

Some Ways That a Thing Can Go Wrong:  
Malfunctions, Disorders and Perversions

by

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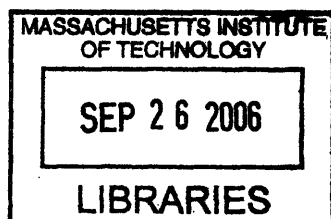
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ABSTRACT

“Selection and Artifacts” is about how artifacts acquire functions. According to Karen Neander, the function of an artifact is the purpose for which it is designed or built. But I argue that in order for an artifact to have some function its parts and properties must also have been properly selected.

“Defining ‘Disorder’” examines the conceptual analysis of medical disorder. I defend and develop the idea that a medical disorder is a harmful malfunction.

“Teleological Theories of Sexual Perversion” examines attempts to analyze sexual perversion in terms of the biological goal of sex or the functions of sexual organs and psychological mechanisms. I argue that teleological theories are false, and defend the view that sexual perversion is excessive, and therefore unwarranted, sexual attraction, especially sexual attraction to that which is disgusting.

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## CHAPTER ONE SELECTION AND ARTIFACTS

### 1. Introduction

We say that the function of the heart is to pump blood and the function of a carburetor is to produce an explosive mixture of vaporized fuel and air. And we say that one function of the liver is to secrete bile and another is to synthesize vitamin A.

Functions have largely interested philosophers because they are examples of teleology, and philosophers have been most interested in how functions arise naturally, which is to say, in natural teleology. Meanwhile, they have generally been less interested in what is called “artifact function” or “conscious function.” Beth Preston (1998) speculates that that is because the task of giving a theory of artifact function has seemed fairly trivial. To this it might be added that the apparent purposive-ness of a tree’s bearing fruit is naturally bewildering in a way that the purposive-ness of a hammer is not. After all, we are all acquainted with our own goals and intentions, and have fashioned things with our own hands. We experience the process by which artifacts acquire functions, but, until recently, had no good explanation for how the parts of a tree do so.

But the problem of explaining how artifacts acquire functions is one that is both intrinsically interesting, and connected to other interesting problems. Philosophers in the empiricist tradition have long felt that we needed to explain how normative properties are related to non-normative properties. The function of an organ or an artifact is relevant to various normative facts about the conditions under which it would be defective or malfunctioning; and also what it “ought” to do and what it is “supposed” to do. (Both

locutions are used.) It is certainly curious how the process of natural selection results in objects with normatively significant functions, and it is similarly curious how the human activity of designing and manufacturing does so. In this chapter I will look at a theory of artifact functions proposed by Karen Neander and try to show that, while promising, it should be modified in light of the normative significance of function possession.

## 2. Overview of Neander's Theory

Karen Neander holds what has been called an “intentionalist theory” of artifact function, because of the role that it gives the mental states of the people who bring artifacts into the world. On Neander's theory, “the function of an artifact is the purpose or end for which it was designed, made, or (minimally) put in place or retained by an agent” (1991b, p. 462). Imagine that an engineer wants to create a very small transistor, but finds that it creates too much heat. He therefore designs an ingenious insulating rubber sheath, whose function is to insulate the transistor. A technician follows the engineer's instructions to successful effect, even though the technician doesn't know what he is building. Nevertheless the function of the sheath is to insulate the transistor, because that is the purpose for which the engineer designed it.

Now imagine a case in which the engineer overlooks insulation and gives the technician a faulty design, but the technician builds in an insulating rubber sheath, nonetheless. Once again, the function of the sheath is to insulate the transistor, this time because that is the purpose with which the technician made it.

Next we want to see how a function can be acquired through the agent's “putting in place” or “retaining” an object for a certain purpose. Imagine that the technician wants

to build a transistor and to this end he looks around the workshop for some metal to use as the “source”. He finds one that is doped with the right kinds of impurities. He puts it into place and discards the other pieces as scrap. The function of the metal is to act as a source, because it was put in place in order to do so.

Finally, imagine a case in which the technician is overseeing some new hires who are learning how to assemble transistors. One of the new hires assembles something that looks like a transistor but with absolutely no heed as to whether the right kinds of materials have been used in the right places. The technician reprimands the new hire. He moves some of the parts around, discards others, and leaves a few, because they happen to have fallen into the right place. The parts that the technician leaves in place are deliberately retained. The functions they acquire are a matter of the purpose for which they are retained by the technician, who could have moved or discarded them.

Neander’s allowance of function-bestowal through retention is reminiscent of Richard Sorabji’s much quoted suggestion that “we make it a necessary condition for correct application of the word ‘function’ that some efforts are or would if necessary be made to obtain the effect mentioned from the thing in question” (p. 290). To use Sorabji’s own example, we can imagine that, in medieval times, herb plants spontaneously spring up in normally crowded places, and that it has the salutary effect of covering up the smell. But if no efforts were made—or would have been made—to obtain that effect, then covering up the smell is not a function of the plants. On the other hand, we can infer that it would have been a function of the plants so long as people had been willing to protect them from being trampled, if necessary. Sorabji can be seen as suggesting an interpretation of what constitutes “retention,” holding the view that to

“retain” the herbs, one must be willing to make some effort, if necessary, to obtain their effects.

### **3. Preston’s Argument Against Intentionalism**

**3.1** It is safe to say that intentionalist theories are endorsed, in one form or another, by most philosophers who have written about artifact function. However, several philosophers have recently criticized Neander’s theory. Beth Preston argues that Neander’s theory is inadequate because it fails to accommodate a putatively crucial distinction, which Preston calls the distinction between “proper function” and “accidental function.” The choice of terminology follows Houkes and Vermaas (2003), though it is not at all clear to me that everyone has the same distinction in mind. Here is Preston’s description:

The proper function of something is what it is supposed to do—a function that is ‘standardly ascribed’ to it, as Vermaas and Houkes put it. Accidental functions are what something in fact does on specific occasions even though it is not its standard purpose. (2003, p. 603)

By way of example, Preston says that the proper function of beer is to be used as a beverage. When a gardener uses beer to bait slugs, attracting and drowning the slugs becomes an accidental function of the beer.

Although Preston approaches the distinction from various angles, it is clear that the hallmark of proper functions is the fact that they have normative significance. Crucial to Preston’s distinction is the idea that when an object is used temporarily for some effect, we cannot say that it is “supposed” to have that effect (p. 608). So the distinction between proper and accidental functions is the distinction between functions that are standardly ascribed and therefore carry normative weight, on the one hand, and



functions that are not standardly ascribed, and therefore do not carry normative weight, on the other.

It should be clear from the outset that Neander will have trouble accommodating Preston's distinction. According to Neander, an object can acquire a proper function merely by being temporarily retained for a local purpose. But in order to accommodate the distinction, an intentionalist theory of artifact function would have to distinguish between the intentional actions that bestow proper functions on objects, and the fly-by-night intentions of the casual user, which are not said to bestow proper functions. Preston argues that no intentionalist theory could reasonably stake out and defend any relevant difference between designer's intentions and users' intentions, by canvassing the most promising ways that such a theory might attempt to do so.

First, the intentionalist theory might say "that the intentions of designers have some special cognitive structure or characteristic that sets them apart from the intentions of users" (p. 606). Preston replies that users often exhibit similar "planful deliberation," giving the example of someone who wants to move a rock on their lawn, considers multiple artifacts, and finally decides to bend a fence-post in order to get leverage. Preston concludes that, if the planful deliberations of a designer is sufficient for the bestowal of a function, then the planful deliberations of such a creative gardener should be sufficient as well.

Next Preston considers the possibility that designers are "creative in a way that users are not" (p. 606), replying that there are ample examples of creative users, including the terrorists who used airplanes as incendiary bombs. And lastly, Preston considers the possibility that what distinguishes designers from users is that "design

involves modification of materials in forming the artifact for a proper function.” But she replies that “artifacts are often modified to one extent or another in order to perform accidental functions” (p. 607) and she gives, among others, the example of a newspaper that is rolled up to be used as a flyswatter. Finally, Preston writes:

The intentions of users do not appear to differ from the intentions of designers in any relevant way...So if proper functions are derivable from the intentions of designers, it seems they must be derivable from the intentions of users as well. In other words, if the purpose of the designer establishes the proper function of the artifact designed, then the purpose of the user must equally establish the proper function of the artifact used. But any intentionalist non-reproduction theory conceding this would have to view all artifact functions as proper functions, and would thus fail to [maintain the distinction between proper functions and accidental functions].<sup>1</sup> (p. 608)

Preston concludes that we should deny that either designers’ intentions or users’ intentions are sufficient for the bestowal of a proper function. Of course, if neither designers nor users intentions are sufficient for the bestowal of proper functions, then Neander’s theory of artifact functions is wrong.

**3.2** I can think of at least three replies to Preston’s argument:

**3.2.1** Neander can preserve her entire theory by altogether denying the alleged distinction between proper and accidental functions. Peter McLaughlin writes that if someone were to take the exhaust pipe off a car and use it to stir a can of paint, then the function of the pipe is “to do what I now want to use it for” (p. 50). And Timothy Schroeder has written

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<sup>1</sup> Preston defines ‘intentionalist non-reproduction theory’ as follows (following Vermaas and Houkes): “Intentionalist non-reproduction theories...require an appeal to intentional states of agents, but do not require any reference to the history or reproduction of an artifact” (p. 602). Neander’s theory qualifies as a intentionalist non-reproduction theory, because it appeals to the goals and intentions of designers and builders, but does not require that artifacts with functions should be reproductions of historical, previously produced artifacts.

that, “If I use my shoe as a door-stop, then while I am so using it, the shoe is supposed to hold open the door: a norm has been created” (p. 3). If McLaughlin and Schroeder are correct, then an object acquires a function by being used in an idiosyncratic way for some temporary purpose; and moreover, the function it acquires is normatively significant, licensing us to say, e.g., that the shoe is “supposed” to hold open the door. In other words, the object acquires a proper function. But if an object can acquire a proper function by being used in an idiosyncratic way for some temporary purpose, then we have no space for the merely accidental functions. And we have no reason to accept the distinction between proper functions and accidental functions, in the first place.

**3.2.2** It may seem odd to many people to say that the function of the exhaust pipe is to stir paint. Instead of going in for that position, Neander can draw the distinction between proper functions and accidental functions along any of the lines that Preston herself recommends. Preston argues that we cannot strike a relevant distinction between users and designers, because we can give examples of users who display planful deliberation, make physical modifications to objects, and show creativity, just as designers do. But why should we accept Preston’s assumption that the “users” in her examples are users at all? Why shouldn’t we think that they are designers? For example, Preston writes that when someone bends the fence-post in order to use it to pry at the rock, prying is an accidental function of the fence-post. She also writes that when the agent bends and uses the fence-post in this way, the agent is a “user”—a “user” who employs the same ingenuity and planful deliberation as a designer (p. 606). Consequently, Preston concludes that we cannot point to planful deliberation as separating designers from users,

or say that artifacts with proper functions are the result of planful deliberation in a way that objects with merely accidental functions are not. But why shouldn't the intentionalist insist that, in going to such effort and bending the fence-post, the so-called "user" is in fact a designer and builder? Preston gives no reason, because she doesn't even consider the possibility.

Similarly, Preston says that the agent who rolls up the newspaper to swat the flies is a "user" who physically modifies an object in much the same way that a designer would. Consequently, Preston concludes that we cannot distinguish between proper functions and accidental functions by saying that proper functions are the result of physical modification (with some purpose in mind) whereas accidental functions are not. But once again, it is always open to the intentionalist to say that when a person rolls up a newspaper, they are acting as the designer and builder of something whose function is to swat flies.<sup>2</sup>

As part of this same line of response, Neander can take the position that for an object to acquire a function, a number of things have to converge. It might be necessary for the designer to exercise planful deliberation, as well as for the designer to make physical modifications to raw materials.

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<sup>2</sup> Oddly, Preston admits that, "fold up a newspaper, and you have a flyswatter" (p. 607). Yet she continues to insist that, after folding up the newspaper, fly swatting is merely an accidental function of the thing. Now, if what the agent has in hand is a flyswatter, then it would seem that the agent is holding something that is supposed to swat flies. And furthermore, since it is, by Preston's admission, a flyswatter, we should be able to evaluate whether it is a good flyswatter or a bad one, and whether it has any defects as a flyswatter. If it is soft and unwieldy, then it would be a defective flyswatter, though that would not necessarily mark it as a defective newspaper. But if the hallmark of having a proper function is the fact that a host of normative propositions are true of things with a proper function (as Preston herself maintains), then I wonder what sorts of normative propositions attach to things with a proper function, which do not attach to the flyswatter!

**3.2.3** Lastly, Neander can distinguish between designers and users along lines that Preston has failed to mention. This is the approach that I favor. It doesn't seem that someone who merely rolls up a newspaper builds a flyswatter (as Preston claims, see footnote 1). Instead it seems that they have rolled up a newspaper, and used it to swat flies. Why doesn't the rolled-up newspaper count as a flyswatter? The reason cannot be that the owner hasn't sufficiently modified the newspaper. After all, one doesn't have to make very many modifications to a stick in order to make a splint. I believe that two factors are relevant here. First, the owner of the newspaper probably has no intention of regularly using it to swat flies. Second, the owner of the newspaper does not attend very carefully to the suitability of a rolled-up newspaper for the purpose of swatting flies. Anyone who has tried to use a newspaper to swat flies knows that, despite the popular image, it isn't a very good instrument at all for those purposes. Were the owner to make careful and sensible adjustments to the shape of the newspaper, hang it on the wall and form the intention to use it for swatting flies, then I might be willing to talk, in earnest, about his new "flyswatter."

The suitability of an instrument for its intended purpose is relevant to the question of whether it has a given function. This is an idea with some intuitive plausibility, for which I will give a more detailed defense later on.

**3.3** Preston asks us to deny that objects can acquire proper functions through either the deliberate actions of designers or users. I have argued that we have no good reason to go along. Finally, I should also point out that, if we were to go along, this would impose an unnecessary hardship, for it is difficult to see how we could then accommodate the proper

functions of what we might call “novel artifacts”—artifacts that are not reproductions of other artifacts and that have original functions. This is precisely the problem with Preston’s own theory.

Preston holds what she calls a “reproduction” theory of artifact function. On this view the function of an artifact is a capacity that it shares with ancestral artifacts, which accounted for the reproduction of those artifacts. For example, an early prototype of a knife was once produced by a primate, who noticed that it cut through skins. The knife’s cutting through skins caused the primate to manufacture a copy of the knife, something that, to some degree, shared its physical characteristics. Cutting through skins was the function of the resulting copy, which was a *bona fide* knife. This theory is ready made to accommodate the distinction between proper functions and accidental functions.

Previous fence-posts were not copied because of their ability to provide leverage, and previous newspapers were not copied because of their ability to smash flies. Therefore Preston’s theory allows us to say that providing leverage and smashing flies are merely accidental functions of those artifacts. On the other hand, previous fence-posts were copied for their ability to serve as barriers, which is undoubtedly a proper function of fence-posts; and previous newspapers were copied for their ability to display type, which is undoubtedly a proper function of newspapers.

But the problem with Preston’s theory is that it denies the possibility of novel artifacts. A scientist cannot wake up tomorrow, draw up some plans and then build a time-machine whose function is to transport people back in time. In her view, in order to possess a proper function, the scientist’s time machine would have to be a reproduction of an ancestral artifact that enabled time-travel. For Preston, even an artifact that is a

faithful copy of some other artifact cannot have an original function. Consider the first time that a carpenter copied an armoire with the purpose of making something to accommodate a television set. On Preston's view, this cabinet did not have the proper function of accommodating a television set, because accommodating a television set was not something that its ancestors did that accounted for their reproduction.

It is unsurprising that Preston's theory fails to accommodate the possibility of novel artifacts. After all, the obvious way to explain how a novel artifact acquires its function is to point out that it has been conceived, designed or built with some original purpose in mind. But the fact that Preston's theory fails to accommodate novel artifacts is a serious problem. The first television cabinet was "supposed" to accommodate a television set, and even its builder would have said so. Moreover, if it had been built too low to the ground for proper viewing, then we would have been entitled to say that it was defective, because it failed to perform its function.

The fact that intentionalist theories can accommodate novel artifacts is a distinct advantage for those theories. Furthermore, as I have shown, intentionalist theories can either accommodate or deny the validity of the distinction between proper functions and accidental functions. Therefore, I can see no reason to give up on intentionalist theories in favor of Preston's reproduction theory.

#### **4. Structural Conditions**

**4.1** I turn now to a different criticism of Neander's theory. Peter Vermaas and Wybo Houkes (2003) have argued that Neander's theory is inadequate because it fails to impose "structural conditions" on artifacts (p. 281). In the remainder of this chapter I try to show

that their arguments for the structural conditions are inadequate; I provide my own reason for accepting the structural conditions; and, finally, I explain the implications for Neander's theory.

#### 4.2 Vermaas and Houkes begin by describing the following case:

CASE: John wants to put up his tent, but notices that the pegs are missing. He therefore looks through his things and collects alternatives. He chooses items such as large nails and thick wooden pins because they are elongated and resist some bending. When John finally puts up his tent, some of the wooden pins break, but the nails work. (p. 264)

From this the authors derive two "structural conditions" which they say any theory of artifact function must entail in order to be "adequate" to CASE. First the authors claim that in order for a theory of artifact function to be adequate to CASE, it should entail the following:

Structural Condition 1: "For every function there exist structural conditions sufficient for its performance." (p. 265).

If Structural Condition 1 is true then that poses a problem for Neander's analysis of artifact function. On Neander's view, an artifact can acquire a function purely by being built for a certain purpose in mind (however fanciful). It need not be the case that anything could possibly fulfill that purpose, as Structural Condition 1 requires.

Unfortunately, it is unclear how the authors arrive at Structural Condition 1 or in what way a theory of artifact function must respect that condition in order to be adequate to CASE. In CASE, John chooses wooden pins and nails in order to hold down his tent. Happily for John, it's true that there are structural conditions sufficient for the pinning down of a tent, but this example alone gives us no reason to think that John's luck



generalizes—that for every function there are structural conditions sufficient for its performance.

In a footnote, the authors say that Structural Condition 1 “expresses the intuition that not every artifact can perform a given function” (p. 265). But the idea that not every artifact can perform a given function is obviously a triviality that any theory of artifact function can respect. Indeed, it is hard to imagine a theory of artifact function that would be inconsistent with the fact that not every artifact can perform every function. Such a theory would need to imply, for example, that an airplane is suitable to be used as an eyedropper. Structural Condition 1 is a very substantive and important thesis, which goes well beyond expressing such a triviality.

In fact, I think that there is good reason to accept Structural Condition 1. One reason for accepting this condition is that it follows from widely accepted ideas about the normative significance of functions—namely, that if an object has some function then it ought to be able to perform that function; and that if its physical structure is unsuitable for the performance of its function then it doesn’t have the physical structure that it ought to have, which is to say that it is defective. Now suppose that a mad scientist builds a complicated machine that he hopes to transport people back in time, but also suppose that time travel is logically impossible. We could not point to what the scientist has made and say: “That is not as it ought to be. That is defective.” If it were not as it ought to be, then we should want to know how it ought to be, instead. But if there is no structural condition adequate for the performance of time-travel, then there is no answer to our inquiries. In general, if an object has a function, then there must be some physical structure adequate to its performance.

4.3 The second structural condition adduced by Vermaas and Houkes is as follows:

Structural Condition 2: “If a theory ascribes function to an artefact it should provide partial justification for the belief that the physical structure of the object satisfies such conditions.” (p. 266)

One problem with the wording of the second condition is that it is slightly unclear what it means for a theory to provide justification for our beliefs about the physical structure of objects. What the authors mean is that, once we learn the theory of how objects acquire functions, and then proceed to learn the function of any given object, we should be partially justified in believing that it can perform its function. We can render the second structural condition more perspicuously. From now on I will be using the following formulation:

Structural Condition 2\*: It is a constraint on any theory of artifact function that upon learning the function of any artifact one is partially justified in the belief that it can perform its function.

Once again, it is somewhat unclear why a theory needs to entail this structural condition in order to be “adequate” to CASE. In CASE, John picks through various durable, pointed objects in order to find something to pin down his tent. What the example illustrates is that—at least sometimes—the appearance of an artifact is some guide to its function. But there could be an artifact whose physical structure provided almost no guide as to its function. Inspectors in Iraq came across large aluminum cylinders, which could be used to build bombs or for numerous civilian purposes.

More to the point, even if the physical structure of an artifact is always a guide to its function, this has nothing to do with Structural Condition 2\*. The fact that an object’s physical structure is a guide to its function still leaves open the possibility that absolutely no object with that function can ever perform its function. Therefore, it leaves open the

possibility that an object's possessing a function in no way lends weight to the notion that it can perform its function.

But once again, I want to argue that Vermaas and Houkes' structural condition is correct. A plausible analysis of artifact-sortals would hold that a knife is an object whose function is to cut things; a paper-weight is an object whose function is to weigh down paper; a time-machine is an object whose function is to enable time-travel; and so on. But suppose that a child reads in a fantasy book that if he mixes baking soda with snail slime and puts it all in a milk carton then he will have built a time machine. To my mind, whatever the child ends up with, it is most definitely not a time-machine. Therefore, if a time machine is simply an object whose function is to enable time travel, then we want to deny that the child has endowed anything with such a function. And that means that it is not sufficient for someone to build something with the purpose of enabling time travel for that thing to, in fact, count as having the function of enabling time-travel.

If we were to ascribe a function to the child's "time-machine" then that would cheapen the concept of function. Learning of an object's function would give us no confidence in its ability to perform its function, since the object could very well be the fantastic concoction of a child. Instead, learning that an object has a function must always lend some justification to the notion that it can perform its function—which is to say that Structural Condition 2\* is correct.

## **5. Implications for Intentionalism**

**5.1** Neander's intentionalist theory has trouble accommodating the structural conditions.

Neander's theory does not accommodate Structural Condition 1, because someone's

designing, building or retaining an object for some purpose does not guarantee that there are structural conditions sufficient for its performance. And Neander's theory does not accommodate Structural Condition 2\*, because it ascribes functions too liberally. On Neander's theory, the child who throws together baking soda and snail slime bestows the function of enabling time travel, because that is the "purpose or end" for which he goes to his efforts. But if a child can bestow the function of time travel on a pile of baking soda and snail slime, then learning that an object has a function does not (in any substantial measure) justify a person in believing that it can perform its function, and Structural Condition 2\* is not satisfied.

But next I want to suggest that Neander should welcome the structural conditions, and modify her theory of artifact functions accordingly. I will argue that the structural conditions follow from Neander's overarching idea that artifacts and biological organs acquire functions through different kinds of selection processes.

**5.2** On the face of it, there is one single notion of function—that of what a thing is "for" and what it is "supposed" to do—that applies to both artifacts and organs. Therefore most theorists have tried to say something by way of unification.

Neander shares the widely held view that what artifact function and biological function have in common is that they both arise through a process of "selection".<sup>3</sup> In the biological case, the function of a trait is whatever it did in previous organisms, in virtue of which those animals were selected under natural selection. And in the artifact case, the function of an artifact is whatever purpose it was selected for. In Neander's words:

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<sup>3</sup> For a dissenting view see Bigelow & Pargetter (1987). They defend the view, associated with Robert Cummins, that the function of an organ or trait is whatever adaptive effects it has—regardless of evolutionary history. (I have obviously oversimplified their position.)

I suggest that the function of an artifact is the purpose or end for which it was designed made, or (minimally) put in place or retained by an agent. Once again, its function is the effect for which it was selected, but the selection is usually intentional selection by an agent (p. 462)

Later, Neander provides detail about what constitutes the selection process:

...‘consequence etiologies’...are causal explanations of a special kind, those in which an effect of the trait being explained ‘plays a role’. The role played, however, depends upon the kind of selection process. In the case of natural selection, effects of past instances of that type of trait causally contribute to increased replication of the trait. While in the case of intentional selection, it may be that a mental representation of the effect is what plays the causal role. (p. 463)

According to Neander, the selection process in biology consists in effects of past instances of a trait contributing to their reproduction. To say that moths were selected for black coloration is to say that the effects of past instances of black coloration causally contributed to the increased replication of that trait. But in the artifact case, for example, a carpenter forms a mental representation of a walking stick with various properties, including a certain height. Then he forms a mental representation of the stick’s properties having various effects. Perhaps its height enables tall people to use it. When the carpenter builds the stick, its properties have functions that correspond to their imagined effects.

Of course, Neander leaves out one crucial step. The carpenter’s mental representation of the height’s causal effects doesn’t just happen to contribute to his making a stick of that height. The carpenter’s mental representation induces him to make a choice, which is why we talk about “selection”. The carpenter’s choosing desired properties could be likened to survival of the fittest, in which suitable candidates pass the test. And the carpenter’s proceeding to instantiate the chosen properties could be likened to reproduction of survivors, in which the superior traits are passed on or realized.

**5.3** On the going story, we talk about a builder choosing to include certain parts or properties for enabling certain effects, which is all we mean by saying that those parts or properties were selected. Therefore, we can talk about selection of a part/property for its enabling some effect. And wherever some part/property is selected for enabling some effect, that effect is its function. For example, the carbon filament is selected for enabling the bulb to burn longer. What this means is that the fact that the carbon filament enables the bulb to burn longer was the reason for which the designer/builder chose to include it. It follows that enabling the bulb to burn longer is one of its functions.

Of course, we also need to assign functions to entire artifacts. The parts and properties of an artifact are selected because of their ability to do certain things. But most parts and properties are only of interest to the builder because of how they work together to enable the artifact to do other things, which are of greater value and interest. For example, the parts and properties of an engine are of interest to the builder, but only because of how they work together to create a reliable and powerful mechanical motion. For this reason, we can say that one of the “ultimate” effects for which the parts and properties of the engine have been selected is the creation of reliable and powerful mechanical motion. To generalize, the functions of an artifact are the ultimate effects for which its parts and properties are selected.

**5.4** For animals to be selected is for a process of differential death and survival to take place. For the parts of an artifact to be selected is for someone to act upon reasons. The important commonality is that in both cases we can explain the existence of a trait in terms of what it does. We can point to the organs of an animal and say: “The heart is

there because hearts circulate the blood, etc.” Similarly, we can point to the carbon filament and explain its presence by saying: “The carbon filament is there because carbon filaments burn longer than others.”<sup>4</sup>

This leads to an important insight about the nature of selection. When biologists say that there is selection of organisms for some trait for its effects what they mean is that, in the past, organisms’ possessing the trait in question contributed to their fitness, and that the trait was consequently passed down, resulting in its presence in the current population. Therefore, if there is selection of birds for large beaks for large beaks’ providing leverage, then large beaks must actually provide leverage. Furthermore, possession of large beaks must actually contribute to fitness, explaining why the associated phenotype was passed down.

But that is not just a product of how natural selection works, because the same thing goes for selection for properties of artifacts. We speak of selection of properties for enabling some effect, where enabling the effect is its function. What this means is that the fact that the property enables the effect is the reason why the designer/builder chose

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<sup>4</sup> Nonetheless, there is one very curious difference between selection of organisms and selection of artifacts. Whereas we assign functions to entire artifacts, we do not assign functions to entire organisms, except for bees, termites and other creatures that live in groups.

It is uncommon for theories of biological function to provide a principled explanation for why entire organisms don’t have functions. Many theories get the desired result by fiat, explicitly defining ‘function’ for organs and traits, without mentioning organisms. For Karen Neander, the function of an “item” of an organism—by which she means either an organ or trait—is “that which items of [its] type did to contribute to the inclusive fitness of [the organism’s] ancestors” (p. 1991a. 174). It seems that we should be able to extend this theory to entire organisms, as follows: The function of an entire organism is that which organisms of its type did to contribute to their fitness. At any rate, Neander’s theory does not help us to understand why organisms are left out.

An explanation for this curious difference between organisms and artifacts may turn on the fact that for something to possess a function is for it to be in the service of something else. Organisms with arms were selected because of how arms benefited them. The parts of a toaster are selected because of how they contribute to the usefulness of the toaster; but so is the entire toaster useful to its builder and to the person who purchases it. On the other hand, it is hard to say of what an entire organism is in the service—unless it belongs to a herd, a hive, etc.

to include it. But if someone chooses to include a certain property because it enables some advantageous effect, then that is to say that the property must actually do so.

On the picture I have sketched, the functions of an artifact are what I have called the “ultimate effects” for which its properties have been selected. For example, supporting human weight is one ultimate effect for which the size, shape and weight of a walking stick are selected, because it is the effect of principal interest for which those properties are selected. Now if the properties of a walking stick are selected for enabling some ultimate effect, then that is to say that they must actually enable that effect. It also follows that the effect for which they are selected is one that is possible to bring about.

**5.5** We are now in a position to see how Neander should modify her account in light of the fact that artifacts acquire functions through a process in which properties are selected and then instantiated. When Neander makes these modifications her theory will also accommodate the structural conditions.

On Neander’s theory, “the function of an artifact is the purpose or end for which it was designed, made, or (minimally) put in place or retained by an agent” (1991b, p. 462). That is right so far as it describes a necessary condition for an artifact’s acquiring some function. In other words, if the function of some object is to *V* then someone must have designed, made, put in place or retained the object for *V*-ing. However, two further conditions are necessary. First, as we have seen, the designer or builder must have selected properties that actually enable *V*-ing. Second, they must have succeeded in making an object that, all else being equal, actually *V*-s. (The phrase ‘all else being



equal' is required because we must allow for the fact that an object can still have a function even though it is slightly defective.) Next I will show how the resulting intentionalist theory can accommodate the structural conditions.

First take Structural Condition 1. If there is a walking stick whose size, shape and weight were selected for enabling the supporting human weight, then, from this it follows that a stick with those properties can indeed enable the supporting of human weight—which is to say, that it must be possible to support human weight. In general, if the properties of an object are selected for enabling a certain end or purpose then there must be structural conditions sufficient for doing so.

Finally take Structural Condition 2\*. In order to count as a walking stick, an object's properties must have been selected for enabling the functions of a walking stick. And then the designer or builder must have been somewhat successful in bringing about the desired properties, making it the case that the stick can, all else being equal, perform its envisioned end or purpose. From this it follows that the fact that an object has a function lends weight to the notion that it can perform its function. When a builder selects all the necessary properties for the performance of some task, the only conditions under which an object will be incapable of performing the envisioned task are those in which the builder has failed to bring about properties that have been selected; the builder has brought about counterproductive properties; the object has been intentionally modified; the object has been damaged; or the object has been "used up," as when a match is burned.

## 6. Conclusion

I have argued that the normative significance of functions places constraints on any adequate theory of how objects acquire them. In particular, I have drawn attention to the fact that an object with some function should be capable of being, or becoming, defective; and that an object that is completely unsuited to performing its putative function is not defective, but devoid of any function whatsoever. And I have argued that what explains this is the fact that the properties of an artifact with a function must be selected for enabling that function.

For an artifact to be defective it is sufficient that it should be unsuited to performing its function. But what does it mean to say that something is “defective?” One possibility is that to call something defective just is to say that it is unsuited to performing its function. Another possibility is that to call something defective is to say that it is lacking in something of value (that, perhaps, it ought to possess). In the case of artifacts, it is hard to tell which of these options is correct. Since functions are bestowed by designers and builders, anything that fails to perform its function will always disappoint the goals of someone, and in that way, lack value.

On the other hand, in the case of biology, things might come apart. There might be a scenario in which the functioning of some biological mechanism is of no value. If such a biological mechanism malfunctions, do we want to say that it is defective (simply because it malfunctions) or do we want to refrain (because the malfunction isn’t bad)? I do not intend to provide a direct answer to this question. However, in the next section I will turn my attention to a certain class of defects, namely medical disorders. As it turns

out, there is some debate over whether disorder can simply be identified with malfunction, or whether disorder always requires the deprivation of something of value.

## **CHAPTER TWO DEFINING ‘DISORDER’**

### **1. Introduction**

What is a medical disorder? This is a question that has stirred much debate within the medical profession, which has to decide what to include in its manuals. It is also a question of especial interest to the field of psychiatry, where disagreements over what to count as a disorder are often enflamed by political and financial stakes. In this chapter, I consider competing analyses of our notion of medical disorder. Finally, I attempt to clarify the concept of medical disorder that is applied to humans and used in clinical practice.

### **2. Boorse’s Theory of Disorder**

**2.1** Christopher Boorse has proposed a sweeping analysis of what he calls both “pathology” and “disease,” and defines as including “the vast range of conditions that medicine views as inconsistent with perfect health” (1977, p. 7). In this section, I will argue that Boorse’s theory can be interpreted more narrowly as an analysis of medical disorder (which is only one kind of pathology). Understood in that way, his theory provides an excellent starting point for the discussion of medical disorder that follows.

**2.2** Boorse proposes to use the word ‘disease’ in a broad sense, and in which it is literally true that health is the absence of disease. By his own admission, the word ‘pathology’ is probably more appropriate, and he sometimes uses the two words interchangeably.

Boorse highlights the following first-pass at an analysis:

A disease is a type of internal state which impairs health, i.e. reduces one or more functional abilities below typical efficiency. (p. 555)<sup>5</sup>

Boorse adds that this reduction in functional abilities is relative to an organism's age and sex—or in other words, that the word 'typical' means 'typical for the organism's age and sex'.

However, Boorse ends up endorsing a different analysis, in response to the fact that there can be universal diseases that result from what he calls "environmental agents," such as pollution. In this way, it could turn out that everyone of a certain age suffers from diseased lungs, although their level of lung function isn't below "typical" efficiency for people of their age and sex. He concludes:

A disease is a type of internal state which is either an impairment of normal functional ability, i.e a reduction of one or more functional abilities below typical efficiency, or a limitation on functional ability caused by environmental agents. (1977, p. 567; 1997, pp. 6-7)

But this analysis differs from the first in an important, though perhaps unintentional, way.

The first pass suggests that diseases are causes of functional impairment ("a disease...reduces one or more functional abilities"), whereas the second suggests that diseases just are impairments of functional abilities ("a disease is...an impairment of normal functional ability"). In fact, Boorse appears to hold the inclusive view that a disease is either the cause of functional impairment or the functional impairment itself.

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<sup>5</sup> In its narrower and ordinary sense, diseases certainly do not include any and all internal states that reduce functional abilities. Instead, to have a disease is usually to have small agents in ones body, damaging tissue by operating on a cellular level. For that reason, someone with who is tortured by having a rat sown up in their bowels is not said to have a disease. (Someone with a large tumor is said to have a disease, but that is probably because we think of the operative agents as small cancer cells.) As previously mentioned, Boorse is construing the word 'disease' broadly to include the full range of pathological states.

This view is supported by the text and, as I suggest below, it is a charitable one to attribute to him.<sup>6</sup>

**2.3** According to Boorse, disease/pathology can be identified with functional impairment or the cause of functional impairment. This is a view that appears to make sense.

Pneumonia and other infectious diseases seem not to be functional impairments themselves, but they are plausibly classed as diseases because of how they affect the body—and in particular, because they cause things in the body to stop working properly, resulting in harm and sometimes death.

On the other hand, many of the states that we consider pathological, and which Boorse would count as “diseases” in his broad sense, do seem to be identifiable with functional impairments. In particular, these are what we would ordinarily call “medical disorders.” If someone has an optic disorder the doctor might explain that the eye is not focusing properly, and if someone has a psychiatric disorder the doctor might jokingly explain that the patient has “a screw loose.” Both explanations go to the idea that when someone has a medical disorder something isn’t functioning properly. Indeed, we can talk about a “disordered optic system” or a “functionally impaired optic system,” and, offhand, our choice of words doesn’t seem to make any difference. Disorder and functional impairment appear to be one and the same.

Below, I will be concerned with the nature of medical disorder, as a species of pathology. In particular I will be concerned with the proposal, which I attribute to

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<sup>6</sup> As Boorse sometimes puts it, a given disease always “involves” impaired function of one kind or another (e.g. 1977, p. 559).

Boorse, that a disorder just is the functioning of some organ or mechanism “below typical efficiency” relative to the being’s age and sex.<sup>7</sup>

2.4 Before getting to criticisms of Boorse’s theory of disorder, it is worth attending to some complications and points of clarification.

2.4.1 First, Boorse defines disorder as the functioning of some organ or mechanism “below typical efficiency,” but hyperthyroidism is a disorder that consists in an overactive thyroid gland. In light of this, Boorse makes the qualification that all deviation from normal efficiency should count as “reduced efficiency” in his sense (1977, p. 559). Now, as far as I can see, functioning below typical efficiency, or deviation from normal efficiency, is just malfunction. Therefore, I take it that for Boorse disorder is the same as malfunction.<sup>8</sup>

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<sup>7</sup> For Boorse, an organ or mechanism’s function is the contribution that it makes to the goals of an organism, where “an organism or its part is directed to goal G when disposed, throughout a range of environmental variation, to modify its behavior in a way required for G” (p. 9). Boorse’s view of function needs to be distinguished from the popular evolutionary, etiological view on which the function of a biological part or trait is the contribution that it made to the survival of ancestors. Boorse’s functions are so-called “systems-functions,” the contributions of parts to systems with reliable inputs and outputs. (In this sense, oceans and forests might be said to have functions within a large weather system.) However, I don’t intend to discuss the debate surrounding competing theories of biological function. For present purposes, it will suffice to say that the Boorsian idea is that disorder is malfunction.

<sup>8</sup> I should note that, in my experience, philosophers tend not to distinguish between malfunction and dysfunction. According to the OED, the noun ‘malfunction’ denotes “bad or faulty functioning;” and the noun ‘dysfunction’ denotes “any abnormality or impairment of function.” I cannot see how the slight differences in definition capture any difference in meaning. However, in my casual survey, several people have told me that ‘malfunction’ seems to apply more comfortably to artifacts, while ‘dysfunction’ applies more comfortably to biological organs. This is borne out by the OED, in which almost every example-sentence for ‘malfunction’ regards mechanical artifacts; whereas the example-sentences for ‘dysfunction’ are somewhat more varied, but mainly regard biological organs.

One friend has also made the useful observation that ‘dysfunction’ can be used, perhaps loosely, to mean not so much that something is functioning badly, but simply that it is screwed up. In this sense, a dysfunctional family is just a family in which people don’t get along and communicate, though doing so isn’t the function of a family. Similarly, it doesn’t seem as if a relationship has to have any function at all in order to qualify as a “dysfunctional relationship.” Even though ‘malfunction’ is usually used in regard to

**2.4.2** Second, Boorse’s qualification about age and sex is not quite right. Some qualification along those lines is necessary, because what counts as a disordered organ in an eighteen year old may not count as a disordered organ in an eighty year old. But the problem is that a person could be disordered even though their condition is typical for people of their age and sex. For example, while Boorse writes that even Alzheimer’s isn’t species typical “even at fairly advanced ages,” (1997, p. 92, emphasis mine) we have good reason to think that Alzheimer’s is species-typical in people who are old enough. What are we supposed to say about people at those advanced ages? Anyone with such severe cognitive limitations would have to be considered disordered.<sup>9</sup>

A theory of disorder will somehow have to reconcile two facts: First, what counts as a disorder in an eighty year is different from what counts as a disorder in an eighteen year old. Second, there are or could be disorders from which all eighty year olds typically suffer. But reconciling these facts is a problem for any theory of disorder—not just for Boorse’s—and I propose that we bypass it.

**2.4.3** Finally, Boorse himself takes the view that someone with one dead brain cell has a pathological condition, albeit a minor one (p. 51). But common sense says that a single neuron itself may have pathology, even though the person with that neuron does not.

Though Boorse explicitly rejects it, a charitable interpretation of his theory might identify

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artifacts, it is perfectly appropriate to use it in regard to biological parts and mechanisms. And since ‘dysfunction’ seems to be laced with so many evaluative connotations, I will be using the word ‘malfunction’ throughout this chapter.

<sup>9</sup> Another example of an expectable disorder might be presbyopia, which is the age related hardening of the eye’s crystalline lens. This condition affects about 100% of adults over the age of 50, causing them to hold their books away at a distance and to purchase bifocals and reading glasses. Presbyopia is routinely classified as an eye disorder, although it might be a borderline case between disorder and normal age related decline.



disorder with the significant malfunction of some organ or large system or mechanism (as opposed to the systems and mechanism internal to individual cells). What I consider the more charitable interpretation will become relevant when we look at challenges to Boorse's theory.

### **3. Disorder as More than Malfunction**

**3.1** Jerome Wakefield (1992) has criticized Boorse's theory on the grounds that it identifies necessary, but not sufficient, conditions for disorder. Wakefield argues that disorders are malfunctions that also carry some kind of disvalue, and, therefore, that the analysis of disorder must contain a "value component." His strategy is to show that, where a malfunction isn't harmful, it doesn't constitute a disorder—suggesting that the relevant value is the wellbeing of the individual.

**3.2** Wakefield tries to show that where a malfunction isn't harmful, neither is it considered a disorder. In one passage, he begins by writing:

A dysfunction of one kidney often has no effect on the overall well-being of a person and so is not considered to be a disorder. (p. 384)

But as Boorse points out, this contention is simply false. A malfunction in one kidney is a disorder—a unilateral kidney disorder (1997, p. 49).

Next Wakefield writes:

Physicians will remove a kidney from a live donor for transplant purposes with no sense that they are causing a disorder, even though people are certainly naturally designed to have two kidneys. (p. 384)

Here Wakefield is right that someone who has donated one kidney is not considered to have a disorder, but this is not because donating a kidney has no effect on wellbeing, as

Wakefield seems to suggest. Instead, it is because someone with only one kidney does not have anything in his body that is malfunctioning. When a kidney is removed, the patient does not have a disorder, unless some other organ or mechanism consequently stops working properly.<sup>10</sup> And even Wakefield agrees that malfunction is necessary for disorder, albeit not sufficient.

**3.3** Wakefield needs to supply cases in which there is both a malfunction and a lack of harm. This is not easily done. Nature has designed animals efficiently, and few biological functions are completely superfluous to health. However, Wakefield correctly observes that there are cases from human psychology:

Even if a disposition to highly aggressive response is the natural function of some mechanism, the loss of that function might not be considered a disorder. (p. 384)

Wakefield seems right that an unnaturally mild person should not be considered disordered, and the obvious explanation is that a mild disposition isn't harmful. Perhaps it even reduces the incidence of strokes and stress-related illness.

Admittedly, the example of mildness might at first appear hard to assess. As I suggested earlier, a charitable interpretation of Boorse's theory would identify disorder with substantial malfunction. That way we do not have to say that the malfunction of a single brain cell, after a night's gin and tonic, constitutes a disorder. And maybe there is a point at which significantly lowered functioning of one's aggression mechanisms—resulting in extreme mildness—really does constitute a disorder. It is hard to tell.

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<sup>10</sup> Loss of a kidney usually results in at least some decrease in the efficiency of the renal system, but apparently its functioning may remain within normal range.

But in Wakefield's defense, it seems that whether we should consider even extreme mildness a disorder just comes down to the question of whether it is debilitating. If our ancestors were selected for aggressiveness, but mild people nevertheless live perfectly long, happy lives today, then we would be disinclined to call them "disordered." Therefore, Wakefield's example appear to establish his main point, which is that in order to determine whether a condition is a disorder, we must look into whether there is harm.

Finally, Wakefield has what he admits is a more "speculative example:"

Even if we suppose that people are designed to age and die at roughly a certain rate, someone whose aging mechanism suffered a dysfunction that slowed the aging process and lengthened life would be considered not disordered but lucky. (p. 384)

There is some debate over whether aging is a process that itself contributes to fitness, and for which there may have been natural selection. But if there were a biological mechanism whose function was to cause aging, then we would certainly hesitate to call this malfunction a "disorder."<sup>11</sup>

**3.4** The malfunctioning aggression mechanism, and the malfunctioning aging mechanism, persuasively illustrate that we don't ordinarily consider malfunction sufficient for disorder in a person. Moreover, these examples give us good reason to think that disorder must also be harmful to the individual or otherwise bad in some way.

It might be thought that, if harm is required for disorder, then the entire fuss over malfunction is a red herring. In other words, while Wakefield thinks that malfunction

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<sup>11</sup> It is probably misleading to talk about one single aging mechanism. According to Linda Partridge, "Because aging is such a complex process, it probably involves a large variety of parallel processes" (2006, p. 42). Also, according to Partridge, there is now a consensus that aging processes are not themselves fitness enhancing, but rather, an unfortunate byproduct of other fitness enhancing processes. Wakefield's example is hypothetical.

and harm are each necessary for disorder, perhaps what we should take away from his arguments is, instead, that we can analyze disorder entirely in terms of a state's being bad for the patient, without any mention of malfunction, at all. The problem with this suggestion is that harmful biological conditions such as injuries are clearly distinct from disorders. For example, a puncture in the lung is a harmful state, but it isn't a disorder (although it might cause one). The original idea, that in a disorder something isn't working properly, must be on the right track. Nevertheless, there is reason to doubt that Wakefield has captured the whole story about disorder, and I turn to that next.

**3.5** According to Wakefield, Boorse's analysis needs to be amended with a "value component," something requiring disorders to be bad for the people who have them (pp. 384-385). The problem with this suggestion stems from the fact that animals, as well as humans, can apparently suffer from reproductive disorders—even though reproductive malfunction isn't bad for many animals.

For example, cystic right oviduct is a disorder in chickens, in which an abnormal cyst on the cloacal wall causes abnormal development of embryos. If a chicken has a cystic right oviduct, it is very tempting to say that it has a reproductive disorder, just like a human with blocked fallopian tubes or seminal vessels. In fact, *The Merck Veterinary Manual* lists what it calls "disorders of the reproductive system" for fowl, including cystic right oviduct, false layer, internal layer, impacted oviduct, prolapse of the oviduct, salpingitis, and yolk peritonitis (pp. 1610-1611). Yet although a chicken with cystic right oviduct has a defective reproductive system, it isn't the case that being in that state is in any way bad for the chicken. How could it be? Are we to suppose that chickens pine for

little chicken families? Wakefield mentions that “the ability to have children is commonly considered a benefit” (p. 384), but here he has humans in mind, as he must throughout the entire paper.

**3.6** Infertile animals present us with a puzzling asymmetry. On the one hand, it seems that a disorder in a human is a state that must be bad for the individual—as Wakefield’s examples illustrate. But, on the other hand, it seems that a disorder in an animal need not be bad for the animal. How should we reconcile this apparent difference between human and animal disorder?

One suggestion is that a disorder, whether in an animal or a person, is a malfunction that is bad for us (not necessarily for the creature that has it). After all, we have an interest in the fertility of chickens even if the chickens themselves do not. But the problem with this suggestion is that there could apparently be a reproductive disorder in a species of vicious snakes, which was neither bad for the snakes nor bad for us.

A more promising suggestion is that different concepts of disorder are ordinarily applied when we talk about the disorders of animals as opposed to the disorders of people. Wakefield demonstrates that ordinary intuitions about what counts as a disorder in humans are driven, in part, by our beliefs about what is bad for the individual. But when we talk about the disorders of vicious snakes, perhaps what we have in mind is some other concept. For example, perhaps the concept we apply to vicious snakes is akin to Boorse’s notion of disorder, which identifies disorder with malfunction. In this way,

reproductive malfunction in a vicious snake would clearly qualify as disorder, even if it wasn't bad for the snake or any of us.<sup>12</sup>

The fact that Boorse's theory accommodates reproductive disorder in animals certainly lends it some credibility. It is very possibly the concept that we apply to animals, and it may have other theoretical uses as well (including application to people in certain contexts). At the same time, Wakefield's numerous examples illustrate that it is often counterintuitive to equate malfunction with disorder in people. In the following sections, I will focus on the concept of disorder identified by Wakefield—the one that dominates our thinking about people, and which we would expect to apply in clinical contexts. (Therefore, wherever I talk about “disorder” I have Wakefield's concept of human-applicable disorder in mind.) My goal is to develop Wakefield's insights, and to fill out precisely how a human malfunction must be bad in order to count as a disorder.<sup>13</sup>

#### **4. Wakefield's Characterization of the Value Component**

**4.1** Wakefield is cautious about defending any particular view about how malfunctions must be harmful or bad in order to count as disorders. He writes: “The nature of values is such a complex topic in its own right that it requires separate consideration” (p. 384).

However, he also makes two fairly clear suggestions. First he writes: “To be considered

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<sup>12</sup> This is a suggestion that would be welcome to Boorse. In direct response to Wakefield's article, Boorse charges that Wakefield is, “confusing theoretical and practical issues” and that “it is hopeless to expect a single concept of ‘disorder’ simultaneously to fill theoretical, clinical and social roles” (p. 49). No doubt Boorse would agree that when we talk about the reproductive disorders of vicious snakes, we invoke his “value-neutral” concept of disorder as malfunction.

<sup>13</sup> Whether we say that there is one concept of disorder, or separate concepts, really just depends on how we choose to individuate concepts. We could say that there is one concept, but that more is required in order for humans to fall under it. In that case, for both animals and humans, malfunction is necessary for disorder. (Perhaps, as I argue below, what is necessary is malfunction that reduces fitness in the right kind of way.) However, for humans, it is not sufficient.

a disorder, the dysfunction must also cause significant harm to the person under present environmental circumstances and according to present cultural standards” (pp. 383-384). And later he writes: “Only dysfunctions that are socially disvalued are disorders” (p. 384). I believe that each of these versions is right, in its way—or rather, that what is right is a combination of both.

**4.2** To begin, consider the proposal that what makes a malfunction a disorder is the fact that it causes “significant harm under current environmental circumstances.” We should interpret this as the proposal that what makes a malfunction a disorder is the fact that that type of malfunction typically causes significant harm under current environmental circumstances. After all, it may not have been bad for Stevie Wonder to go blind, though nevertheless, Stevie Wonder possessed a disordered optic system.<sup>14</sup>

A different suggestion is that a disorder is a malfunction that is bad in some way—not just on balance. Notice that though blindness may not have been bad, on balance, for Stevie Wonder, it was bad in some way, because he missed out on certain benefits that others take for granted. But this still won’t do, because we can imagine cases in which someone’s disorder isn’t bad for them in any way, due to their own idiosyncratic circumstances. For example, suppose that someone with a highly defective cornea later develops a defect in the part of the brain that interprets electrical impulses from the optic nerve. The disorder in the brain is in no way bad for the person, who would never be able to see, anyway. Yet we would say that the person now has multiple optic disorders.

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<sup>14</sup> In the June 2006 edition of *Harper’s Magazine*, David Samuels writes, “It is no secret that Stevie believes that his blindness is a gift from God” (p. 54).

Whether a malfunction is a disorder does not depend on the individual's circumstances, but on what is common or typical for people. With that in mind, we should consider:

- (A) A disorder is the malfunction of some mechanism, where, typically, such a malfunction is bad for the person.

4.3 Unfortunately, there is a problem with (A), in that it fails properly to constrain the way in which a malfunction must be harmful in order to count as a disorder. Consider again someone with an aging mechanism that fails to function. Intuitively, we want to say that the person is non-disordered because the malfunction is not harmful. But now suppose that society is jealous, and people with malfunctioning aging mechanisms are cruelly persecuted. On the view under consideration, disorder is harmful malfunction, where harmfulness is equated with "harm to the person...under present environmental circumstances and according to present cultural standards" (pp. 383-384). Therefore, by this measure, someone with a non-functioning aging mechanism has a harmful malfunction, and a disorder.

Yet, it would seem that people with malfunctioning aging mechanisms are not disordered, whether or not they are persecuted by society. In fact, if society is unfair to people with malfunctioning aging mechanisms, then that goes to show that there is something wrong with society, not with the otherwise fortunate people who don't age.

4.4 The problem with (A) is that a malfunction must be harmful in the right kind of way. Malfunctioning of the liver should count as a disorder when it causes toxins to build up in the body; malfunctioning of the eyes should count as a disorder when it causes the person



to have trouble seeing; and so on. We can think of all biological functions as being paired with their natural, beneficial or fitness enhancing outcomes. In this vein, we get:

- (B) A disorder is the malfunction of some mechanism in which, typically (and “under present environmental circumstances”) the following condition is met: The mechanism fails to contribute to the person’s fitness or welfare as it is its function to do, so that the person’s fitness or welfare is thereby reduced.<sup>15</sup>

I have glossed over the fact that there may be a disorder in which the corresponding malfunction does not typically affect wellbeing or fitness, because there is typically adequate medical intervention.

4.5 The wording of (B) is meant to require that the harms that the malfunction causes result in the right, non-deviant, way. If the malfunctioning aging mechanism fails to benefit people by keeping jealous peers at bay, then this does not mean that the mechanism fails to contribute to a person’s fitness “in the way that it is its function to do.” On an evolutionary, etiological theory of biological function, we would explain this by pointing out that, most surely, our ancestors were not selected for an aging mechanism because of its envy-appeasing properties. Therefore, though society may harm someone with a malfunctioning aging mechanism, we have no reason to take such harm into account when we ask whether the malfunction is a disorder.

(B) correctly classifies many of the malfunctions that Wakefield wants to avoid considering as disorders. These are malfunctions that don’t reduce a person’s wellbeing or fitness “under present environmental circumstances” (p. 383). For example, suppose that aggression used to be beneficial, but that it isn’t in the modern, civilized world that

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<sup>15</sup> There are important disagreements about the nature of fitness, and especially how an organism’s fitness is relative to its environment. See e.g. Richardson and Burian (1992). Nevertheless, talk of “fitness” is important and well established in biology.

we live in. (B) gives us the desired result, which is that a malfunctioning aggression mechanism is not a disorder. After all, a malfunctioning aggression mechanism does not typically, and under present environmental circumstances, decrease the organism's wellbeing or fitness.

4.6 The problem with (B) stems from the fact that many biological parts and mechanisms are only designed to contribute to fitness, in the biologist's sense, not to contribute to wellbeing. Therefore, a malfunction could fail to contribute to the organism's fitness as it is its function to do, without being bad for the person—and according to (B), such a malfunction would count as a disorder. In trying to take a step forward, this analysis loses sight of Wakefield's original insight: A disorder is a harmful malfunction<sup>16</sup>

To illustrate, (B) makes it a likely, empirical possibility, that homosexuality is a disorder. If our ancestors were selected for attraction to members of the opposite sex, then ensuring attraction to members of the opposite sex is a function of one of the psychological mechanisms governing our sexuality. It becomes possible that the failure of the mechanism to ensure attraction to members of the opposite sex is the result of some malfunction. And furthermore, this malfunction would be one that renders a person less fit, precisely by failing to contribute to a person's fitness in the way that it is its function to do so.<sup>17</sup> However, homosexuality is not, intuitively a disorder, because it

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<sup>16</sup> In fact, since (B) does not require a disorder to be bad for the organism or disvalued by society (only fitness reducing, in the biologist's sense), it is a candidate for the concept of disorder that is applied to animals. If a snake has a reproductive malfunction, then "the reproductive mechanism fails to contribute to the organism's fitness as it is its function to do, so that the organism's fitness thereby reduced." According to (B) the snake has a disorder.

<sup>17</sup> Whether homosexuality is somehow fitness enhancing is unresolved. According to the "kin selection theory," homosexuality evolved as a strategy to aid the reproduction of genetic cohorts. The idea is that homosexuals perpetuate their genotype by helping to care for family. McKnight (1997) argues that what

isn't harmful. And neither are a host of other sexual orientations and preferences that reduce fitness, without harming the person or (rightly) carrying any disvalue for society.

Asexuality is surrounded by much less controversy, and while some have argued that asexuality is a disorder, those arguments have tended to rest on the claim that asexual people are less likely to lead flourishing lives. It is safe to say that among devout religious people, for whom chastity is a value, asexuality is not considered a disorder. We could consider those people conceptually confused, but I prefer the following explanation: Whether asexuality is a disorder does not rest on whether asexual people have some malfunctioning reproductive mechanism, but on questions of value, such as whether an asexual person is happy and on whether an asexual person leads a good life.

Finally, we can look, not at sexual orientations, but at preferences for certain kinds of sexual relationships. There is a popular stereotype that men have different sexual needs than women, and, in particular, that men have a predatory sexual appetite. This stereotype about men could be erroneous, but let us suppose that it is true. Doing so shouldn't be difficult, because it is such an entrenched stereotype that most of us are already in the grip of it.<sup>18</sup> Let's also suppose that, by evolutionary design, all men are supposed to be sexually predatory and that this has a significant effect on their behavior and chances of reproductive success, so that more predatory men have more children.

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explains the frequency of homosexuality is that it is an evolutionarily counterproductive byproduct of a successful strategy (1997, ch. 3). On this view, development of a feminine personality might be a successful reproductive strategy that sometimes results in homosexuality as a byproduct. The feminine personality occupies a niche that is distinct from that of more masculine and aggressive men.

In any case, while it is open to debate whether homosexuality is a fitness enhancing strategy, many people would insist that it is not open to debate whether homosexuality is a disorder.

<sup>18</sup> The stereotype about men might be false precisely for reasons adduced in the preceding footnote. That is, it is possible that, by evolutionary design, some men have less aggressive, more feminine personalities. This allows them to occupy a distinct niche in the marketplace for mates.

In the case we have imagined, being “responsible” is associated with malfunction and reduces fitness. (It is not a stretch to imagine that it diminishes fitness even more than a mild case of hyperthyroidism.) Yet it does not seem that “responsible” men are disordered. Why not? It appears that when we evaluate these men to decide whether they are disordered, we place very little importance upon facts about evolution, and we place a lot of importance on whether their preference for stable, monogamous relationships is one that is good.

4.7 Asexuality, homosexuality and “responsible monogamy preference” are examples of malfunctioning mechanisms, which lower fitness, yet are not disorders. But there could also be examples that do not concern sexual orientations and preferences. For example, someone might be especially selfless and altruistic, as a result of lower than normal functioning of the “selfish mechanism.” Their decreased selfishness may reduce the pleasure they gain from life more than someone with, for example, a mild disorder such as partial color blindness. Yet we would hesitate to call them “disordered” unless their selflessness got entirely out of hand.

It could be replied: “Well, why shouldn’t we just think of all these conditions as disorders? Who is to say they are not?” It is possible that usage of the word ‘disorder’ has historically underdetermined its meaning. But it strikes me as very plausible that a disorder is, by definition, a problem, which is something that (B) fails to capture. Certainly, the medical community appears to have opted to use the word ‘disorder’ in this way, which is the basis upon which it has chosen not to classify homosexuality as a disorder.

## 5. Social Disvalue

5.1 Critics have long argued that our notion of disorder is a clinical notion. On the most naïve clinical theory, disorder is whatever physicians find suitable to provide medical attention for. This is swiftly rejected by Kendell (1975), who points out that there can be disorders of which physicians are unaware; and Boorse (1997), who points out that doctors attend to all sorts of things that aren't disorders, including pregnancies, and fevers. Yet clearly it is true that, all else being equal, a disorder is appropriate to treat, even if a lot gets packed into the phrase 'all else being equal'. (It isn't appropriate to treat myopia if the only treatment available is terribly dangerous; or if the procedure is slightly dangerous and myopia can be controlled with a prosthetic; or if myopia for some reason carries an enormous government pension.)

But if a disorder is appropriate to treat, then that is precisely because a disorder is a problem. Therefore, I suggest we return to Wakefield's original suggestion that "only dysfunctions that are socially disvalued are disorders" (p. 384). Of course, we could always be wrong about what we disvalue. It would be more accurate to say the following: Only malfunctions that, all else being equal, would rightly be socially disvalued, are disorders.<sup>19</sup> This gives us:

- (C) A disorder is the malfunction of some mechanism such that, typically (and "under present environmental circumstances"),
1. The mechanism fails to contribute to the person's fitness or welfare as it is its function to do, so that the person's fitness or welfare is thereby reduced; and
  2. All else being equal, the malfunction would rightly be disvalued by society.

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<sup>19</sup> The clause 'all else being equal' remains unavoidable. If a malfunction creates undesired consequences through some unusual causal chain, then it will always be rightly disvalued. By the same token, a debilitating malfunction might cause desired consequences through some unusual causal chain. We would want to consider it a disorder, even though it shouldn't be all-things-considered-disvalued.

On this view, many of our disagreements over the status of putative disorders will be disputes over value. What a Roman Catholic Theologian considers a disorder might not be the same as what a secular humanist considers a disorder.

## 5.2 The proposed analysis gives the right result on the case of homosexuality.

According to the old psychotherapeutic theory, the mechanism that has evolved to ensure attraction to members of the opposite sex has also evolved to provide psychological benefits in conjunction with that attraction and also the resulting sexual contact. Therefore, if the mechanism malfunctions, and fails to provide those psychological benefits, then the resulting psychological distress would qualify the malfunction to count as a medical disorder.

On the other hand, if as most psychiatrists now believe, homosexuals are perfectly well psychologically adjusted, then there is probably no regard in which they lack fitness in a way that rightly would be disvalued. Although homosexuality may be associated with a lack of fitness (in the biologist's sense), the particular way in which it is associated with lack of fitness—i.e. by reducing one's chances of reproduction—is not problematic. A sexual orientation that reduces one's chances of reproduction is of no more concern to society than the aspirations of a scientist, businessperson, or world traveler, which take precedence over having a family.

But one additional point should be made. Even if homosexuals are perfectly well adjusted, then homosexuality might nevertheless count as a disorder if there are non-clinical reasons for disvaluing it—for example, moral or

theological reasons. This illustrates that a malfunction can count as a disorder even if it isn't bad for the individual. A malfunction can count as a disorder even if the mechanism only fails to contribute to the person's fitness (as opposed to welfare) as it is its function to do, so long as there are good moral or theological grounds upon which we would rightly disvalue the malfunction.

5.3 Lastly, there is an important caveat to the analysis that I have suggested. Earlier I stressed that whether a state counts as a disorder is partially a matter of whether that type of state is typically bad for some creature. This helps to explain why all congenital reproductive disorders are in fact disorders. If a woman is born with obstructed fallopian tubes, or a man is born with obstructed *vasa deferentia*, then they have reproductive disorders no matter what their preferences. Their conditions may not be a problem for them, but the type of state they are in still counts as a medical disorder.

Things become blurry when we talk about states that are brought about intentionally and electively, by the patient, and not due to medical needs or duress. It sounds very strange to say that a man who has had a vasectomy is walking around with a disordered reproductive system, even though, if he were born that way, we would have no trouble saying so. We can go one of two ways. We can say that someone who has had a vasectomy brings on a desired disorder. Or we can opt for a slightly complicated analysis, in which types of states are differentiated, in part, according to genesis. Then someone with congenitally tied *vasa deferentia* has a reproductive disorder; while someone with *vasa deferentia* that is tied for the right reasons does not have a reproductive disorder. The complication is probably worth the cost, because it is very

common for thoughtful people to operate upon the *vasa deferentia* in order to prevent conception, and it seems strange to say that they end up disordered.

To say that we should differentiate states according to genesis is not to say that all electively induced malfunctions are excepted from being considered disorders. The well considered obstruction of reproductive organs is not, typically, a problem for the patient, or a cause of significant harm. Therefore it would not be rightly disvalued. But other kinds of electively induced malfunction might be different, including self-mutilations done for penance, and sterilization that it not done for the right kinds of reasons.

## **6. Conclusion**

In this chapter, I have defended Wakefield's contention that there is a value-laden concept of disorder, and I have tried to fill it out in greater detail. It should not come as such a surprise that there is an evaluative dimension to the concept of disorder used in most human and clinical contexts. As many previous writers have suggested, to call someone disordered carries an implied call to action, an all-else-being-equal recommendation for treatment.

In the final chapter I will turn attention to sexual perversion. Like disorder, there have been several attempts to analyze perversion in terms of evolution and biology—that is, what bodily parts, functions and mechanisms, are “for”, and what they are “supposed to do”. For some philosophers, the hope is to establish objectivity, and therefore, respectability, for our judgments about perversion. But I will argue that these attempts to establish a firm foundation for our judgments about perversion fail.



## **CHAPTER THREE**

### **TELEOLOGICAL THEORIES OF SEXUAL PERVERSION**

#### **1. Introduction**

**1.1** People disagree over what to consider sexually perverted, and there has probably been a great deal of change in public opinion over the last hundred years. In my view, sexual perversions fall roughly into two groups. (I will provide more reason for believing this later on.) On the one hand, some perversions strike most of us as revolting and are likely to elicit strong reactions of disapproval. These include necrophilia and pedophilia. Many people who find homosexuality perverted would place it in this category, especially those people who have a strong, hostile or fearful attitude, originally described by George Weinberg as “homophobia” (and described at length in [1973]). On the other hand, there are perversions such as shoe fetishism and voyeurism, which are more bizarre than revolting.

**1.2** An adequate theory of perversion should respect and explain the following three things:

**1.2.1** First, to call something “perverted” is to make a negative evaluation of it.

Philosophers sometimes insist that an adequate account of perversion must make sense out of the fact that sexual perversion is considered immoral. For example, Thomas Nagel famously suggested that a sexual perversion is the proclivity for sexual activity that is not accompanied by reciprocal empathic arousal (Nagel 1969), to which Graham Priest has retorted that this leaves it completely mysterious why we should consider sexual

perversion “immoral” and “wrong” (p. 362). In fact, while everyone reacts negatively to what they consider sexual perversions, not everyone issues a specifically moral objection. Haidt & Hersh (2001) presents evidence that self-described “conservatives” are more likely to do so. They also find that some liberals experience a visceral, negative reaction to descriptions of unusual sexual acts, but refuse to issue a moral objection (p. 211).

A theory of perversion should help to shed light on its normative dimension, but we need to be careful how we enforce this demand. It could turn out that the range of things described as “perverted” are not such that they should be negatively evaluated at all, either because ‘perverted’ is non-denoting or because, while ‘perverted’ is denoting, the things that it denotes are not in fact wrong or objectionable in any way. (Some people hold a view similar to the latter about racial epithets, terms of abuse, and other so-called “thick ethical terms.”) But if a theory of perversion is eliminativist in holding that nothing is perverted, then it should at least explain why the things that have usually been taken to be perverted were therefore considered objectionable. And if a theory holds that, while some things are perverted, nothing is wrong or objectionable about them, then it should at least explain why so many people have felt otherwise.

**1.2.2** Second, some activities seem more perverted than others. For example, if any actions are perverted at all, then necrophilia is certainly more perverted than fetishism. (I have not done a survey, but Graham Priest, for one, agrees [p. 361].)

**1.2.3** Third, people may disagree about what sorts of things are perverted, but if a theory is not eliminativist (i.e., it agrees that some things are perverted) then it should reasonably

conform to ordinary peoples' judgments about what is and is not perverted. Where it fails to conform to ordinary peoples' judgments, it should offer some explanation for why people have so far been mistaken.

**1.3** Before getting under way, I should say something about the subject matter of a theory of perversion. The sorts of things that we ordinarily call "perverted" are actions, people, proclivities and desires. A theory could start by defining what it takes for an action to be perverted, and then define the perverted person as one who desires such actions. Or, on the other hand, a theory could start by defining what it is for a person, or a certain proclivity to be perverted, and then define perverted acts derivatively.

I will not argue ahead of time for any preferred object of analysis, since my intention is to approach each theory on its own terms. As it turns out, the theories I discuss in this chapter mainly start by defining perverted actions. (An exception is the theory of Roger Scruton, with which I begin.) But my own view is that we should define perverted action derivatively in terms of what it takes for either a person or their proclivities to be perverted. My view will emerge near the end, where I argue that sexual perversion is a matter of a person having a propensity for sexual attraction that is not in proportion to the level that is warranted.

## **2. Two Approaches to Perversion**

**2.1** Broadly, there are two trends in analyzing sexual perversion. The first trend takes off from the observation that we think of perverted sex as somehow unnatural. In this vein, various theories have tried to explain perversion in terms of the biological aims of

sex—for example, as sex that fails to further the biological function of sex, usually thought to be reproduction.

The second trend analyzes perversion in terms of the failure to achieve the interpersonal ideals of sexual relations. In this vein, Robert Solomon (1974) proposes that perverted sexual activity is that in which there is a breakdown of communication between partners; Thomas Nagel (1969) proposes that a perversion is the proclivity for sexual activity in which there is failure to engage in arousing mutual recognition with another person; and Roger Scruton (1986) proposes that it is the proclivity for sexual activity that is “detached from interpersonal intentionality” (p. 289). Interpersonal-ideals theories are not the major subject of this discussion, but it is worthwhile to take a brief detour to consider them. I will focus on Scruton’s theory, since it is the most recent.

**2.2** According to Scruton, an analysis of perversion should focus, not on particular actions, but on a person’s disposition—their more or less stable motives, impulses and needs (p. 290). On this view, perversion is the inclination to desire, or satisfy ones sexual needs, without taking responsibility for a meaningful sexual relationship, seeking bonds of emotional union, and experiencing erotic love. In other words, it is the inclination to desire, or satisfy ones sexual needs, without attaining the “interpersonal aims” of sex (p. 290-293).

But the problem with Scruton’s theory is the same as the problem with all interpersonal-ideals theories. As Primoratz (1997) points out, someone with a proclivity for engaging in casual sex may lack the impulse to form a healthy interpersonal relationship with his or her partner. But though we may think of this as sad and possibly

unfair, we don't ordinarily think of it as constituting a sexual perversion. For this reason, Scruton and other interpersonal-ideals theorists are best seen as giving a theory about immature or irresponsible sexual proclivities; not perverted ones.

**2.3** As the case of casual sex illustrates, turning away from the interpersonal aims of sex is not sufficient for perversion. But it is still possible that it is necessary. The question is why we should ever think that that is so. Scruton writes of performing sexually perverted actions that,

...in so divorcing sexual conduct from the impulse of accountability and care, we remove from the sphere of personal relations the major force which compels us to unite with others, to accept them and to compromise our lives on their account. In other words, we remove what is deepest in ourselves... This, I believe, is the major structural feature of perversion, *and the feature which justifies the moral condemnation* of perverted desires, and also introduces a distinction that facilitates the explanation of its nature. (pp. 289-290, emphasis mine)

It is possible that, although not alone sufficient for perversion, the "divorcing [of] sexual conduct from the impulse of accountability and care" is what makes perversion wrong. If so, Scruton has identified an important necessary condition for perversion.

**2.4** But we have reason to doubt that what makes perversion wrong in our judgments is its "divorcing [of] sexual conduct from the impulse of accountability and care:"

**2.4.1** First, a lot of people who strongly object to what they consider sexually perverted proclivities don't object to the proclivity for relationships that are devoid of "accountability and care." It is obvious that this is true, because almost everyone objects to bestiality, while people are largely divided about whether to condemn a

proclivity for casual, heterosexual relations. Also, many people object to homosexuality because they consider it a perversion, although they feel the same way about the proclivity for a monogamous homosexual relationship filled with “accountability and care.” Scruton’s theory doesn’t help us to make sense out of some very common, and seemingly coherent, sets of attitudes.

**2.4.2** Second, if what is wrong with sexual perversion is the “divorcing [of] sexual conduct from the impulse of accountability and care,” then it should turn out that the more a perversion divorces sexual conduct from the impulse of accountability and care, the worse it is. But in that case, voyeurism must be just as bad as bestiality. After all, neither one lends itself to any interpersonal rapport, and at least bestiality lends itself to a rapport with some other being, or can be seen as working out an ultimate desire for meaningful contact with another being. But clearly, bestiality is far more perverse than voyeurism.

**2.4.3** Finally, when most people object to something that they find sexually perverted, they express strong revulsion, not the kind of solicitude for happy, healthy relationships one finds in a self-help relationship book. They say (e.g.), “Bestiality is utterly vile,” not “Bestiality is very sad, because there is no meaning and love.” Therefore, while Scruton’s theory claims to explain why perversions are negatively evaluated, it fails to capture the quality and tone of that evaluation. I conclude that the “divorcing [of] sexual conduct from the impulse of accountability and care” is not what’s wrong with perversion, and we have no good reason to think that it is a necessary component of it.

**2.5** It does not seem promising to analyze perversion in terms of the failure to desire respectful or emotionally healthy interaction. In the following sections, I will turn attention to theories that try to analyze perversion in terms of the biological function of sex. My reason for focusing on theories of this sort is that they attempt to capture and develop the reasons that ordinary people give for their judgments about perversion—for example, that a certain act is wrong because it is “unnatural” or that people are not “meant” to engage in it. Such a teleological approach to perversion is associated with Thomas Aquinas and the Roman Catholic tradition, and, more recently, philosophers have recast it in terms of the biological function that sex has acquired through the process of Darwinian evolution.

### **3. Teleological Accounts of the Unnatural: Part I**

**3.1** According to a standard etiological theory of biological function, the function of some trait is given by the contribution that it made to the survival and reproduction of ancestors, and which accounted for selection of the trait under natural selection. We can think of the biological function of a behavior as the contribution that that behavior made to the survival and reproduction of ancestors, and which accounted for selection of a disposition to engage in it. In that case, the function of sex is to enable reproduction, and to do anything else that sex accomplished that contributed to the survival and reproduction of our ancestors, which accounts for why the disposition to have sex was selected for.

The simplest teleological theory of perversion identifies perverted behavior with any and all sexual behavior that undermines or fails to enable reproduction. For example, Robert Gray writes:

Thus, if reproduction is the adaptive function of sexual activity, those forms of sexual activity which are nonreproductive and, more clearly, those which are inimical to successful reproduction... would be unnatural and perverted; they would constitute, as it were, a twisting of sexual activity away from its "natural" object or function. (p. 190)

Perhaps the most obvious problem with this account is that a lot of non-reproductive sex is un-perverted, including sex between 60 year olds, and even sex between young fertile, heterosexual people that doesn't occur during ovulation. For this reason, Sarah Ruddick defines perversion in terms of what "*could* lead to reproduction in normal physiological circumstances" (p. 24, emphasis Ruddick's), and one suspects that Gray, whose paper is cast as a commentary on Ruddick's, has the same thing in mind.

But the problem is that it is normal for a woman to be infertile while she isn't ovulating. And sex with a woman who isn't ovulating could not lead to reproduction, even under normal circumstances, though it certainly is not perverted. A more plausible analysis would be the following:

- (A) A sexual act is perverted just in case it could not lead to reproduction, even given that the individuals involved are healthy, of reproductive age, ovulating (if applicable) etc.

**3.2** But this account fails to satisfy the three desiderata that I outlined earlier:

**3.2.1** Gray's account renders obscure why there should be negative evaluation of perverted actions. Certain kinds of hard candy have no nutritional value. Therefore



eating this hard candy fails to further the biological goal of eating, which is, presumably, to convey nutrition to the body. Yet nobody considers the eating of hard candy to be gustatorily perverted, or otherwise attaches a negative evaluation to it. Gray needs to provide some explanation for why sexual activity that fails to achieve its biological aim is different.

**3.2.2** Along the same lines, Gray's account does not yield an intuitive ordering of which actions are more perverse than others. If perverted actions are those that either undermine or fail to contribute to reproduction, then it will be natural for him to say that the most perverse actions are either those that make the smallest contribution to one's chances of reproduction or that undermine one's chances of reproduction the most. But then it will turn out that distracting oneself with sexual fantasies is just as perverse as engaging in an act of necrophilia.

**3.2.3** Finally, Gray's account does not give intuitive verdicts about many of the acts that strike us as perverted. Gray will have to allow that sexual acts that only indirectly contribute to reproduction may count as un-perverted, because, otherwise, he will have to say that kissing and fondling are perverted. But the problem is that it could have turned out that sexual acts with animals was therapeutic for inexperienced adolescents, enabling them to gain confidence and move on to relationships with people. Bizarre stories can be told about any number of seemingly perverted acts, which might connect them in some way with reproductive utility. Yet, intuitively, this does not matter to whether those acts are perverted.

3.3 Though Gray focuses on a theory about what it takes for an action to be perverted, it sometimes seems that he is equally interested in sexual desires. This emerges when he writes, “As Thomas Nagel expresses it, ‘A sexual perversion must reveal itself in conduct that expresses an unnatural sexual *preference*’” (p. 192, emphasis Gray’s). A few sentences later he writes, “...it is not the fact that a person might derive sexual pleasure from a given activity that makes him perverted; it is, rather, that he desires or prefers to engage in such sexual activities” (p. 192). Therefore, I take it that Gray would endorse the following analysis of perverted desire:

- (A\*) A sexual desire is perverted just in case it is desire for an act that could not lead to reproduction, even given that the individuals involved are healthy, of reproductive age, ovulating (if applicable) etc.

But the analysis of sexual desire fares no better. We still need an explanation for why the desire for nonreproductive sexual activity is negatively evaluated, when the desire for non-nutritional gustatory activity is not. And we are still confronted with the problem that the desire for bestiality might have turned out to be un-perverted had bestiality been therapeutic.

#### 4. Teleological Accounts of the Unnatural: Part II

4.1 So far I have looked at problems for one way of pursuing the idea that perverted sex goes against the biological purpose of sex. But we should look at more promising variations on the same idea.

Gray tries to understand perversion by looking at the biological goal of sex. But perhaps we should look, instead, at the sexual organs, and mental mechanisms responsible, for human sexuality, and at the functions they possess. After all, someone

can engage in sexual acts that fail to further the “goal of sex” (i.e. reproduction), even though their physiology and psychology are fine, and everything is working according to biological design. But perhaps perversion is a matter of something going wrong with a person’s psychological makeup.

4.2 According to Francis Williamson, what makes a certain activity or kind of contact sexual is the involvement of a certain qualitative experience, namely the experience of sexual arousal or pleasure. A perverted act is one that attains its status as a sexual act in the wrong kind of way. He writes:

What then is the basic structure of perversion? It is this: an act is perverse when an element which has no general suitability to function intrudes itself, not as an *incidental* or *peripheral* feature, but rather as the central or salient feature of the entire episode... Thus a sex act is perverted if it achieves its status as a sex act (i.e. if the agent derives or adverts to sexual sensations) only via the presence of elements—pain, faeces, whatever—which play no role in instantiating a general and natural teleological norm. (p. 223, emphasis Williamson’s)

Unfortunately, this theory is untenable as stated. It simply is not true that, for an act to be perverted, some extraneous element must be the “central and salient feature of the entire [sexual] episode” or that the agent should derive sexual pleasure “only via” the presence of such an element. Sex with a dead body is perverted even if the body’s being cold and lifeless is just one among many things enhancing the agent’s experience, and even if the agent can experience sexual pleasure without being with a dead body. If Williamson’s theory is to get off the ground, it has to be recast as follows:

- (B) A sexual act is perverted just in case the actor experiences sexual pleasure through awareness of some object or aspect of their sexual act, though it is not the function of any biological part or mechanism to ensure that they gain pleasure from the awareness of such an object or aspect of their sexual act.

According to Williamson, one major advantage of his theory is that it can explain what is wrong with perverted behavior. If it is the function of certain biological parts and mechanisms to ensure that we gain sexual pleasure in a certain way, then—according to Williamson—there are “natural teleological norms” governing how we acquire sexual pleasure. What is wrong with perverted acts is that they deviate from these norms.

I will have to come back to the question of how perverted acts deviate from the norms that Williamson has in mind, and whether this can explain what is wrong with them. But first I turn to more immediate problems with the theory under consideration.

**4.3** One problem with (B) is that it is no better than Gray’s theory at rendering plausible classifications of perverted, and non-perverted, actions. For example, some men prefer women with short hair, though it is unlikely that it is the function of any biological part or mechanism to ensure attraction to shortness of hair. Instead, short hair is just something that some people like, because of their own personal histories and associations. But according to (B), a sexual act in which the actor enjoys the shortness of his partner’s hair would be perverted, which simply isn’t true.

While humans might not be designed to like short hair, we obviously have a somewhat open-ended capacity to respond sexually to physical cues for which we have our own personal affinities, and for which the culture has attached special meaning. A theory of perversion needs to distinguish between the response to idiosyncratic cues that is normal, and the response to idiosyncratic cues that is perverted, something that (B) fails to do.

4.4 The short hair problem is symptomatic of a deeper problem. (B) tries to ensure that perverted acts involve a deviation from what Williamson calls “natural teleological norms.” Accordingly, someone is perverted if they acquire pleasure in a certain way, even though it is not the function of any biological part or mechanism to ensure that they acquire pleasure in that way. But it is not true that an act deviates from a biological norm just because the actor acquires pleasure without its being the function of any mechanism to ensure that they do so. At best, an act deviates from a biological norm when the actor acquires pleasure in some way even though it is the function of some mechanism to ensure that they not do so. Similarly, a transaction doesn’t violate any legal norms when the law fails to mandate that it should be performed. Rather, a transaction violates a legal norm when the law dictates that it is not to be performed.

We should strengthen and recast the theory. A plausible thought is that for some action to be perverted is for there to be some malfunction of the psychological mechanisms that governs the sexual appetite. In particular, an action is perverted when the agent experiences sexual pleasure in a certain way, although he is designed not to. For example, the agent might find cold lifeless bodies attractive, because his disgust mechanism isn’t working. The following analysis captures this idea:

- (C) A sexual act is perverted just in case the actor experiences sexual pleasure through awareness of some object or aspect of their sexual act, and this is due to the malfunction of some mechanism that is meant to ensure otherwise.

The new analysis apparently avoids the result that a sexual act is perverted, just because the actor enjoys the shortness of his partner’s hair. After all, it may seem that, while we aren’t designed to like shortness, we aren’t designed not to like it, either. So nothing is malfunctioning in someone who does.

The new analysis also captures the fact that someone can be perverted even though they aren't attracted to any bizarre object or aspect of their act, so long as they fail to be repulsed by it. Intuitively, sex with an animal is perverted so long as the actor is blithely indifferent to the fact that his partner is an animal, even if he doesn't enjoy the very fact that his partner is an animal. A possible explanation is that, in either case, something is wrong with the actor's psychology. Something is malfunctioning.

4.5 However, while (C) at first appears to pass the test of extensional accuracy (the third desideratum), it nevertheless leaves too much to chance. People all around the world belong to groups with unique morphological features, many of which are adaptations to their ancestors' environments. And if a certain skin color was historically adaptive, then sexual preferences for that skin color, as well as dislike for other skin colors, must also, by hypothesis, have been historically adaptive.<sup>20</sup> According to an evolutionary theory of biological function, this means that there could be a psychological mechanism whose function is to ensure a dislike for certain skin colors. In that case, there could be a malfunction in which someone enjoys a skin color that his ancestors were selected for disliking; and according to (C), the sexual acts in which he indulges this preference are perverted. But such a result is implausible.

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<sup>20</sup> See Frost (2004) for a discussion of whether ice-age men were selected for preferring blonde hair color in women. Frost's own opinion is not that there was selection for a preference for blonde hair. Instead, Frost contends that what explains the success of blonde hair in women is that it had a 'pop-out effect'. (In other words, since blonde hair used to be rare in the population, it grabbed the male's attention, making the female more noticeable and likely to be chosen for mating.)

4.6 The apparent problem with (C) is that it tries to equate the malfunction of the mechanisms governing sexual desire with mental illness, when, as we have seen, there can be malfunctions that are completely harmless and unobjectionable. Although (C) is still not quite right, I think that we are almost there. The final pass at an evolutionary, etiological theory of perversion brings us to what I think most people have in mind when they try to articulate such a theory:

- (D) A sexual act is perverted just in case the actor experiences sexual pleasure through awareness of some object or aspect of their sexual act, and for someone to be so constituted is for them to be disordered.

At several points, Williamson suggests that this is what he has in mind, as when he writes that a pervert suffers from a kind of deviance that “betokens something intrinsically disordered in the make-up of [some] person” (p. 229).<sup>21</sup>

4.7 But while (D) may be serviceable for purposes of psychiatry or psychotherapy, it falls short of characterizing our ordinary concept of perversion. As I argue in the preceding chapter, a medical disorder is just the malfunction of some biological organ or psychological mechanism that meets the following conditions. First, the malfunctioning organ or mechanism fails to contribute to the benefit or fitness of the organism in the way that it is its function to do so. Second, this failure to contribute to the organism’s benefit or fitness would be rightly disvalued by society. If this analysis of disorder is correct, then it is easy to show that (D) makes little progress over its predecessors.

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<sup>21</sup> Levin [1984] also appeals to the notion of disorder in order to argue that there is something wrong with homosexuality.

**4.7.1** First, while it may appear that (D) easily satisfies the first desideratum, requiring a theory of perversion to make sense out of our negative evaluations, this is not the case. Even if all perversions are medical disorders, this cannot by itself explain the peculiar way in which perversions are objectionable. By its very nature, a disorder consists in the patient's failure to enjoy the benefit, or fitness enhancing effects, that some psychological or biological mechanism ought to provide, such as the ability to see or to have children. Therefore, a disorder is usually bad in a way that evokes sadness and sympathy. (As Williamson himself writes, concluding his paper: "Perversion involves intrinsic disorder and this requires therapy, not moral condemnation" [p. 229].) By contrast, what marks a sexual perversion is that it is either weird or disgusting in a way that evokes contempt. This calls for some explanation.

**4.7.2** Second, and more importantly, (D) fails to accommodate the third desideratum, which is to say, that it fails to give intuitive verdicts about what is and is not perverted. The problem is that there can be perversion without malfunction.

For example, a sexual act in which one derives pleasure from having strangers watch them having sex would certainly seem to be perverted. But what reason do we have for thinking that someone who goes in for this kind of thing suffers from any psychological malfunction? Similarly, perhaps our evolutionary strategy is to attempt to mate with whatever two-legged animal is available, no matter how odd, when nothing else is available. If so, then someone who sometimes enjoys sexual relations with a chimpanzee would not have any psychological malfunction, even though his acts of bestiality would certainly be perverted.



Furthermore, incestuous acts are surely perverted, although there is good reason for skepticism about the frequent claim that humans have evolved to reject incest, and therefore that anyone who doesn't reject incest must suffer from some psychological malfunction. Leavitt (1990) points out that many societies have practiced incest, including the ancient Roman, ancient Egyptian, and Mormon (p. 973). Furthermore, there is reason to question the commonly held belief that our ancestors must have been selected for rejecting incest, because of the deleterious effects of inbreeding. Leavitt mentions various studies showing that humans evolved during a period of dispersal into "small, isolated, and interbreeding populations" (p. 975). And as he explains: "Small interbreeding populations, while initially increasing their chances for harmful homozygotic recessive pairings on a locus, will quickly eliminate such genes from their breeding pools, thus reducing genetic loads" (p. 974). The result, according to Leavitt, is that inbreeding ceases to be harmful.

Of course, the question of whether sex with animals or family members is perverted does not depend on questions about our evolutionary histories. Many people disagree over whether marriage between first cousins is repugnant and betokens perversion. But crucially, these disagreements do not revolve around the findings of evolutionary psychology. Rather, they revolve around whether it is gross to have sex with your cousin.

**4.8** Teleological theories of perversion attempt to ground our concept of perversion in what sex is for or in how human sexuality has been designed by nature. But we don't need to understand biology or evolutionary psychology in order to understand the nature

of perversion. As I will argue in the next section, all we need to understand is whether a given person, trait or action, is sexy, gross or somewhere in between.<sup>22</sup>

## 5. The Unwarranted-Attraction Theory of Perversion

5.1 I believe that sexual perversion is excessive and therefore unwarranted sexual attraction. For present purposes, a person's sexual attraction to a given object (i.e. a physical trait, a body part, or a sexual act) should be thought of as an inclination to experience directed sexual desire for that object, or to experience sexual arousal by it.<sup>23</sup> For someone to have an excessive attraction to an object is for their desire or arousal to be overly strong.

Our notion of perversion depends on the idea that certain objects are more sexually attractive than others; that some objects are not sexually attractive at all; and that some objects are the opposite of attractive, which is to say, repulsive. What this means is

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<sup>22</sup> After rejecting evolutionary, etiological approaches, as I have done, Graham Priest suggests that we should abandon the notion of perversion. According to Priest, the notion belongs to an Aristotelian worldview, in which biological parts have purposes assigned to them by the cosmos, and in which using an object for any purpose other than the one it was assigned by the cosmos is wrong. But Priest's approach to debunking perversion leaves much to be desired. I don't consider myself to be in the grip of an Aristotelian worldview, yet I can tell when an act is perverted. Neither does it seem to me that, in doing so, I am temporarily assuming an Aristotelian point of view. My judgments are unequivocal and accompanied by a strong affective component.

Furthermore, by Priest's own admission, it is hard to see how an Aristotelian worldview—even were we in the grip of it—would inspire us to react as we do towards perversion. I can see how the belief that someone has offended the cosmos might inspire a kind of solemn dread. But that isn't what I feel.

Lastly, Priest's suggestion is uncharitable if we can't come up with a theory of perversion, inspired by the Aristotelian worldview, which is at least passably coherent. But any attempt to do so encounters problems parallel to the ones confronting evolutionary-etiological based accounts of perversion (which are just modern versions of the Aristotelian strategy). In short, Priest's explanation attributes a bizarre theory to us, which is that objects have supernaturally assigned purposes. And then it can't even explain why, once in the grip of such a theory, one would consider it offensive to use sexual organs for purposes other than reproduction, whereas one doesn't consider it wrong to use wood to build a house.

<sup>23</sup> In other words, attraction is a proclivity. This usage is not unusual. If we say that someone has a liking for mystery novels, what we usually mean is that they have a certain inclination—not that they are, right now, in the grip of an attitude directed at a specific novel.

that some objects warrant more sexual attraction than others; that some warrant none; and that some warrant revulsion. Attraction is, in this respect, just like a host of intentional attitudes and emotions, for intuitively, some things warrant more pity, resentment, fear, or gratitude than others, and some things warrant none.<sup>24</sup>

The teleological approach to analyzing perversion is untenable, because we can't equate an attitude's being warranted or fitting with its being the attitude that evolution has equipped us to have. Just as that which is contemptible is that which warrants contempt, not that which nature has designed us to condemn, that which is sexually attractive is that which warrants attraction, not that which nature has designed us to be attracted to.

**5.2** If all sexual perversion is unwarranted sexual attraction, then what counts as a sexual perversion will depend in part on how much sexual attraction different things warrant—legs, animals, shiny hair, etc.. This naturally raises the question as to whether there is any objective fact of the matter about how attractive, or unattractive, something is. After all, it appears that standards of attractiveness vary dramatically from one culture and generation to another.

I do not intend to take a position on the question of whether there is an objective fact of the matter about how much attraction anything warrants; or whether it is always relative to (e.g.) some culture or place in time. However, I suspect that at least some things objectively warrant attraction, such as the signs of youth and health; and I also

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<sup>24</sup> See Brandt (1946). One aside: When we say that something is sexually attractive, what this usually means is that the thing typically or often warrants sexual attraction. However, it also makes sense to talk about whether a given person's attraction to something is warranted. As I will argue, what makes someone a pervert is the fact that their own attraction is unwarranted (whether or not attraction to the object in question would typically be warranted by most people).

suspect that at least some things are objectively undeserving of attraction, such as a person's being covered with excrement.

If we have evolved to find some trait unattractive, then it is very likely that, in many cultures, places and times, attraction to it will be considered unfitting. However, the fact that we have evolved to find a certain trait unattractive is not sufficient for attraction to that trait to be objectively unfitting. After all, it is possible that we have all evolved to find the appearance of an old person sexually unattractive, but there is clearly nothing unfitting about one old person's sexual attraction to the appearance of another old person.<sup>25</sup> Why not? The answer, I suspect, is that the fittingness of someone's attraction to a certain trait at least partially rests on the various ways in which attraction to such a trait would be good or bad—especially good or bad for someone like the individual. (That is why perversion, which is the propensity for unfitting attraction, is a defect.) For one old person to be attracted to the appearance of another enhances their life in many ways, and this weighs against their attraction's being unfitting.

It is still possible that for attraction to some trait to be objectively unfitting, it is necessary that we should have evolved to find the trait unattractive. If so, then there is more than a grain of truth to teleological theories of perversion, because “objective” perversion—objectively unfitting attraction—requires attraction to that which we have evolved to find unattractive. However, such a partial victory for teleological theories is less meaningful than it might at first appear. The motivation for most teleological

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<sup>25</sup> Whether a person's attraction to some object is fitting or unfitting depends on particular things about their circumstances. For that reason, if we want to be very precise, then we need to talk about what it is fitting for different people and groups to be attracted to. For example, Mary may be perfectly healthy and good looking, although Ted's attraction to Mary is not fitting, because Mary is Ted's sister. Similarly, there is a difference between what it is fitting for a twelve year old to be attracted to, on the one hand, and what it is fitting for an eighty year old to be attracted to, on the other.

theories of perversion is to put our concept of perversion on the firm footing of biology. As Williamson puts it, perversion “involves deviance from an objective norm, a norm which can be spelled out in terms of natural biological and psychological function” (p. 205). Hopes are dashed if evaluative facts, other than those of biology, are sometimes relevant to whether a case of attraction is unfitting. Hopes are dashed if, in evaluating whether it is unfitting for one eighty year old to feel attraction for another, it is relevant to ask: Is it good for them? Could there be reasonable social norms that proscribe it? Should we endorse it? But these questions certainly seem relevant. And if they are not, and if we have evolved to find the appearance of old age unattractive, then it will be hard to explain why amorous eighty year olds aren’t perverted.

**5.3** On my view, all perversion is a matter of excessive and therefore unwarranted sexual attraction. However, not all excessive sexual attraction amounts to perversion. For example, there is obviously nothing sexually attractive about big ears, but a constant mild attraction to big ears does not amount to perversion. If a certain thing or act is neutral with respect to attractiveness, then moderate attraction would be considered funny, without rising to the level of perversion. Instead, perversions come in two kinds:

**5.3.1** First, a very excessively strong, or exclusive, sexual attraction to that which is attractive, or neutrally attractive, counts as a perversion. In most cases, this is what we call “fetishism,” especially where the object of attraction is an artifact, such a shoe, or body part, such as a foot.<sup>26</sup>

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<sup>26</sup> One might make the following objection: Wearing short hair is at best neutrally attractive. Therefore, attraction to short hair should be considered a fetish, or at least it should fall on a spectrum with

5.3.2 Second, either indifference, or sexual attraction, to that which warrants revulsion, counts as a perversion. I will refer to perversions of this sort as “hard-core perversions,” because they are the ones that most of us find most fascinating and horrible, including bestiality and necrophilia. From least to most perverted, hard-core perversion begins with unwarranted attraction to that which is mildly repellant. For example, exhibitionists are attracted to having people with whom they are not in any way intimate observe their intimate parts or acts, even though the fitting reaction to being watched in this way is to be embarrassed and turned off. Even more perverted than sexual attraction to that which one should find embarrassing is sexual attraction to that which is disgusting—which is to say, sexual attraction to an object or act despite the fact that it is disgusting, such as attraction to a person despite the fact that they are dead.<sup>27</sup> More perverted still is attraction to that very feature of the object or act that is disgusting, such as attraction by the very fact that the object one is having intercourse with is a cold lifeless body. In fact, if someone is attracted by the very thing, or act, that is disgusting, then we might consider the person a pervert even if the thing they are attracted to is only ever so slightly

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fetishism—which apparently is not the case. But I would reply that short hair is something that a lot of people prefer, which flies in the face of the assumption that it is really neutrally attractive.

Short hair was especially stylish for women in the 1920’s, and it still turns up on the cover of *Vogue* from time to time. Here I will speak to the question of why many heterosexual men like short hair on women. The answer, I think, is that short hair conveys that a woman is open, independent and lively. The word ‘boyish’ most comes to mind.

It’s extremely common for girls, or young women, with short hair to come off as cute and childlike. The actor Winona Ryder is exemplary with her pixie cut. It’s still not clear to me whether the short hair contributes to the effect of cuteness, or rather offsets it—as if to say, “I’m cute, but I’m also edgy.” Dare I say that it is common for men to find cuteness sexually attractive? I know people who would revolt at that suggestion.

<sup>27</sup> As with attraction, generally, it is clearly the case that what warrants disgust by one person does not warrant disgust by another. For example, Mary may be perfectly healthy and good looking, although the sight of Mary’s private parts warrants disgust on the part of Ted. The reason is that Mary is Ted’s sister. As with unattractiveness, generally, I leave it open whether there is any such thing as “objective” disgustingness, or whether it only makes sense to talk about that which is disgusting in a culture or at a place and time.

disgusting. And, finally, the most perverted of all is extreme attraction to the very thing that is disgusting, which is to say, the fetishising of the disgusting.

Interesting cases are those in which someone is not just attracted to some feature of their experience that is disgusting, but is attracted to the very fact that such and such is disgusting. I'm not exactly sure where to place such cases, but I should think that someone who is attracted to the very disgustingness of the bestiality he is committing is at least as perverted as someone who is attracted to sexual acts with animals.

**5.4** The unwarranted-attraction theory of perversion satisfies the three desiderata that I put forward in the first section.

**5.4.1** This theory explains why perversion is negatively evaluated, and it also captures the tone with which perversion is negatively evaluated. If someone is asked to explain why they don't like foot fetishism, they are likely to explain that it is "weird" or "bizarre". On the proposed theory, all perversion is bizarre, insofar as it consists in an attitude that is unusual and unwarranted. Meanwhile, if someone is asked to explain why they don't like bestiality, they are likely to explain that sex with animals is "disgusting." On the going theory, those perversions that consist in attraction to the disgusting are objectionable just as attraction to any kind of disgusting object or action is objectionable (including attraction to feces, or attraction to eating feces).

Many people, especially non-religious people, are uncomfortable with attraction to the disgusting, without finding it a moral fault. They have a liberal "live and let live" attitude. On the other hand, it is common knowledge that religious people are more

likely to think that perversion is a moral fault, and this has been backed up by the research of Haidt et al. (1993). Why religious people are inclined to moralize perversion is an interesting question. (Another interesting question is why religious people seem to have a longer list of perversions.) Haidt et. al. speculatively suggests that, for religious people, mistreating or polluting the body is disrespectful to the deity that has created it (p. 615).

**5.4.2** This theory explains our judgments about degrees of perversity. To begin with, it helps to shed light on the important difference between merely strange fetishes, on the one hand, and hard-core perversions, on the other. Even extreme attraction to that which is neutrally attractive is rarely as unfitting as attraction, or even indifference, to that which is revolting. With that said, degree of perversion also breaks down along the following dimensions:

First, degree of perversion is in proportion to level of interest. Extreme attraction to that which is disgusting is more perverse than weak attraction, which is more perverse, in turn, than mere indifference. In general, if it is unwarranted to be interested to some degree, then it is even more unwarranted to be interested to an even greater degree.

Second, degree of perversion is in proportion to how off-putting the object of the attitude is. Therefore, attraction to dead bodies is more perverse than attraction to merely deformed bodies. This makes sense, because, if what makes certain attractions unwarranted is the fact that the object is unattractive, then it only stands to reason that the more unattractive the object is, the more unwarranted a person's attraction.



**5.4.3** Finally, this theory appears to be extensionally accurate. Surely there can be no perversion where someone's sexual attraction is always fitting. And where someone's attraction is not fitting, we will only consider this person to have a perversion if the attraction is extreme (as in the case of fetishism) or if the warranted attitude would be quite opposite, namely, one of embarrassment, disgust, or some other rejecting attitude.

## 6. Conclusion

I have argued that teleological theories of perversion do not adequately characterize our concept. Instead, I have suggested that a sexual perversion is sexual attraction that is extreme, and that "hard-core" perversion is sexual attraction to that which warrants rejection. Several important things remain unresolved. First, if perversion is unwarranted and excessive sexual attraction, then this raises the question of what makes a given attraction a specifically sexual one. Second, and more importantly, it raises the question of what makes an attraction unwarranted—a question that can partially be broken into several questions of aesthetics. For example: What makes some action or feature of a person sexy? And what makes some action or feature of a person disgusting?<sup>28</sup> While I have not answered these questions, I have nevertheless presented a substantive theory—or at least, a substantive way of looking at sexual perversion—which is clearly distinguishable from its predecessors.

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<sup>28</sup> Apart from the question of whether disgustingness is objective or relative, it has also been suggested that our perceptions of disgust universally rely on what has been called a "magical" and "metaphorical" folk theory of contagion and contamination. (See Miller [1997], Rozin et al. [1994], Rozin & Nemeroff [1990].) Among other things, contamination as described by this theory is insensitive to the dose of contaminating substance, and it is governed by what has been called the "law of sympathetic magic," whereby "appearances mean deeper similarities in substance" (Miller 1997, p. 6). (This allegedly explains why people are repulsed by a pile of chocolate shaped to look like feces.) If we are indeed in the grip of such a magical folk theory, then we probably want to rethink the significant role that disgust plays in shaping our attitudes towards other people and their behavior.

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