

THE
PHILOSOPHY
OF DESIGN
GLENN
PARSONS



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The Philosophy of Design

Glenn Parsons

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Dedication

To William

This one's for you

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Introduction

There are two kinds of philosophy. One follows the well-trodden paths of philosophical tradition and its greatest minds, taking up perennial questions such as “What is the mind?,” “Does God exist?,” “What is knowledge?,” and so on. In the other, one strikes off from these established paths into wilder territory, and applies a philosophical approach to some hitherto unexplored topic. The present volume falls into the latter category, given that there has not, hitherto, been a branch of philosophy focused on design.

There has, of course, been much *design theory*, and, “philosophy” being as loose a term as it is, this inquiry is often referred to as “philosophy of design.” But there is an important distinction between theory and philosophy, despite their overlap. Broadly speaking, the difference is that, unlike philosophy, design theory's primary motivation and focus is the practice of design (Galle 2011). The questions posed by theory are driven and framed by current practical considerations in a way that those of philosophy are not. This by no means diminishes the importance of theory – indeed, for the practicing designer, theory is apt to be a good deal more useful than philosophy. But it does mean that the current body of theoretical writing on design cannot be called a “philosophy of design,” in the sense that we can speak, for example, of a “philosophy of art.”

This raises the question of what a philosophy of design would consist in, and what good it would be to a student or practitioner of design. Broadly speaking, such a philosophy would examine design, and its specific aims and problems, in light of the fundamental questions that philosophy

examines: questions about knowledge, ethics, aesthetics and the nature of reality. It has to be said that philosophy tends to produce a range of plausible positions, each with merits and difficulties, rather than unequivocal results. Also, given their nature, these philosophical positions are sometimes difficult to straightforwardly apply to “real-life” practices. What philosophy does offer to the student or practitioner is a broader perspective on their practice and its relation to the other important dimensions of human life. The ability to see one's daily practice in this way, and to think through its place in the grander scheme of things, is one mark of an educated person, and this is what philosophy can help us to cultivate.

As mentioned, philosophical reflection about the “fine arts,” in contrast to design, has a long tradition. In a sense this is understandable, given that we have had works of art for thousands of years, whereas design is a fairly recent phenomenon. Still, design today has a prevalence and prestige that make its neglect by philosophy rather glaring. Indeed, one could argue, amidst recent rumors of the “End of Art,” that design today has eclipsed the arts in terms of cultural significance. Be that as it may, it seems clear that the time is ripe for a philosophical consideration of design.

In this book, then, I offer such a consideration, sketching out the terrain for a philosophy of design, and showing that its concerns connect deeply with the sorts of fundamental questions that preoccupy philosophers. Fortunately, this sounds much more ambitious than it is, for two reasons. First, while there has not yet been a distinct field of inquiry called “the philosophy of design,” there has been plenty of excellent philosophical work directly on, or relevant to, design by philosophers laboring in various areas such as aesthetics, ethics, epistemology, metaphysics and the philosophy of technology. More than anything else, this book aims to bring this work together into a systematic

treatment. Second, we have a template of sorts for such a systematic treatment of design, one left to us by the Modernist movement.

This last point calls for comment, since it is commonplace to dismiss Modernism's philosophical pretensions to be “more than another style,” and to see it as precisely that – a rather overbearing stylistic phase that had its day and then passed into the history of Taste. The view taken here is that the Modernists saw, more clearly than anyone else, the central philosophical issues relevant to design, and the connections between them, even if they often failed to develop their philosophical insights. A major element of this book, then, is an attempt to reconstruct key Modernist ideas and subject them to a critical analysis. Although the views that Modernist thinking produced do not always succeed, they remain a vital starting point for a philosophical investigation and I exploit them as such here.

A brief plan of the book is as follows. In [chapter 1](#), I bring the subject matter into focus by examining definitions of “design” offered by design theorists and philosophers. Building upon a definition offered by Greg Bamford, I endorse a conception of design as a particular kind of social practice with its main historical roots in the industrial revolution. In [chapter 2](#), I examine more closely the sort of problem solving that is characteristic of design, and identify an important philosophical problem that arises for it. In this context, [chapter 3](#) introduces Modernism, not primarily as a historical movement, but as a philosophical attempt to address this problem. In the rest of the book, the Modernist response to the problem serves as a touchstone in the discussion of various issues central for design.

In [chapter 4](#), I examine the Modernist's bid to severely curtail the expressive dimension of design, and situate this

bid in relation to contemporary thought on the meaning of design and material culture in general. [Chapter 5](#) examines a central concept for Modernism – function – and discusses two philosophical theories that purport to clarify the notion. [Chapter 6](#) turns to matters of beauty and aesthetics, and the Modernist notion that there is a vital relationship between function and beauty. Finally, [chapter 7](#) turns to ethical aspects of design, including design's relation to consumerism, the impact of design upon our ethical frameworks, and possible methodologies for ethical design. I conclude with a comment on the legacy of Modernist thought for our own philosophical investigations of design.

In this attempt to map the terrain, I do not claim to have identified, much less definitively answered, all of the philosophical issues relevant to design. However, I will consider the book worthwhile if it succeeds in showing that design is a realm worthy of philosophical exploration in its own right.

1

What is Design?

When it comes to questions about design, perhaps the most fundamental one of all is simply: “What is it?” One way to respond to this question would be to pick out examples of design. With a visit to a design website, or a flip through a design magazine, we could easily point to some objects that are widely recognized as products of contemporary design: the Apple iPod, the Eames chair, Mies van der Rohe's Farnsworth House or Alessi's famous Juicy Salif citrus juicer. But identifying some examples of design does not really answer our question in a fully satisfying way. When we ask “What is design?,” we want to understand what makes the production of these things, and others like them, instances of design. We would like to discover, in other words, the nature of the concept rather than mere examples of it. In this chapter, I take up this challenge, and examine some attempts to define the activity of design.¹

Some concepts are hard to understand because the things that they refer to are unfamiliar: concepts such as God, infinity and the Big Bang do not correspond in any obvious way to the things we encounter in daily experience. Thus we struggle to discern their meaning. When it comes to the concept of design, however, this is not a difficulty we face. As we will see, with design, we run up against the opposite problem: the concept of design seems to refer to too much of what we experience, rather than too little (Heskett 2005, 3-5).

1.1 Defining “Design”

Before we examine some potential definitions of “design,” we should first discuss the kind of definition we are seeking. When philosophers attempt to understand a concept, they typically look for a particular sort of definition, which we can call simply a “philosophical definition.”² This consists of a set of conditions that are individually necessary, and jointly sufficient, for being an instance of the concept. A condition that is *necessary* for being an instance of a concept specifies possession of a feature that any instance of the concept must have. For instance, “being unmarried” is a necessary condition for the concept “bachelor” since to be a bachelor something must be, as a matter of necessity, unmarried. A condition or set of conditions is *sufficient* for being an instance of a concept when anything that satisfies it must be, as a matter of necessity, an instance of the concept. Thus, the conditions “unmarried,” “adult human” and “male” are together jointly sufficient for the concept “bachelor,” since anything that satisfies these conditions has, of necessity, to be a bachelor. A definition of a concept that specifies a set of conditions that are individually necessary, and jointly sufficient, for being an instance of that concept has the special property of picking out all and only the instances of that concept. In doing so, it provides us with the “essence” of the concept, allowing us to understand it in a particularly satisfying way. Take, for example, the definition of “bachelor” as an unmarried adult male human being. This tells us precisely what bachelorhood consists in, and allows us to understand why any given thing is a bachelor or not one.

In seeking a definition of “design,” perhaps the most instinctive thing to do is simply look in the dictionary. But dictionary definitions rarely measure up as definitions in the philosophical sense we have outlined. Take, as an example, the concept of art. We recognize instances of this

concept easily enough: performances by symphony orchestras, the paintings of Picasso, the novels of James Joyce, and so on. And we can distinguish these instances of art from things that are not art, such as mailboxes, desks and grocery lists. *The Oxford English Dictionary* defines “the Arts” as “the various branches of creative activity concerned with the production of imaginative designs, sounds, or ideas.” This definition is helpful in pointing us in the right direction, but it doesn't capture the essence of the concept. This is because, while the production of imaginative designs, sounds or ideas may be *necessary* for engaging in the arts, it clearly isn't *sufficient*: a politician with an imaginative idea for reforming the city budget, or an engineer who creates a new cooling system for a factory, is not engaging in the arts.

The dictionary tries to reinforce its definition by attaching to it a list of examples: “painting, music, and writing.” This list is meant to suggest the distinction that we need here, since it does not include activities such as legislating, accounting and engineering. However, the list, and the definition more generally, offers us no basis for this distinction. Surely there is some *reason* why the imaginative productions of symphonic music are art, and those of accounting are not, but the dictionary definition fails to tell us what this could be. Thus, since it fails to specify a set of conditions that are individually necessary and jointly sufficient for being a work of art – that is, an essence – the dictionary definition does not allow us to fully understand the nature of art in the way a philosophical investigation of it would demand. For these reasons, philosophers interested in understanding the nature of art must move beyond dictionary definitions and work out philosophical definitions of the concept (for an overview of efforts in this area, see Stecker 2003). If, then, we seek to

understand the nature of design, this is the project we must also undertake.

The search for philosophical definitions, or “conceptual analysis,” as philosophers sometimes call it, is by no means uncontroversial.³ Some philosophers have been skeptical that such definitions can be found, and this skepticism has been influential in thinking about design (see, e.g., Walker 1989). The philosopher Jane Forsey, for example, rejects the possibility of a philosophical definition, or essence, for design, on the grounds that design is a phenomenon that evolves historically. In her view, this leads to two undesirable consequences. First, any philosophical definition is bound to fail once the phenomenon changes, as it inevitably will. Second, once the definition faces these inevitable counterinstances, the philosopher can only ignore them, “unconcerned with the objects that may then fall by the wayside of his theoretical ambition” (2013, 13).

However, both of Forsey's points are over-stated. The fact that a phenomenon changes does not entail that it changes its essential properties: cars are faster than they were 80 years ago, but this would hardly be a reason to rethink our definition of “automobile.” Second, a philosopher who offers a philosophical definition for some phenomenon need not cling to it no matter what happens in the world around him: he may simply determine that the old concept is no longer in use, and offer a philosophical definition of the new one in play. In short, there is nothing in the historical nature of design to rule out philosophical definition.⁴

With this in mind, let us examine some definitions of design that have been offered by theorists writing on the subject. One important group of definitions is based on the idea that everything we do is design. The design theorist Victor Papanek, for example, wrote, “All men are designers. All that we do, almost all the time, is design” (Papanek 1971,

23; see also Nelson and Stolterman 2012). Design is, in his view, “the primary underlying matrix of life,” and includes not only the production of machines, buildings and so on, but even mundane actions such as cleaning your desk drawer and baking a pie. In a similar vein, Henry Petroski says, “Designed things are the means by which we achieve desired ends” (Petroski 2006, 48). This definition includes even natural things that are appropriated by humans, with little or no modification, for use in pursuing some aim. A shell used to scoop water for drinking, for example, counts as a designed object by Petroski's lights. As he puts it, “mere selection for a purpose made [it] designed.” On these definitions, designing is understood as nothing more than using things to achieve our aims.⁵

As philosophical definitions, however, these accounts are clearly problematic. Of course, there are some similarities between an everyday process like baking a pie and the process that produced the iPod, the Juicy Salif and the Eames chair. On the other hand, there are also differences, and we do distinguish between the two: it would be strange to call someone who baked a pie a “designer,” for example. As a matter of fact, in our everyday thinking we distinguish design from all sorts of other activities in which we use things to achieve our aims: art, science, sports, war, as well as mundane activities such as cleaning and using sticks to draw in the sand. Given that we do make this distinction, we would like to understand the basis for it. But definitions such as “Design is using things to achieve our ends” can offer us no such understanding, since they simply ignore the distinction altogether (Love 2002). Put in more philosophical terms, the problem is that using things to achieve our aims is not sufficient for design.⁶

This raises an interesting question: Why are theorists drawn to this definition of “design” when it seems clearly too broad in scope? One factor here, which I mentioned

earlier, is the multiplicity of meaning inherent in the word “design.” The word has existed in English for over 500 years, and *The Oxford English Dictionary* lists 16 differing definitions for the English verb alone. One of these is a sense of the word in which “to design” means simply “to intend,” as in “When I put up the fence, my design was to give us some privacy.”⁷ In offering their definitions, theorists like Papanek and Petroski are perhaps drawing on this recognized usage. However, as *The Oxford English Dictionary* indicates, and as my rather stilted example shows, this use of the word is now practically dead: people no longer commonly use “design” in this very broad way (in the example above, most people would probably say simply “I wanted to give us some privacy”).

In addition to confusion over different senses of the word “design,” however, there may be something else afoot in the proposal of these definitions. One motivation for saying that design is a part of “all that we do, almost all the time,” is that this might be seen as a way to emphasize the importance of design. Instead of something done far away, by a small group of specialists, having remote and uncertain effects, these definitions portray design as something all around us. It may then be inferred, from this fact about design, that it has important consequences for all of us and we should pay greater attention to it.

Perhaps this kind of argument is what attracts some theorists to such broad definitions. Certainly, much contemporary writing on design has a polemical quality, explicitly urging closer attention to design. However, as a strategy for achieving this end, the above argument is misguided. Say that, as this argument would have it, design is present in every human action. The fact is that much of what we do is relatively uninteresting and not worthy of serious attention or analysis. To return to some of the previously mentioned examples, cleaning out your desk or

using a stick to draw a map in the dirt are not activities that seem to possess any particular significance or call for any special attention. Connecting design to these activities is therefore unlikely to lead to a greater interest in, or regard for, the activity of design (Walker 1989).

If, then, “design,” as we typically use the term today, means more than merely using something to achieve a goal, what does it mean? One idea is that design is not merely action of any old sort, but a specific kind of action: action that changes the world. The design theorist Christopher Jones, for example, suggested a definition of design as the intentional initiation of change (Jones 1970, 6).⁸ For this definition to be an improvement on our first candidate, however, we'll need to understand the phrase “changes the world” in a substantive way: after all, any action at all changes the world in *some* way. If you bake a pie, for instance, then the world has one more pie in it than it did before. One way to construe “changing the world” in a more substantive way is to take it to mean bringing a new *sort of thing* into being. On this view, baking a pie does not really change the world, because it doesn't bring a new sort of thing into being – it simply adds one more of an existing type. On the other hand, when a new device, such as the iPod, or the Eames chair, is created, the world is altered in a substantial way – it is different than it was before.

Adopting Jones's suggestion, then, let us define “design” as the intentional creation of a new kind of thing. This definition brings us closer to the meaning of the contemporary concept of design, but it too is inadequate in two respects. First, the definition is too broad. Consider the members of a construction crew that builds an office tower: they create the structure, in a sense, but they do not design it. Designing a structure like an office tower is typically the job of someone else – the architect: workers assemble the required parts in the way the architect directs. That

certainly involves skill, and may call for “on-the-spot” decisions about certain features not explicitly specified in the architect's plans. Nonetheless, it isn't the same as designing the structure. The problem here is that our definition allows for change that is achieved without any creativity or invention. We can fix this by amending our definition to “the intentional creation of *plans* for a new kind of thing” (cf. Love 2002).⁹ Adding this necessary condition highlights the fact that design is essentially a conceptual or mental activity, distinct from the physical activity of making or building. Even if the structure that he has planned is never actually built, the architect has nevertheless designed something.¹⁰

Our definition still needs a second refinement, however. Say that Bill is creating plans for a new type of car, with the aim of reducing the size of the engine. In arranging the engine parts in a new way, he finds that, much to his surprise, the new engine runs at twice the normal efficiency. Bill acted intentionally in creating the new engine. However, Bill never intended to produce an engine with increased efficiency – in fact, improving efficiency never entered into his thinking at all, and this was a completely accidental discovery. Reflecting on this case, we might say that Bill *invented* or *discovered* the high-efficiency engine, but not that he *designed* it. The concept of design, it seems, entails a certain kind of rational connection between the final product and the creative process: if a person designs an X, then the creation of the plan for X is guided by the goal of producing something that can do what X does. To capture the concept of design, then, we will need to build this necessary condition into our definition somehow.

One way to do this is to construe design as, necessarily, a problem-solving activity.¹¹ The design process is not merely

the production of plans for something new; rather, it is the production of such plans via the working-out of a potential solution to some problem. Based on such considerations, the philosopher Greg Bamford (1990, 234) offers a definition of the activity of “design” along the following lines:

Someone designs thing X at time t if and only if:

1. She imagines or describes X at t
2. While supposing that X at least partially satisfies some set of requirements R under conditions C and
3. Satisfying R is a problem for which
4. X is a novel or original solution

According to Bamford, these four conditions are individually necessary and jointly sufficient for the activity of design. We can gloss his definition in simpler language as follows: design is the intentional solution of a problem by the creation of plans for a new sort of thing.¹² Given this definition of the verb, we can now define the noun “design” simply as the problem-solving plan generated by this activity.¹³

A final point needs clarification, however. Above, we said that design is the mental activity of creating plans to solve a problem, and that this mental activity is distinct from the physical act of making. However, perhaps things are not quite so simple. Consider a person who draws up plans for a time machine. The plans specify various components, with various functions, such as “space-time continuum disruptor,” “materialization point locator” and so on, although they do not describe how these components are to be built. This seems to fit our definition of “design” exactly: the inventor supposes that his planned device “would be such as to satisfy the requirements” of a time machine. But,

intuitively, this hardly seems like a bona fide case of design.¹⁴

At a first glance, the problem seems to be that the design is not a genuine design for a time machine simply because it isn't a solution to the relevant problem at all – it doesn't work. However, this is not really the issue, since there are many bona fide cases of design for things that, when constructed, do not work. We do not want to say that someone who draws up plans for a lemon juicer that can't juice a lemon properly is not designing: what we should say is that he designs, but poorly.¹⁵ The problem with the time machine case is not that the plan does not work, but that it is so implausible that any reasonable person can see immediately that it will not work. In short, this seems more like a case of *imagining* a time machine than *designing* one. Let us revise our definition a final time, then, as follows:

Design is the intentional solution of a problem, by the creation of plans for a new sort of thing, where the plans would not be immediately seen, by a reasonable person, as an inadequate solution.

Note that, when applied to the juicer case mentioned above, this yields the correct result: the juicer, it turns out, fails as a solution, but its failure would not be immediately obvious in the way that the failure of the time machine is. Hence it counts as design.

The addition of this final constraint requires a few comments. First, we need to distinguish plans that are obviously inadequate *in principle* from plans that are hopeless for practical reasons, such as time constraints, the expense involved or the rarity of necessary materials. Only the former cases would fail to satisfy our constraint: a design for a device that was simply too expensive to construct would still be design. Second, the constraint that we have imposed on design is quite minimal: it does not

require that the designer have any particular level of justification for thinking that his design will work. It only requires that the design not be a “non-starter,” as it were.

This last feature means that we can now evaluate designs based on the level of justification available for belief in the likely success of the design: designs that may reasonably be thought likely to succeed can be called more rational than those for which the expected probability of success, given the available evidence, is smaller (Houkes and Vermaas 2010, 41; see also Hilpinen 2011). When the expected chance of success falls below a certain level, designing may become tantamount to the proverbial shot in the dark. As we will see in [chapter 2](#), the extent to which designing can be considered a rational activity is one of the central issues for the philosophy of design.

1.2 Ontological Issues

Our definition raises some intriguing questions about the nature of design. One has to do with the product of the design process: just what sort of thing is it that designers produce? This is what philosophers call an *ontological* question, a question involving distinctions between different types of being.¹⁶ What do we mean here by “types of being?” In one sense, there are a zillion different types of beings: cats, protons, cities, milkshakes and so on. But when philosophers talk about “types of beings” they have in mind certain very general categories into which such particular things fall. For instance, the things just mentioned are all what philosophers call *substances*: particular things that can be conceived to exist independently of anything else. For example, it is possible to conceive that the only thing that exists is a single cat.¹⁷ In this regard, substances can be contrasted with entities falling into the ontological category of *property*, such as

redness or squareness. We cannot conceive these existing independently of anything else: if redness or squareness exists, then there must be something else, something that has the property (that is, something that is red or square). Thus, philosophers place properties in a separate ontological category.

Ontology crops up, with respect to our definition of “design,” in the following question: what exactly counts as “a new thing?” Sometimes, a designer might solve a problem by creating a plan, not so much for a new object, as for new *uses* for existing ones. Bamford offers the following example. “Consider ... the rehoused Italian peasant, mystified by the w.c. in his modern flat, who surmises that the cistern can be used to cure olives. Should this peasant be counted as having designed an olive curer?” (1990, n32). Bamford answers “yes,” despite the fact that the cistern is not modified in any way by the peasant. There is something odd, however, about saying that the peasant has designed an olive curer. The reason is that, in a sense, he hasn't created a new *thing*: he is just using an already existing thing. A better way to handle this example is to distinguish between two ontological categories: things and processes. Whereas things are particular substances, processes are causally related series of events. It is more accurate to say that the peasant hasn't designed an olive curer (a thing), but rather a new method for curing olives (a process).¹⁸

Another ontological distinction relevant to our definition is that between *types* and *tokens*. A type is a general kind, and a token of that type is a particular thing that is an instance of the type. Distinguishing types from tokens is often helpful in avoiding ambiguity and confusion. Consider, for instance, the number of words in this sentence: “The man held the cat.” If we count by tokens, there are five, but if we count by types, only four, since

there are two tokens of the word “the” in the sentence. In philosophy, the distinction between token and type becomes important in attempts to understand certain kinds of creative activity, such as art (Davies 2003).

In some of the arts, it seems that artworks are types, of which there can be multiple token instances. In musical composition, for example, it is natural to think of what the composer produces as a general type of sound structure (specified in a score), which we then find manifested in many particular performances, each of which is an equally legitimate token of the work (Sharpe 2004, 54–63). In other arts, however, such as sculpture and painting, this seems not to be the case. Here the work created is often a particular thing – a particular painted canvas or piece of shaped marble – rather than a general type. This is evident in the fact that we do not view an exact reproduction of such works as having the same value as the original. A copy of Picasso's painting *Guernica* is not a work of art made by Picasso; it is only a copy of one (and we treat it very differently as a result). This is not true of musical works – when you hear a contemporary performance of Beethoven's 7th symphony, you are not merely hearing a copy of an artwork by Beethoven: you are hearing an artwork by Beethoven.

In distinguishing these two kinds of artworks, it is somewhat awkward to refer to paintings and sculptures of the sort just described as tokens, rather than types. This is because merely calling them “tokens” suggests a general type of which they are instances, whereas for these works there really is no such type. Thus philosophers prefer to distinguish between *singular* and *multiple* works of art: multiple works can be realized, or instantiated, in multiple particular things at one time, whereas singular works can exist only as one particular object.

With respect to design, an analogous ontological question arises: are designs singular, like most sculptures, or multiply realizable, like musical scores? Since design is the production of a plan for something, and such plans can, in general, typically be implemented multiple times, an intuitive view is that designs are always multiply realizable (Dilworth 2001). In discussing his definition of “design,” however, Bamford offers a different view. He writes:

Some designs are designs for a particular thing, for example, an arrangement of freshly picked flowers. Further, only one arrangement of these flowers is possible at any one time. Other designs are type designs, for example, the design of [the Australian automobile] the Holden Commodore. From this type, many tokens can be made – all of which may exist at one time and satisfy [the requirements].

(1990, 234)

Although he employs different terminology, Bamford's comments suggest the view that some designs are singular, whereas others are multiple. Is he right?

It is certainly true that some designs are made with the intention that they be realized in particular materials, as in the flower example Bamford describes. In other cases, the designer may have no particular material in mind; any bit of steel will do to make a Holden Commodore, as long as it meets the appropriate functional requirements.

However, intentions are not decisive here. Commenting on the case of art, Stephen Davies observes that “no dramatist, simply by willing it, could make his play a singular work if it were scripted in the orthodox way” (2003, 159). That is, a playwright could insist all he liked that only one performance of his play counts as the work, and all others are mere copies; this would not change the