near the surface of the earth, the

14. See, for example, B.C. van Fraassen, *The Scientific Image* (Clarendon Press, 1980).

tides, and planetary motions), Newton produced a beautiful theory. And its beauty emerged from its function, given the approximately true description of the phenomena it offered (on a realist interpretation) or the degree of empirical success it had (on an antirealist interpretation).

### *Functional Beauty and Mathematical Theorizing: Proofs and Beauty*

Mathematicians often describe certain proofs as being beautiful. Can we take their descriptions literally, or should we say that they are using the concept of beauty metaphorically rather than in any substantive sense? I think this is an interesting area in which the concept of functional beauty can also be used.

Consider two different proofs of the same mathematical theorem. Suppose that both proofs are perfectly correct (there are no inferential mistakes, no ambiguity in the use of the terms, no gaps in the argument). If we think that the proper function of a mathematical proof is to establish the proposition expressed in the theorem, both proofs fulfill that function perfectly well. Suppose, however, that one proof brings together, in quite unexpected ways, different areas of mathematics that were not seen as connected before. It has significant heuristic value. The other proof offers no such insight, and relies on standard techniques that have been available to the community for a very long time. Mathematicians will typically describe the first (heuristically fruitful) proof as beautiful, and the second as dull. Given that both satisfy the proper function of proofs, the judgment of beauty here may seem to go beyond considerations of functionality alone.

Not so fast. Perhaps we should not characterize the function of proofs simply in terms of establishing the relevant theorem. We should rather say that proofs should establish the target theorem in an *informative* way. And if we take *this* as the proper function of proofs, then we clearly see why mathematicians consider more informative, unexpected proofs as beautiful. And their beauty now emerges from the realization of their function—as it should.

## **Some Objections**

I now raise two objections to the functional beauty conception. They focus on the connection between functional beauty and art appreciation, and are articulated in the context of two examples. The first examines a well-established form of art (painting); the second discusses an extremely experimental form (carnal art).

### *Functional Beauty and Art Appreciation: Painting*

Consider the case of Caravaggio's two paintings of Saint Matthew and the angel. These were religious paintings commissioned by the church. In the first painting, Saint Matthew was portrayed holding very awkwardly a heavy

manuscript on his lap, and his hands, which held a pen, were being guided by the angel, who was literally writing the gospel through Matthew's hands, as the saint stared blankly at the pages, oblivious to what was happening. The church returned the painting demanding a more respectful representation of Saint Matthew. The second painting had the angel flying over Saint Matthew's head giving the evangelist the inspiration for his gospel as the saint worked on his manuscript. Both are, no doubt, beautiful paintings.

But they seem to be beautiful in different ways. Consider the paintings' functional category as religious paintings. It seems that what makes the first painting strikingly beautiful is the brutally honest way in which it portrays Saint Matthew, a man who probably did not know how to write and who very likely would be in an awkward position if he had to write a gospel. It is precisely because Caravaggio subverted the norms of a religious painting—offering a treatment of Saint Matthew that did not yield feelings of devotion or awe—that his first painting was so beautiful. The church realized very well what was going on, and demanded a new painting that properly met the function of a religious work. And Caravaggio complied with the request, producing a painting that successfully realized its function.

The point stands, however, that the appreciation of the first painting as beautiful emerges precisely from the fact that the painting *failed* to realize the proper function it was supposed to have. The painting is beautiful because it portrays Matthew as an ordinary man *against* the conventions of the functional category the work supposedly belongs to. The beauty of an artwork can emerge from the fact that its proper function is *violated*.

#### *Functional Beauty and Art Appreciation: Carnal Art*

Consider now the case of carnal art, as developed by Orlan, a French performance artist who in the 1990s subjected herself to a series of plastic surgeries in which she requested that a plastic surgeon implanted on her a forehead like Mona Lisa's, a chin like Botticelli's Venus, a mouth like Boucher's Europa, and other parts of the face resembling corresponding parts of classical paintings. The result was called *The Reincarnation of Saint Orlan or Image-New Images*, where the artwork is Orlan's own changed body.

The result was clearly not beautiful, even though it was successful in what Orlan was trying to accomplish, namely, to focus on a significant aspect, to challenge received standards of beauty in the Western culture. When we look at Orlan's changed body, what are we looking at? As an artwork—in fact, *the* artwork as carnal art has it—we are looking at something that realized its function. As a person, we are looking at the result of a series of plastic surgeries that did not harmonize with one another. In either case, the result is not beautiful. Now, the function of the artwork in carnal art was realized in Orlan's changed body, given that the resulting artwork did offer a challenge to received standards of beauty in the Western culture, by showing how the juxtaposition of independently elegant components—in fact, true icons of female beauty—need not produce an overall elegant result. Given the successful realization of

the artwork's proper function, we would expect beauty to emerge—assuming that the concept of functional beauty could be applied to something as unique as carnal art. But no matter how hard one tries, beauty does not seem to emerge in this case.

In fact, the case of carnal art suggests something paradoxical in the context of functional beauty. We have here an example of an artwork whose function is to produce something that is not beautiful out of clearly beautiful parts. The realization of the artwork's function is brilliantly achieved in Orlan's own changed body, but the result, which should then be beautiful given the standards provided by functional beauty, could not be uglier. Quite an intriguing result!

As Parsons and Carlson acknowledge,<sup>15</sup> some artworks from twentieth-century art, and I include here performance art, offer difficult cases for their account, particularly given the fact that there is no established tradition within art to which the relevant artworks belong. However, given how significant performance art is to twentieth-century and contemporary art, it would be important to find a way of accommodating this style of art within the functional beauty conception. It is not clear, though, how exactly this can be done, given the lack of precedent and the fairly unique nature of the artworks involved.

### **Conclusion**

Parsons and Carlson have offered a powerful case for functional beauty. They showed the significance of the concept and the way in which it can be used to provide a comprehensive and unified theory of aesthetic appreciation of ordinary objects, buildings, artifacts, and artworks. In this paper, I tried to expand on their analyses, by indicating additional cases in which the concept of functional beauty can be profitably applied, such as plastic surgery, scientific theorizing, and mathematical proving. I also raised some objections to the overall proposal in the context of art appreciation. Despite the worries, there is no doubt that Parsons and Carlson have created a beautiful work.

15. Parsons and Carlson, *Functional Beauty*, pp. 225–7.