

as we think fit. Artifacts come into being as useful objects and at a certain moment their life of being useful ends, although afterwards a physical object remains. Their ‘memory’ can be erased and they can be diverted toward serving a completely different purpose. They can occasionally play the part of being something else, with the associated danger of identifying too much with this role. Just as we do not, normally, run into difficulties when we say that this *is* Geoffrey, we do not, normally, run into difficulties when we say that a particular artifact *is* a screwdriver, and so we are lured into believing that the artifact *is* a screwdriver in precisely the same way as the material of its shaft *is* metal. Nevertheless, abnormal cases in which we would no longer be so sure can, for both persons and artifacts, be imagined with equally little difficulty.

5 No Privileged Role for Designers

What light, finally, does the indeterminateness of the ‘being’ of technical artifacts, as I describe it, throw on the role of the designer of such artifacts? I distinguish two aspects of this role. The ‘Dual Nature’ program gives the designer the (heroic) task of “bridging the gap” between the physical and intentional descriptions by bringing together the function and structure of an artifact. Is this way of putting it compatible with the relation between the physical and the intentional idioms as I sketched it? Second, the designer may be thought to determine the ontological status of an artifact through creating it. If what the designer did was designing an electric drill, how can the product of this design act not *be* an electric drill?

Concerning the first question, I have already stressed that there is no gap to be bridged between the physical and the intentional vocabularies. Among my intentional states are all my beliefs about the physical world. I believe, for example, that the stone at my feet will hold together when I grasp it with my hand, that it can be lifted by me from the ground by exerting a force with my arm, that it can be projected forward by exerting still more force with my arm while loosening my hand’s hold on it, that it then will impact on the skull of the attacker in front of me instead of passing right through the skull, and so forth, all contributing to my action of picking up the stone to defend myself. A designer likewise concatenates a great many of such beliefs to come to a decision about how to construct a specific artifact. None of these beliefs is of a different sort than any of the commonplace beliefs that an arbitrary human being has concerning the surrounding world, nor is the final decision of a different sort.

It might be objected that what the designer and my distressed self are doing has to be described using the intentional idiom, but does not itself consist (partly) in applying it. This objection misfires, however. With the possible exception of low-level components, a designer will entertain, among the beliefs contributing to the design concept, beliefs about how the artifact-to-be will be handled and manipulated by its future users. Likewise I can decide to pick up a stone not to throw it at my attacker right away but to scare him off, ascribing to him similar beliefs about the stone, of what I can do with it and what it will do to him, as I entertain myself.

Instead of standing in opposition to it, the physical idiom is part and parcel of the intentional idiom, partly articulating the content of our own beliefs directly and partly articulating the content of the beliefs we ascribe to others, such that the two vocabularies can become thoroughly mixed ('I know that she believes that he claims that tomatoes are poisonous'; 'Leaving this cigarette butt here will make her believe that he has been here', and so forth).

The contribution of the physical as well as the (purely) intentional idioms in all our doings, in permanently shifting weights, is reflected in the fact that, rather than just two descriptions of artifacts – an intentional and a physical – we entertain a myriad of them, many of which contains elements of both vocabularies. What I have in front of me is a long metal blade, sharp as a knife, stuck in a polished piece of ivory; it is an instrument that will cut through most organic material when pressed upon the material; it is a knife; it is the knife my grandfather bought in Spain; it is the one thing that should never be sold while I live; it is a thing that will cut through human flesh without much force being necessary; it will be recognized as such by other people and is therefore fit to scare away intruders; it is a thing that scares me bit because someone has actually been killed with it; it is an instrument that must be handled with care because it easily slits through whatever contains it; it has often been wetted and is now markedly thinner than it originally was; it is a thing that will be spoilt completely when put in a dishwasher; and so forth.

If an object is a technical artifact, in the sense of being designed for a purpose, or to be used for a purpose, then among these descriptions there is at least one that expresses this. If the design has been successful, that is, if the resulting artifact can be used for the purpose for which it was designed, there is a matching description that expresses this, and a matching description of the object's properties in virtue of which it can be so used. However, this description, or at least a very similar one, can also be true of an object that has not been designed for the purpose, or has not been designed at all. If the object is or has actually been used for this purpose, there is again a matching description. Any nomologically possible combination of these descriptions might apply to a particular object, but these combinations do not by far exhaust the set of all true descriptions of the object in question, nor the set of all descriptions that mix the physical and the intentional idiom.

On the other hand, it should be stressed that none of these descriptions is implied by the single, exhaustive 'purely physical' description of the object. This is so even for the description stating that the object can be used for the purpose *y*, provided this purpose is described non-intentionally as the realization of physical state *y*. The use of an object refers to the typical circumstances that obtain in the environment in which humans act, and to particular capabilities of the typical human user, and neither of these are contained in the physical description of the object itself. Only if the use made of the object can be specified in the form of a specific sequence of manipulations, described in purely physical terms, would such a 'useful for' claim be derivable from the physical description of the object.

The multiplicity of descriptions for the objects that play a role in our life is closely related to the multiplicity of valid descriptions for human actions. This is a