can equally be used to escape from being burnt at the stake. So the for-ness of technical artifacts is essential to them, rather than accidental, as it supposedly is in the cases where mere objects are used for a purpose. That, at least, is what the 'Dual Nature' theory seems to accept. The essentiality lies in the fact that technical artifacts have been designed and made for the purpose that they are used for.

The difficulties, then, are the following: first, it seems overly dismissive to say of a particular natural object that the fact that it is used by someone for a purpose is of less importance for our conception of this object than the fact that some technical artifact is used for a purpose, which happens to be the purpose that another agent had in mind earlier when making the artifact. It seems a type-token distinction is at work here that is not articulated in the 'Dual Nature' programme. The fact that a particular stone is used to crack a nut does not affect the stone as a representative of the natural kind stone, whereas with technical artifacts we are nearly always dealing with representatives of historical kinds. Almost any representative of this historical kind would have served my purpose just as well, but not every representative of the natural kind stone would have served just as well for cracking the nut.[7] Therefore, it seems that the property of being used is not essential to the stone, qua representative of the kind stone, whereas it can more easily be taken to be essential to the nutcracker, qua representative of the artifact kind nutcracker.

Second, if the for-ness of artifacts is analyzed exclusively from the perspective of their being *designed* for a purpose, this would mean that many artifacts, including artifact types, are *for* some purpose although their use will not serve this purpose, or their use, as a type or as a token, is aimed at some entirely different purpose. Figure 1 indicates the various sets of arbitrary objects that can be related to a human purpose *x*.

The fact that the use we can make of objects is quite independent of the previous history of these objects will, however, not easily be dismissed. Nor will the fact that
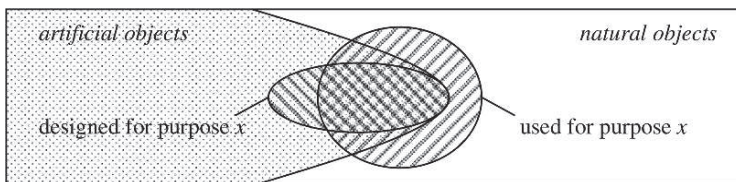

Fig. 1 The relations between the sets of natural objects, of artificial object, of objects designed for a purpose x, and of objects used for a purpose x

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[7] 'Almost', because of the possibility of malfunctioning items. Additionally, it depends on the narrowness of the delineation of the historical kind in question whether other representatives would serve just as well. Elsewhere I have emphasized the importance of clearly distinguishing between functionally defined artifact kinds, like 'knife', and much more narrowly defined, in terms of structural and design-historical features, artifact kinds or types, like 'eight-inch chef's knife from the firm Zwilling J.A. Henckels'. See my (2006) and (2008) papers.

the representation that is an artificial object's birth certificate, so to speak, cannot be guaranteed to hold true forever. In other words, a dual nature can be ascribed to technical artifacts, but this duality is rather that they involve intentionality in two different ways: they are made for a purpose (by someone) *and* they serve a purpose (someone's purpose). In 'fully' describing what an object is for, both aspects have to be taken into account. This is not a problem for the group of 'typical' artifacts, objects that are (successfully) used for the purpose for which they were designed. Problems arise when an object is designed for a purpose but is not used, or not even fit to be used, for this purpose, or when an object is used for a purpose, or fit to be used thus, but was not designed for this purpose.

There is an interesting relation between this 'dual intentional nature' and the difficulty of finding a comprehensive definition of the notion of function for technical artifacts and biological organs and traits. Desiderata for such a definition are that it should be able to grant a function to a completely new artifact (an 'is being used for' aspect) as well as to a malfunctioning artifact (an 'has been made for' aspect). There is a connection, although the connection is not as straightforward as might seem at first glance, between, on the one hand, the 'is used for' aspect and what are called system functions, and, on the other hand, between the 'has been made for' aspect and etiological functions or proper functions. I will not, however, elaborate this point here.[8] I have, until now, deliberately avoided the word 'function' so as not to complicate the issues central to this chapter with the philosophical conundrum of giving an adequate account of this term.[9]

Given that the 'is being or can be used for' and 'has been designed and made for' sides of artifacts can be distinguished as in principle independent aspects, what would it mean to claim that they must both be taken into account in a description of artifacts? Must an adequate description of any artifact take them both into account at the same time? One may wonder why, for an object that is being used for a purpose, the historical side matters at all. Why are we not satisfied with claiming that when an object is put to a use, the purpose it is being used for is what it is for, and that any prior use that has been made of it is irrelevant? Obviously, an artifact's history is highly relevant for finding out for what purposes an artifact can be used. The designer of an artifact knows at least one way the artifact can be used, and the object's history as a designed artifact tells the user that it has this usefulness.[10] Concerning the question what the artifact *is* for, however, it is unclear why the original designer should be given the right to determine this. If anyone puts a particular object, be it an artifact or a natural object, to use, this person becomes in a sense the designer of a system figuring the object. He or she discerns certain

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[8] The source text for system functions is Cummins (1975); the most comprehensive etiological theory of function is Millikan (1984), in which the notion of proper function is defined as a technical term.

[9] See, for an introduction into the difficulties of defining function, in particular focusing on artifact function, Preston (1998) and Vermaas and Houkes (2003).

[10] Cf. Houkes (2006).