

Screwdriver Philosophy; Searle's analysis of technical functions

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Introduction

In the book *The Construction of Social Reality*, Searle has presented an attempt to fit humanly constructed realities into the structure of physical reality. He is mainly interested in the question how social objects fit into the world of physical objects, but *en passant* he also presents an interpretation of technical objects. In the course of his attempt, he defends the idea that functions are assigned to objects and that this involves (collective) intentionality. In the following, I will criticize Searle's theory of technical functions on two points. I will argue that Searle fails to provide a sufficient criterion for the justified assignment of proper causal agentive functions (i.e., technical functions). Furthermore, I will argue that on Searle's own account the idea that (collective) intentionality plays a crucial role in the assignment of causal agentive functions is problematic. In the next section, I will first present Searle's analysis of functions in general; thereafter I will turn to his analysis of agentive functions. The following two sections contain a critical analysis of Searle's views on necessary and sufficient conditions for the assignment of causal agentive functions, respectively of the role of (collective) intentionality in the assignment of causal agentive functions.

Searle's analysis of functions

Searle develops his theory about functions in the context of his attempt "to assimilate social reality to our basic ontology of physics, chemistry, and biology" (p. 41). According to this basic ontology, the world is made up of elementary particles and forces. These particles combine to form systems such as atoms and molecules and some of these are conscious living systems. Consciousness, finally, brings intentionality into the world, that is "the capacity of the organism to represent objects and states of affairs in the world to itself" (p. 7). Thus, for Searle, intentionality is part of the basic ontology of the world; it is a biological, and ultimately physical phenomenon (p. 6). The problem he wants to investigate is how social objects (such as money, marriages, law courts, elections) fit into this basic ontology. In his view there is a "continuous line that goes from molecules and mountains to screwdrivers, levers, and beautiful sunsets, and then to legislatures, money, and nation-states" (p. 41); so there is no fundamental gap between physical and social reality. As this quotation indicates, technical objects are located somewhere on this continuous line and part of Searle's problem is to make clear how technical objects such as screwdrivers fit into the basic ontology of the world.

Technical objects and social objects are humanly constructed realities that perform certain functions. It is precisely the fact that technical and social objects are partly characterized by their function or have functional properties that makes an assimilation of these kinds of objects into the ontology of the physical world at first sight rather problematic. The reason is that objects of the basic ontology of the world, i.e. physical objects themselves, have no functional properties.

To understand how Searle solves this problem it is helpful to consider his distinction between intrinsic and observer relative features of the world. Intrinsic features are features that exist

independently of conscious observers and their representations of the world, and thus independently of intentionality. For instance, the fact that an electron has a certain mass and a certain charge are intrinsic features of the world. Observer-relative features, on the other hand, exist only relative to the intentionality of conscious observers. The fact that this piece of paper is a five-dollar bill is an observer-relative feature of the world, but also the fact that a certain object is a screwdriver:

It is, for example, an intrinsic feature of the object in front of me that it has a certain mass and a certain chemical composition. It is made partly of wood, the cells of which are composed of cellulose fibers, and also partly of metal, which is itself composed of metal alloy molecules. All these features are intrinsic. But it is also true to say of the very same object that it is a screwdriver. When I describe it as a screwdriver, I am specifying a feature of the object that is observer or user relative. It is a screwdriver only because people use it as (or made it for the purpose of, or regard it as) a screwdriver (p. 9-10).

The intrinsic features are either directly part of the basic ontology of the world or can be grounded straightforwardly into this basic ontology and therefore pose no special problem. The question addressed by Searle is how the observer relative features of the world, in particular the observer relative features of the social world, fit into this basic ontology.

The example of the screwdriver illustrates that being a screwdriver, i.e., being an object with a certain function, is an observer relative feature of the world. According to Searle this is true for all functions:

The important thing to see at this point is that functions are never intrinsic to the physics of any phenomenon but are assigned from outside by conscious observers and users. *Functions, in short, are never intrinsic but are always observer relative* (p. 14).

As a matter of fact, humans have the remarkable capacity to impose functions on objects, whether natural objects or objects specifically made to perform the imposed function. This he considers to be a general feature of intentionality, a feature he calls the assignment of function.

Given this feature of intentionality, it is now possible to see in gross outline how the ontology of the social world, in so far this ontology involves functional elements, can be grounded in the basic ontology of the world. Since intentionality itself is an intrinsic feature of the world, i.e., is part of the basic ontology of the world, and since intentionality has the capacity to assign functions, functional features of the world may be related to the basic ontology of the world. Intentionality becomes the linchpin between the physical world and the social world, and enables Searle to construct social reality out of the basic ontology of the world. In the following, I will consider the details of this construction only in so far as they are relevant for understanding how technical objects are related to, on the one hand, the physical world, and, on the other hand, to the social world.

Let us first have a closer look at the assignment of functions. All functional features of the world are assigned and thus observer relative; this is not only true for objects with technical functions, but also for objects with biological and social functions. Whenever there is talk of functions, reference is made implicitly or explicitly to a system of values (or purposes or some form of teleology) that we, as conscious beings, hold. Searle argues, for instance, that in the case of

biological functions, survival as a value is presupposed. He does not provide a definition, stating necessary and sufficient conditions, of the notion of a function, but mentions two central conditions:

- Whenever it is claimed that the function of an object X is to Y then X and Y are parts of some larger system that is in part defined by values, purposes or goals.
- There is a normative element involved in function assignment: when the function of X is to Y, then X is supposed to cause or otherwise result in Y. More is involved than simply causation, because even of an object X that malfunctions, i.e., never causes Y, it may be said that it has the function to Y (p. 19).

Thus the assignment of functions always involves more than just intrinsic features (causal features) of the world: it brings into play values (purposes, goals) and normative elements.

Searle distinguishes, furthermore, between three different types of assignment of function, resulting in three classes of functions: agentive, nonagentive and status functions. He speaks of agentive functions whenever the functions ascribed to objects refer to the "use to which we intentionally put these objects" (p. 20). Examples of agentive functions are technical functions like screwdriver, bathtub etc. Nonagentive functions, for instance the biological function of the heart to pump blood, are not assigned because they serve practical purposes, but are assigned to naturally occurring objects in the context of a theoretical account of that object. Finally, there is a special kind of agentive function, which is characterized by the fact that the function of the object is to represent, symbolize or stand for something else; these are status functions and examples of this type are the function of the sentence "Snow is white", but also the function of a landmark. In the following, I will concentrate mainly on agentive functions, since technical functions belong to this type.

Agentive functions: screwdrivers and money

The functions of technical objects, like a screwdriver, and of social objects, like a ten-dollar bill, fall within the category of agentive functions; their functions are assigned by users to serve practical purposes. But according to Searle, there is an important difference between the two kinds of functions. For objects with technical functions there is a strong link between function and physical structure: they are able to perform their function only because they have the appropriate physical structure. These functions are therefore called causal agentive functions. The situation with regard to social functions is different. An object with a social function, for instance a ten-dollar bill, does not perform its function on the basis of its physical characteristics. None of the intrinsic properties of a ten-dollar bill is related to its function of being a medium of exchange for economic goods. This is corroborated by the empirical fact that almost any kind of physical object may serve as money; it would be hard to find the common physical characteristic of all these various manifestations of money, which could explain that all could function as money. A certain piece of paper can perform its function as money only because a status with a function is imposed on it, and this new status is collectively recognized. It has a status function. The difference between a causal agentive function and a status function is that the former can be performed only on the basis of the causal (intrinsic) characteristics of the physical carrier of the function, whereas the latter can be performed only through collective intentionality.

A closer look at how status functions are assigned shows the important role of *collective* intentionality. A status function Y may be assigned to a physical object X through a constitutive rule, which has the following form: "X counts as Y in C", where C refers to a certain context. The

following statement is an example of a constitutive rule: Bills issued by the Bureau of Engraving and Printing (X) count as money (Y) in the United States (C) (p. 29). This statement confers a function on a certain kind of objects, but these objects can perform this function only by virtue of a collective agreement on or acceptance of this constitutive rule. On condition of its collective acceptance or agreement, this constitutive rule creates new institutional facts, for instance that this piece of paper is a ten-dollar bill (i.e., is money). In contrast to brute physical facts, institutional facts are made true or false by virtue of collective intentionality and are thus observer relative.

Apart from the condition concerning collective agreement, constitutive rules imposing status functions on physical objects have to fulfill yet another important condition. The causal features of the objects referred to by the X term may not be sufficient for the fulfillment of the assigned function described by the Y term. In other words, the "Y term has to assign a new status that the object does not already have just in virtue of satisfying the X term" (p. 44). This is the reason why for instance the statement "Objects of a certain shape and made of certain materials (X) count as screwdrivers (Y)." is not a constitutive rule, because whether or not the objects specified by the X term can be assigned the function Y does not depend on human agreement (collective intentionality). In contrast to technical functions, the performance of status functions cannot be traced back to the intrinsic properties of the physical carrier of the status function; more is involved, namely the continued collective acceptance of the status function.

Thus, status functions as well as technical (causal) functions are assigned to objects but in very different ways: the former are assigned implicitly or explicitly through constitutive rules and can be performed only by virtue of collective intentionality, whereas the latter are assigned on the basis of the intrinsic properties of the objects involved. This is the reason why statements about technical functions and status functions have a different character. For Searle, the statements

- i. "This object is a ten dollar bill", and
- ii. "This object is a screwdriver"

have in common that both refer to objectively ascertainable social facts about observer relative features of the world. But the statement about the ten-dollar bill is an institutional fact, whereas the statement about the screwdriver is not. The truth of (i) depends on the collective acceptance of a constitutive rule, whereas the truth of (ii) depends on the physical makeup of the object referred to. Thus, the 'truth makers' of the statements referring to status and causal functions are very different in nature: one involves collective intentionality in an essential way, the other not.¹

In spite of these differences, finally, causal and status functions have an important feature in common according to Searle: any function F has the rather peculiar feature that seeming to be F is from a logical point of view prior to being F, because seeming to be F is a necessary condition for being F (p. 13). This is true for any observer relative feature of the world, thus also for being a screwdriver:

So, for example, in order that something be a screwdriver, it has to function as a screwdriver, and hence, it has to be thought of or used as a screwdriver. Screwdrivers are not abstract or symbolic in the way that money and property are, but the point is the same in both cases. Where agentive functional concepts are concerned, part of satisfying a description is being thought to satisfy that

description (p. 53; the example of the chair in the original is replaced by the example of the screwdriver).

The meaning of expressions like 'to function *as* F', 'to be used *as* F' or 'to be thought of as F' all contain an element of seeming to be an F (for an observer or user of X). Clearly, to function as, to be used as or to be thought of as F is, generally speaking, not a *sufficient* condition for being an F. But in the case F is an observer relative feature, some way of seeming to be an F (being used as etc.) is at least a *necessary* condition for being an F. So far our exposition of Searle's analysis of functions in general, and of technical functions in particular.

To be or not to be a screwdriver

When is an object X a screwdriver? In the following I will argue that Searle's analysis of the assignment of functions does not provide a satisfactory answer to this question. He argues that it is a necessary condition for something to be a screwdriver that it seems to be a screwdriver. In other words, the statement "Object X is a screwdriver" implies an indefinite inclusive disjunction of the form "X is used as a screwdriver, or X is thought to be a screwdriver or X is designed as a screwdriver or etc." (see p. 32). But what is a sufficient condition for something to be a screwdriver? What conditions have to be added to the indefinite inclusive disjunction such that the implication can be turned around? Under which conditions is the assignment of the function of being a screwdriver to an object justified and does it turn that object into a 'real' screwdriver? Searle does not address this problem explicitly, but nevertheless suggests some answers in his analysis. In my opinion, these are inadequate.

Note that in spite of the fact that functions are assigned, the question whether an object is a real screwdriver or not, makes perfectly sense for Searle. Although being a screwdriver is an observer relative feature of the world, it is an objectively ascertainable fact whether a certain object is a screwdriver or not; the functional property in question may be ontologically subjective (because assigned and thus not intrinsic), but is epistemologically objective (p. 10). From an epistemological point of view observer relative features of the world may be as objective as intrinsic features, for instance the feature that a hydrogen atom has one electron.

What is it that makes an object a real screwdriver? Searle's answer runs as follows:

...we do not have any metaphysical doubts about whether or not this is really a screwdriver, or this is really a car, because the sheer physical features of the objects in question enable them to function as screwdrivers or cars (p. 45).

Apparently, Searle thinks that a sufficient condition for something to be a screwdriver (without any shred of metaphysical doubt) is that it possesses the physical features, which enable it to function as a screwdriver. But what does the above phrase "enable them to function as" mean? I take it that the expression "the sheer physical features of the objects in question enable them to function as screwdrivers" in this quotation primarily means something like "the physical structure of the objects in question are sufficient to tighten or loosen screws with them". In other words, an object is a screwdriver because it has a certain physical structure/disposition such that under a given set of conditions (including: when used properly) it will exhibit a certain physical behavior. This behavior will lead to the realization of a goal set by its user (to loosen or tighten screws).

With this interpretation of the expression "enable them to function as" in mind, the following definition of a sufficient condition for being an F, with F associated with a causal agentive function, might be proposed:

For some object X to be an F, it is sufficient that X's physical features, and those alone, enable X to function as an F.

The following three points should immediately be noted. First, this definition is compatible with the idea that a malfunctioning object, that is an object that does not have the physical features to enable it to function as an F, still is an F. Second, the issue is not whether we can provide an exact definition of being an F; we are not dealing here with the problem of borderline cases. For any F referring to a class of real technical objects, there will probably be borderline cases for which it is debatable whether they are an F or not. We are interested in paradigmatic instances; what is it that makes an object an F in those cases? (Later on, I will come back to an interesting connection between malfunctioning [normativity] and borderline cases.) Third, it is questionable whether this sufficient condition encompasses the necessary condition stated above. If not, then either the alleged necessary condition is not necessary after all, or this condition has to be rephrased such as to incorporate the necessary condition.²

As it stands, however, this proposal turns out to be inadequate because it is too broad. Objects may have the appropriate physical properties which allow them to be used as and thus to function as screwdrivers, without really being screwdrivers. As Searle himself remarks in a footnote:

You could not define "screwdriver" as "anything that can be used as a screwdriver," because lots of things can be used as screwdrivers that definitely are not screwdrivers, for instance, coins (p. 53-4).

This remark is in line with his point of view that seeming to be F (being used as F, being designed as F, being thought of as F) is only a necessary condition for being F. But if something can be used as a screwdriver, for instance a coin, then it appears to follow that it must have the appropriate physical features to tighten or loosen a screw; otherwise it would not be able to function as a screwdriver, and it can function as a screwdriver only because it has the appropriate physical features. But that would imply that it satisfies the above sufficient condition for being a screwdriver. According to our interpretation of Searle's analysis, a coin would also be a screwdriver.

It does not help to take into account the context C in which an object X functions as an F. It could be argued that a coin can be used as a screwdriver only in specific contexts of action and that that is not the case for screwdrivers. But that is not true. There exists an enormous variety of screwdrivers, but not any screwdriver can be used as a screwdriver in any context. A carpenter's screwdriver does not have the appropriate physical features to function as a screwdriver in the context of producing or repairing a micro-mechanical device and therefore would not be a screwdriver at all *in that context* according to the above definition. Furthermore, contextualization would have the consequence that being an F would become context dependent. That would get Searle into greater problems, because that would imply that it is no longer a matter of objectively ascertainable fact whether an object as *such*, without taking into consideration a context of action, is an F (e.g., a screwdriver) or not.³

In order to solve the coin counter-example, Searle has to deal with the distinction between the assignment of *proper* and *accidental* functions. This is a topic he does not discuss.⁴ By virtue of its physical properties, a coin may be used as or thought of as a screwdriver in a particular context. It may even be assigned the function of a screwdriver in that context, but that would not make it a screwdriver. Normally, this would be regarded a case of the assignment of an accidental function. It is rather obvious that the distinction between the assignment of proper and accidental functions cannot be grounded solely in the physical properties of the objects involved, for in both cases these properties allow the objects to be used as screwdrivers. But can collective intentionality account for this difference? It could be argued that a coin is not a screwdriver, although it may accidentally be used as such, because it was originally designed as a coin and not as a screwdriver. This means that the (collective) intentionality of the designer(s) determines the proper function of an object and thus whether it is an object of a certain kind or not. But why this special status to the collective intentionality of the designers? What is so special about the collective intentionality of the designers in comparison to the collective intentionality of the users or the producers? This special status cannot be a matter of contingency, for then the relation between the proper function of an object and its physical constitution would also become a matter of contingency. That would be rather implausible, especially from an engineering point of view.

In summary, Searle assumes that it makes sense to distinguish between objects, which are real screwdrivers, that is, objects whose proper function is to drive screws and therefore can be used as screwdrivers, and objects which are not real screwdrivers, but which can accidentally be used as screwdrivers. This distinction, however, cannot be made solely on the basis of physical properties which enable the objects involved to function as screwdrivers and an underpinning in terms of collective intentionality appears problematic. Searle's theory about the assignment of functions in its present form is not able to account for the distinction between the assignment of proper and accidental functions. Consequently the distinction between objects, which are real, objectively ascertainable screwdrivers, and other objects that may be used as screwdrivers accidentally stays problematic. Searle fails to spell out a sufficient criterion for the assignment of proper causal functions.

The assignment of causal functions and (collective) intentionality

I will now turn to an examination of the role of (collective) intentionality in the assignment of causal functions in general. Searle maintains that causal functions, as all functions, are assigned to objects and are therefore observer relative. He stresses that it is a necessary condition for an object to be a screwdriver that it has to be used as, designed as, regarded as a screwdriver by users, designers, etc.⁵ But what precisely is the role of (collective) intentionality with regard to the assignment of causal functions? In what sense can it be claimed that causal functions are assigned to objects, given that the performance of these functions does not so much depend on (collective) intentionality as well on the physical properties of the carriers of these functions. Put in another way, is there anything inherently intentional about the feature that this is a screwdriver, since the crucial point appears to be not that we think or use or design it as a screwdriver, but that it can perform the function of a screwdriver on the basis of its physical makeup? As Searle remarks, we do not have any metaphysical doubts because the object has the appropriate physical properties to perform this function. From this point of view, the notion of screwdriver appears to be nothing more than a definitional add on to the physical properties (dispositions) of the object. This would seem to undermine the idea that all functions, also causal functions, are assigned to objects.

According to Searle, the assignment of causal functions may be a matter of individual or collective intentionality (p. 38-9; 122). But in the course of his analysis of the nature of constitutive rules he makes a remark, which downplays the role of collective intentionality for the assignment of causal functions. Constitutive rules of the form "X counts as Y in C" allow to attach a status function to an object through collective intentionality. But, as we have seen earlier, not every rule of the form "X counts as Y in C" is a constitutive rule:

Furthermore, it does not express a constitutive rule to say "objects of a certain shape count as chairs," because the functions assigned can be assigned independently of any human agreement. It has a certain kind of shape, we can use it as a chair regardless of what anyone else thinks (p. 44).

Causal functions are not assigned through constitutive rules, because they can be assigned "independently of any human agreement" whereas constitutive rules require collective acceptance. So, *collective* intentionality is not necessary for the assignment of causal functions.⁶

Note that Searle's footnote about a coin not being a screwdriver suggests otherwise.⁷ The physical properties of the coin do not forbid the individual to assign the function of a screwdriver to the coin (because it can be used as a screwdriver). Apparently some element of human agreement, i.e., collective intentionality, is involved in this case.

But is intentionality involved in a non-trivial sense? According to Searle, claiming of an object that it is a screwdriver (i.e., that that object has the function to drive screws) adds, in a non-trivial way, an observer relative (but objective) feature to this object. This means that the feature of being a screwdriver is not equivalent to some of its intrinsic properties. To see whether that is really the case, let us compare the following two statements:

- i. Object X has the function to drive screws.
- ii. Object X has a physical structure/disposition such that under certain conditions it will drive screws.

Statement (i) explicitly assigns a function to object X, that is, attributes an observer relative feature to X. Statement (ii) describes an intrinsic feature of object X; it does not attribute a function to X. If we disregard for the moment the case of malfunctioning, then statement (i) implies (ii); (ii) is a necessary condition for (i). But according to Searle, (ii) is also a sufficient condition for (i).⁸ But then, the feature attributed to X in statement (ii) is at the same time a necessary and a sufficient condition for the feature attributed to X in statement (i). That means that the description of the feature in statement (ii) may be interpreted as a definition of the feature described in statement (i). This would lead to the conclusion that to attribute a function to X in this case is nothing more than a definitional matter: nothing is said about X, which can not be said in terms of its intrinsic properties.

According to this line of reasoning, the assignment of causal functions involves intentionality in a trivial way. Searle assumes that it is an objectively ascertainable fact that a certain object is a screwdriver. Whether or not an object is a screwdriver is determined by the fact whether it can function as a screwdriver. This, in turn, is determined solely by its physical properties. There seems to be no need at all to attribute a causal function to an object, since the object's physical structure or disposition determines whether it has a particular function or not. To attribute a function to an object is not to attribute a feature over and above its intrinsic (physical) features.

No appeal to values, purposes or goals of a larger system encompassing the object seems necessary.

This picture, however, becomes much more complicated if we take into account malfunctioning, more generally, the possibility to make normative statements about objects to which causal functions are assigned. A closer analysis of these normative aspects reveals that, contrary to the argument presented above, the assignment of causal functions may involve intentionality in a non-trivial way.

There appears to be an inherent connection between the assignment of functions and the issue of normativity. Compare the following three statements:

- A. Object X is a screwdriver.
- B. Object X is a bad screwdriver.
- C. Object X is not a screwdriver.

The object X referred to in these statements may be 'the same object' which undergoes some changes during its lifetime. Initially, object X may be "without any metaphysical doubt" a screwdriver, even a good screwdriver, but because of wear and damage it may turn into a bad screwdriver. Later, it may become damaged to such a degree, that it would no longer be considered, as an objective fact, a screwdriver. This shows that there is a continuous spectrum going from 'being a screwdriver' to 'being a bad screwdriver' to 'not being a screwdriver at all'.

Now, it might be thought that in order to answer the question where a given object is located on this spectrum, the following procedure has to be applied: first it is to be decided whether, as a matter of objective fact, the object is a real screwdriver or not, and if so, then an evaluative judgment about the quality of the object as a screwdriver is to be made. According to this line of thought, we are dealing here with two separate decisions referring to two independent criteria, one empirical and the other normative. In my opinion, however, this view is rather problematic. It is not clear at all what the empirical criterion would look like. Searle has suggested that an object is a screwdriver because its sheer physical properties enable it to function as a screwdriver. Apart from the reasons discussed above, this suggestion is unacceptable in the present context because it involves an implicit normative judgment, namely, that an object can function (adequately) as a screwdriver. Normative and factual considerations together seem to determine where an object X is located on the continuous line and they are intertwined to such a degree that it is highly questionable whether they can be disentangled. In other words, it is questionable whether a criterion can be found for being a screwdriver, which does not implicitly appeal to normative judgements involving values, purposes or goals. So, after all, the assignment of causal functions appears to be based on intentionality in an important way.

Conclusion

I have argued, in the first place, that Searle's theory about the assignment of causal agentive functions is incomplete; it discusses a necessary condition for something to be an F (with F being a functional characterization of an object), but fails to state an acceptable sufficient criterion for something to be an F. This is related to the fact that it does not provide an account for the difference between the assignment of proper and accidental causal agentive functions. As a consequence, Searle's claim that it is an objectively ascertainable fact that, for instance, a given object is a screwdriver becomes problematic. In the second place, I have argued that, as long as malfunctioning is left out of consideration, it is highly questionable whether, on Searle's own

account, (collective) intentionality plays a non-trivial role in the assignment of causal agentive functions. If we take into account malfunctioning, then the conclusion seems inevitable that intentionality is involved.

In both issues, the question about a sufficient condition for some object to be an F (e.g., a screwdriver) plays a crucial role. In my opinion, it is doubtful whether within Searle's approach it will be possible to state a viable sufficient condition. This is related to an inherent ambiguity in Searle's analysis of the assignment of causal agentive functions between the role of collective intentionality and the role of intrinsic properties. In one line of reasoning he stresses, on the basis of his general analysis of functions, that causal functions are assigned and thus that causal functions involve some form of (collective) intentionality. In another line of reasoning he underlines that objects with causal functions can perform their functions only by virtue of their intrinsic properties. This inherent ambiguity is related to the fact that technical artifacts have a dual nature: on the one hand they are physical objects (usual man made constructions) that may be used to perform a certain functions, on the other hand they are intentional objects, since it is the function of a technical artifact that distinguishes it from physical (natural) objects and this function is an intentional feature. This so called 'dual nature of technical artifacts' makes it difficult to state a sufficient condition for something to be an F in terms of either physical features or intentional features.⁹ Somehow both aspects will have to be combined in order to arrive at an adequate account of objects with technical, that is, causal agentive functions.

End Notes

¹ Note that, according to Searle, there is a gradual transition and not a sharp dividing line between social facts in general and the special subclass of institutional facts (p. 88).

² I thank Marcel Scheele for drawing my attention to this last point.

³ Searle would have to modify his claim that it is an objectively ascertainable fact whether an object is a screwdriver into the claim that it is an objectively ascertainable fact whether an object is a screwdriver in a given context.

⁴ The distinction between proper and accidental functions is a recurrent issue in function theory. See Preston (1998) and the reply, Millikan (1999).

⁵ At one point in his analysis, Searle suggests that this is also a sufficient condition: "It is a screwdriver only because people use it as (or made it for the purpose of, or regard it as) a screwdriver" (p. 10). We have seen already in the previous section that this idea is not tenable.

⁶ This implies that the fact that object X is a screwdriver is not necessarily a social fact. By stipulation, a social fact involves collective intentionality (p. 26); all and only cases involving collective intentionality are social facts (p. 122).

⁷ I thank Maarten Franssen for drawing my attention to this point.

⁸ That would mean that statement (ii) implies statement (i). Statements (i) and (ii) would thus be logically equivalent. We have seen above that this is questionable. It could be argued that statement (ii) implies the following variant of (i): Object X has a function to drive screws. An object X may be attributed different dispositions that will lead to various forms of behavior with each of which may be associated a different function; generally speaking object X may perform a variety of (accidental) functions. It is not possible to infer statement (i) from (ii) because, as I have argued above, it is not possible to distinguish between proper and accidental functions solely on the basis of physical (intrinsic) properties/dispositions.

⁹ For more information about the dual nature of technical artifacts, see <http://www.dualnature.tudelft.nl>.

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