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Aristotle's Function Argument

1. Introduction

The purpose of the *Nicomachean Ethics* is to discover the human good, that at which we ought to aim in life and action. Aristotle tells us that everyone calls this good *eudaimonia* (happiness, flourishing, well-being), but that people disagree about what it consists in (NE 1.4 1059a15ff). In 1.7, Aristotle suggests that we might arrive at a clearer conception of happiness if we could first ascertain the *ergon* (function) of a human being (NE 1.7 1097b24). The justification of this line of inquiry is that “for all things that have a function or activity, the good and the ‘well’ is thought to reside in the function” (NE 1.7 1097b26–27). The compact argument that follows establishes that the human function is “an active life of the element that has a rational principle” (NE 1.7 1098a3–4). The human good therefore is the activity of the rational part of the soul performed well, which is to say, in accordance with virtue (NE 1.7 1098a15–17).

Aristotle's argument, which I will present in more detail in the next section, is a descendant of one offered by Plato at the end of the first book of the *Republic* (R 352d–354b). Here Socrates is trying to establish that the just life is happiest and best, and he argues as follows. First of all, each thing has a function, which is what one can do only or best with that thing (R 352e). Furthermore, everything that has a function has a virtue, which enables it to perform its function well (R 352b–c). The function of the soul is “taking care of things, ruling, deliberating, and the like,” since these are activities you could not perform with anything except your soul. A few lines later Socrates also proposes that “living” is a function of the soul (R 353d). Since the soul only performs its function well if it has the virtue associated with its function, a good soul rules, takes care of things, and in general “lives” well, while a bad soul does all this badly (R 353e). Since earlier arguments have supposedly established that justice is the virtue of the soul, Plato concludes that the just soul lives well, and therefore is blessed and happy, while an unjust one lives badly and so is wretched.

Both versions of the argument seem to depend on a connection between being a good person and having a good or happy life, and their aim is

to connect both of these in turn to rationality. Aristotle's version of the argument in particular has provoked a great deal of criticism, some of which I describe in the next section. In this essay, I offer an account of what Aristotle means by "function" and what the human function is, drawing on Aristotle's metaphysical and psychological writings. I then reconstruct Aristotle's argument in terms of the results. My purpose is to defend the function argument, and to show that when it is properly understood, it is possible to answer many of the objections that have been raised to it. For reasons I will explain below, I think it is essential to make good sense of the function argument, because the theoretical structure of the *Nicomachean Ethics* collapses without it. Part of the defense is conditional, and shows only that if one held Aristotle's metaphysical beliefs, the function argument would seem as natural and obvious as it clearly seemed to him. But part of it is intended to be unconditional, and to show that, given certain assumptions about reason and virtue, which, if not obvious, are certainly not crazy, the function argument is a good way to approach the question how to live well.

2. The Function Argument and its Critics

Aristotle opens his version of the argument with these words:

Presumably, however, to say that happiness is the chief good seems a platitude, and a clearer account of what it is still desired. This might perhaps be given, if we could first ascertain the function of man. For just as for a flute player, a sculptor, or any artist, and, in general, for all things that have a function or activity, the good and the "well" is thought to reside in the function, so it would seem to be for man, if he has a function. Have the carpenter, then, and the tanner certain functions or activities, and has man none? Is he naturally functionless? Or as eye, hand, foot, and in general each of the parts evidently has a function, may one lay it down that man similarly has a function apart from all these? (NE 1.7 1097b22–33)

After quoting this remark, W. F. R. Hardie comments "the obvious answer is that one may not, unless one is prepared to say that a man is an instrument designed for some use."¹ Only in light of controversial religious or metaphysical assumptions can we view human beings as having a function, or being designed for a purpose.

We can read the passage quoted in either of two ways. We can read it as an expression of astonishment: "What! All these other things have a function, and a human being has none?" Or we can read it as an argument: bodily parts have functions, but that only makes sense if there is a function of the whole

¹ W. F. R. Hardie, *Aristotle's Ethical Theory*, p. 23.

relative to which the parts have a function; the various trades and professions have functions, but that only makes sense if there is some general function of human life to which they make a contribution. Either way, the argument seems to depend on a teleological conception of the world that we no longer accept: in the first case, the simple assignment of a purpose to everything; in the second, a form of reasoning from relative to absolute purposes that may be illegitimate.²

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Even supposing that human beings do have a function, it is unclear why the good *for* a human being should reside in the good performance of the human function. Granted that a human being who performs the human function well is (in some sense) a good human being, we can still ask whether it is good for a human being to be a good human being.³ We can ask whether it will make the person happy, in a recognizable sense having something to do with pleasure, or with the quality of the person's experiences, or at least with some condition welcome from the person's own point of view. Certainly, not all of the standard Greek examples of function will support an inference from being a good X in the sense of being good at one's function to achieving the good for an X. Aristotle himself uses the example of a horse, and says that the virtue of the horse "makes a horse both good in itself and good at running and at carrying its rider and at awaiting the attack of enemy" (NE 2.6 1106a19). But it is not obvious that a horse achieves its own good in being "a good horse" if what that means is a horse good for human military purposes. Might not a skittish unmanageable horse win for itself a fine free horse-life away from the dangers of warfare? One of Plato's examples is a pruning knife (R 353a), but it would be absurd to infer that a good pruning knife achieves the good for a pruning knife. An even more serious problem is posed by the fact that in the *Republic*, when Adeimantus complains that the guardians in the ideal state will not be very happy, Socrates replies that he is aiming at the happiness of the whole, not of any one part (R 419–421c). The ideal state is explicitly formed on the principle of each part performing its function, yet here Socrates admits (at least temporarily) that the guardians, in performing their function, may not get what is best for themselves.

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Aristotle proceeds:

What then can this [the function] be? Life seems to be common even to plants, but we are seeking what is peculiar to man. Let us exclude, therefore, the life of nutrition

² These criticisms are mentioned and discussed, though not endorsed, by Martha Nussbaum in *Aristotle's De Motu Animalium*, p. 100 ff.

³ See Peter Glassen, "A Fallacy in Aristotle's Argument about the Good." For a discussion of Glassen's criticism, see Kathleen V. Wilkes, "The Good Man and the Good for Man in Aristotle's Ethics," in *Essays on Aristotle's Ethics*, pp. 341–57.

and growth. Next there would be a life of perception, but *it* also seems to be common even to the horse, the ox, and every animal. There remains, then, an active life of the element that has a rational principle. (NE 1.7 1097b3–1098a4)

This move gives rise to further objections. Why should the human function be one of these three things—the life of nutrition and growth, the life of perception, and the life of reason? And of these, why should it be the one that is “peculiar” to us? If dolphins or Martians also reasoned, would it be any the less our function to reason?⁴ And aren’t other things “peculiar” to us? Bernard Williams comments:

If one approached without preconception the question of finding characteristics which differentiate men from other animals, one could as well, on these principles, end up with a morality which exhorted man to spend as much time as possible in making fire; or developing peculiarly human physical characteristics; or having sexual intercourse without regard to season; or despoiling the environment and upsetting the balance of nature; or killing things for fun.⁵

And Robert Nozick asks:

If man turned out to be unique only in having a sense of humor, would it follow that he should concentrate his energies on inventing and telling jokes?⁶

Even if we suppose that for some reason the human function must be one of the three kinds of life among which Aristotle makes his selection, why only one? Thomas Nagel points out that it may be more plausible to argue that human flourishing involves the well-functioning of all of our essential capacities, and not just one.⁷

Finally, even if we do manage to isolate a unique and characteristic human capacity that seems to be a plausible candidate for the human function, won’t it turn out to be a capacity that can be used either for good or for evil? Why should the good performance of the human function make one a *morally* good human being? Bernard Williams says:

For if it is a mark of a man to employ intelligence and tools in modifying his environment, it is equally a mark of him to employ intelligence and tools in destroying others. If it is a mark of a man to have a conceptualized and fully conscious awareness of himself as one among others, aware that others have feelings like himself, this is a preconception not only of benevolence but . . . of cruelty as well.⁸

⁴ I draw these examples from Robert Nozick in *Philosophical Explanation*, p. 516; and Terence H. Irwin, “The Metaphysical and Psychological Basis of Aristotle’s Ethics,” in *Essays on Aristotle’s Ethics*, p. 49.

⁵ Williams, *Morality: An Introduction to Ethics*, p. 64.

⁶ Nozick, *Philosophical Explanations*, p. 516.

⁷ Nagel, “Aristotle on Eudaimonia,” in *Essays on Aristotle’s Ethics*, pp. 7–14.

⁸ Williams, *Morality: An Introduction to Ethics*, p. 64.

In this way nearly every premise and presupposition of the function argument has been criticized. The idea that human beings even *have* a function is supposed to be based on a dubious teleological principle or an illegitimate piece of teleological reasoning. The inference that the good performance of this function, supposing that it did make you a good human being, would therefore be good *for you*, has been deemed a “fallacy.”⁹ The assumption that the good performance of the function *would* make you a good human being is called into question by the thought that any human capacity can be used—and used, in a non-moral sense, excellently—either for good or for evil. Even if these problems were resolved, Aristotle’s method of selecting the function—by choosing the kind of life that is unique to human beings—raises a whole new set of problems, since his critics cannot see either why it should be one of these or why it should be the one that is unique.

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For all of these reasons, even sympathetic readers sometimes dismiss the function argument as a piece of antique metaphysics, or as an unfortunate contrivance for supporting the philosopher’s characteristic prejudice in favor of rationality. Some of the critics seem to think of the function argument merely as a preliminary argument in favor of the contemplative life that Aristotle will champion in Book 10, and therefore perhaps as something we may simply lay aside. On this reading, the function argument is simply “reason is the unique human capacity, therefore human happiness consists in thinking and doing science and philosophy.” This makes the bulk of the *Nicomachean Ethics*, Books 2–9, appear as a kind of digression.¹⁰

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In fact, however, the function argument cannot be set aside without a serious loss to Aristotle’s theory of the moral virtues. Both Plato and Aristotle recognize a conceptual connection between *ergon*, function, and *arete*, virtue (R 353 b–c; NE 2.6 1106a14ff; NE 6.2 1139a18). A virtue is not merely an admirable or socially useful quality: it is quite specifically a quality that makes you good at performing your function.¹¹ An important part of Aristotle’s task in the *Nicomachean Ethics* is therefore to show that the characteristics that we commonly think of as the moral virtues really are *virtues* in this technical sense—qualities that make us good at rational activity. So Aristotle needs the conclusion of the function argument not only to support his views about

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⁹ Peter Glassen, “A Fallacy in Aristotle’s Argument about the Good.”

¹⁰ The text does not bear this reading in any case, since after Aristotle identifies the function as the active life of the part that has a rational principle, he adds that one part “has” such a principle in the sense of being obedient to it and another in the sense of possessing it and exercising thought. It is of course practical reason, not theoretical reason, to which the moral virtues are in some sense “obedient.”

¹¹ Sarah Broadie also points this out in her discussion of the function argument in *Ethics with Aristotle*, p. 37.

what sort of life is best, but also in order to give us a theoretical basis for the claim that certain qualities are virtues. The key to Aristotle's theory of the virtues rests in the connection Aristotle establishes between moral virtue and practical rationality, in the claim that *phronesis* or practical wisdom cannot be achieved without moral virtue. To understand why that is so is to understand what moral virtue really is and why it matters. If we set aside the function argument and with it the technical connection between function and virtue, Aristotle's careful descriptions of the virtues are merely that—descriptions of widely admired qualities and nothing more.

One may object, of course, that the descriptions are obviously something more: they are aimed at showing us that the virtues all fit a certain pattern, namely, that they involve having responses that rest in a certain kind of mean between two extremes. After all, in 2.6 Aristotle proposes what is generally acknowledged to be a kind of definition of virtue: it is a state “concerned with choice, lying in a mean relative to us, this being determined by reason and in the way in which the man of practical wisdom would determine it” (NE 2.6 1106b35ff.). Aristotle's aim is to show that all of the moral virtues can be understood in this way. But it is essential to observe that that same section, 2.6, opens with an announcement of the technical connection between function and virtue:

We must, however, not only describe it [virtue] as a state, but also say what sort of state it is. We may remark, then, that every virtue both brings into good condition the thing of which it is the virtue and makes the function of that thing be done well. (NE 2.6 1106a14ff)

Aristotle's descriptions of the virtues are therefore not merely intended to show us that virtue is in a mean, but to show us how having qualities that are in a mean makes us good at rational activity.

If we set aside the function argument, then, we set aside the key to Aristotle's theory of the virtues. And that means that if we set aside the function argument, we will not know how to read the *Nicomachean Ethics*, since we will not know how to look for the facts about the virtues that Aristotle is trying to make us see.

3. Form, Matter, and Function

Those who object to the function argument on the grounds of its alleged dependence on an illicit teleological principle or method of reasoning are usually interpreting function as being more or less equivalent to “purpose.” A number of Aristotle's defenders have pointed out that function or *ergon* has a

wider range of meanings than just “purpose.” It can be used to mean work or workings or product or characteristic activity.¹² In fact *energeia*, activity, and *ergon*, function, are etymologically linked (M 9.8 1050a21–22).

And the notion of an activity—an *energeia*—is central to Aristotle's metaphysics, because of its connection to the important metaphysical notion of form. In *Metaphysics* 7–9, in the course of an investigation into the idea of *ousia*, substance, Aristotle explores the distinction between form and matter. The distinction serves to explain how things (substances) can come to be and pass away (M 7.7 1032a20ff.). A thing comes to be, as the kind of thing that it is, when a certain form is imposed on matter. But Aristotle raises questions about how we are to understand the ideas of form and matter, and which of the two is more essential to a substance. The form, Aristotle argues, is what gives us the real essence of the thing, for it is in terms of the form that we can explain the properties and activities of the thing. As the argument proceeds, the fairly simple notion of form as the shape of a thing and matter as what is thus shaped gives way to a notion of form as the functional construction of a thing and matter as the material or the parts which get so constructed. The thing is what it is when its parts are arranged in a way that makes it capable of the activities that are essential to or characteristic of it—capable of performing its function. In later stages of the argument, which I will not be taking up in this essay, the notion of form as the functional construction of a thing in turn gives way first to the more complex notion of form as the actuality of which matter is the potentiality, and finally to the notion of form as the activity itself. Aristotle does not give up the simpler accounts, but rather reinterprets them in light of the more complex ones. In this way he establishes a tight link between a thing's form, its function, and the characteristic activities that make it what it is. It is in terms of this link that the function argument of the *Nicomachean Ethics* must be understood.

Aristotle's central examples of things that can be understood in terms of form/matter distinction are material substances. His favorite cases are plants and animals (M 7.8 1034a3). The elements—earth, air, fire, and water—are also material substances (M 7.2 1028b9ff; M 8.1 1042a7ff). So are the other sorts of things, characterized by mass nouns, which are most immediately composed of them: iron, bronze, wood, and flesh, for instance (M 7.9 1034b8ff). These are often mentioned as matter, since they are matter relative to other substances, but they are also substances in their own right and as such must have a form and a matter of their own. The parts of animals and plants are also sometimes

¹² See especially Terence H. Irwin, “The Metaphysical and Psychological Basis of Aristotle's Ethics,” in *Essays on Aristotle's Ethics*, pp. 35–53; Martha Nussbaum, in *Aristotle's De Motu Animalium*, pp. 100 ff.

classed as substances, although in the end Aristotle rejects that view. A related and important problem case is the things into which a substance dissolves when it loses its form: a corpse or skeleton, for example, or the bricks and timbers of a fallen house. These turn out to have a kind of privative form (M 7.7 1033b7ff). And finally there are artifacts: a hammer, a house, and so forth.¹³

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In identifying what is form and what matter in each of these cases, we must keep in mind certain constraints on the notion of form, which emerge in the course of the argument. The form of a thing is its essence. To know a thing is to know its essence or form (M 7.7 1032a). Demonstrations, which yield scientific knowledge, start from a statement of the essence (M 7.6 1031b6; 7.9 1034a31ff).¹⁴ So the form must be something in terms of which we can explain the properties and activities of the thing (M 7.17 1041a9ff.). To be a craftsman is to have the form of your product in your mind, and to work from it (M 7.7 1032b1–20; 7.9 1034a 24). And two things that are of the same species have the same form (M 7.12 1038a16ff; 7.13 1038b21–22).

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Considering these constraints and Aristotle’s own examples, we can generate some cases of the form/matter distinction. Aristotle often introduces the form/matter distinction by identifying form with shape. He mentions a bronze cube, of which the bronze is the matter and the form is the “characteristic angle”; a bronze statue, of which the bronze is the matter and the shape is the plan of its form; and a brazen sphere made out of brass and the sphere (M 5.25 1023b19ff., 7.3 1029a2, 7.8 1033b8ff). He also mentions stone and wood as materials out of which various things are made (M 7.11 1036a30ff), and such things are often made by shaping.

For most things, however, shape in this sense—contour—has little explanatory value. This is evidently true of things characterized by mass nouns, such as the bronze, stone, and wood that are identified as matter in the above cases. These are also, as I said earlier, substances in their own right, and as such have a form. Aristotle says these are characterized by the “ratio” or, as one might put it, the recipe. For instance, when criticizing the Pythagorean view that forms are numbers, Aristotle remarks that “the substance of flesh or bone is number

¹³ Aristotle applies the distinction in other kinds of cases as well. For instance, he says that mathematical objects, such as the circle or the plane, also have a form and a matter: these cases lead him to make a distinction between two sorts of matter, perceptible and intelligible (M 7.10 1036a7ff.; M 7.11 1037a1ff.; M 8.6 1045a34). Intelligible matter seems to be a kind of bare extension. Aristotle also says that since any change must be explained in terms of the three basic principles of form, matter, and privation, we must posit a form and a matter even for qualitative or “accidental”—as opposed to substantial—change (M 7.4 1030a23; PHY 1.6–9). In such cases, the matter is the concrete material substance, already a form-in-a-matter, and the form is that of the quality itself. For instance, in the case of tanning, the *human being* is the matter or substrate of the change, and the form is the form of the dark color acquired (not the form of the human being, who of course remains a human being).

¹⁴ This is also clear from *Posterior Analytics* 2.

only in this way, 'three parts of fire and two of earth' (M 14.5 1092b17ff). He says of "the things formed by mixture, such as honey-water" that they are characterized by "the mode of composition of their matter" (M 8.2 1042b15ff.). And we would similarly give the form of bronze as copper plus tin in a certain ratio, and so on.

In the case of plants and animals neither contour nor recipe can be the form. The contour may be the same in a statue and the person it depicts, yet these are different kinds of substance, and animate beings are certainly not mere mixtures. Aristotle sometimes describes the parts of a living thing as its matter: flesh, bone, and so forth (M 7.10 1035a15ff.). In this case it is tempting to identify the form as the structural arrangement: it is when the flesh, bone, and organs are put together in a certain way that they become a human being or a tiger or a sparrow. A similar point could be made about a more complicated artifact, say a machine, which actually is created in this fashion: it is made, say, of coils, wheels, cogs, springs, nuts, bolts, and so forth; when these are organized in a certain way, it becomes a clock or a vacuum cleaner or a drill.

A problem with the idea of identifying structural arrangement with form, however, is that things with quite different structural arrangements are of the same species, and so, according to Aristotle's theory, should have the same form. For example, a native American's teepee, a Victorian house, and a medieval castle are all houses, even leaving aside the further range of nests, burrows, and so forth, and yet they have little structural similarity. An abacus and an electronic calculator are both calculators, although they do not work the same way. It is perhaps possible to treat some of these cases as involving different species of a single genus. But it is not possible to treat different kinds of human beings as different species of a single genus, yet a giant and a pygmy, a woman and a man, an adult and a child exhibit obvious structural differences. These kinds of cases, together with the connection Aristotle makes between the form of a thing and its characteristic activity, suggest the idea that the form is the *function* of a thing (M 7.10 1035b17).

A functional account of form is also suggested by the idea that to know a thing is to know its form. After all, you might get a quite complete notion of the structural arrangement of a thing, say by taking it apart or dissecting it, without any idea what it does or what it is for. In that case you could hardly be said to know what the thing is. The person who knows what a thing *does* knows more about what it is than the person who has minutely examined its structural arrangements but has no idea what it does.

But appeal to what a thing does, by itself, does not seem to explain its properties and activities. It seems only to gesture at where the explanation might lie. I think it is helpful here to distinguish two possible senses of

“function.” In many cases it is quite natural to identify a thing’s function with its purpose, with what it is for or simply what it does. Some of the examples mentioned earlier suggest that Plato and Aristotle do identify a thing’s function with its purpose, and in the *Metaphysics* Aristotle occasionally says things that identify a thing’s form with its final cause. For instance, in one place, he gives an example of a definition, which is supposed to be a statement of a thing’s essence and so of its form, which is straightforwardly purposive: a house is “a covering for bodies and chattels” (M 8.2 1043a15). Similarly, in *On the Soul*, Aristotle argues that the soul is the form of the body, and illustrates this by remarking that if the eye were an animal, sight would have been its soul (OS 2.1 412b19). And sight is the function of the eye.

There is, however, another way of understanding the idea of function, which in a way subsumes the concept of structural arrangement, and which is a more appropriate candidate for form. Function can refer to the way a thing functions or *how* it works, to its function-*ing*. If we use “function” in this sense—“how a thing does what it does”—it will diverge from “purpose,” which is simply “what it does.” Consider, for example, a complicated machine. Such a thing might have many purposes, but in the sense I am discussing now it has only one function—one way of functioning. For instance, a computer serves a great variety of purposes, things as different as word processing, solving mathematical problems, writing music and playing chess. But to describe its function, in this second sense, is to describe what we might call its functional construction, the mechanisms that enable it to do all these things. Superficially, we might say that its function is the electronic storage and retrieval of information according to a program, or some such thing. But in the strict sense, only someone who actually understands how computers work can tell you what their function is. Or, to take another example, you could say of a radio that among its purposes is to broadcast music and live entertainment, provide a medium for advertisement, keep people up to date on the news and serve as an early warning system in an emergency. These are all “what it does.” But if we wanted to talk about “how it does what it does” we would have to talk about transmitting electromagnetic waves of certain frequencies and rendering them audible, and about the mechanisms that make this possible. The various things the device does are its purposes; the second thing, *how* it does all this, is its form or function.

Of course the two notions are closely related. The notion of purpose is embedded in the notion of function, the “what it does” in the “how it does what it does.” And there will be cases in which the two are virtually identical. Think for example of a very simple device like a fork or a shelf; in these cases to say what the thing does and to say how it does what it does is pretty

much the same thing. (What is the function of a shelf? To put things on. How does it work? Well, you put things on it.) Another, very different sort of case where function and purpose coincide is where the function itself is the thing's purpose or end. This is how Aristotle thinks of the functions of those things that he regards as "natural purposes," especially plants and animals whose "final cause" or purpose is essentially to preserve their specific form of functioning, through their own survival and reproduction.

The main argument for taking function in this second sense to be the correct notion of form comes from the role of form as the object of knowledge and the locus of craft. As I noted earlier, the person who minutely observes the structural arrangements of a thing but does not know what it does could not be said to know or understand the thing. But neither can purpose by itself be the object of knowledge in any very strong sense of "knowledge." All of us know, for example, what the heart is for, and to this extent we know what it is, but this does not make us all cardiologists. But someone who knows what the heart is for, and its structural arrangements, *and* how those arrangements enable it to do what it does can truly be said to understand it. Or take an artifact. Aristotle says that the art of building is the form of a house. But knowing the purpose of a house does not make one an architect. The architect knows both the structure and the purpose, and how the structure makes the purpose possible: she understands the construction of the house functionally. She knows, for instance, not just that the bricks and timbers are arranged thus and so; and that the house must withstand the winter storms; but how this arrangement of bricks and timbers enables the house to withstand the winter storms. So, function in the sense of "how a thing does what it does," of structure as tending to purpose, is from the point of view of knowledge the best candidate for form. This account also allows for varying structures in the same kind of object, since various structural arrangements could tend to the same end, and the expert would know how each does so. The accomplished architect knows how the construction of both teepees and castles enables them to withstand the winter storms.

In Aristotle's text, the notions of shape, recipe, purpose, and functional construction all seem to be candidates for form. Different ones work better in different cases. The bronze sphere and cube do not exactly have any purpose, so the shape seems to suit them. Recipe suits things whose contours are not so much of the essence as the ratio of their mixture. The form of a simple tool is virtually identical to its purpose. More complex things seem to be best characterized by their functional construction. As it turns out, there are other candidates as well. In *Metaphysics* 8, Aristotle undertakes to show that items from almost any of the categories can serve as the form of a thing.

But evidently there are many differences; for instance, some things are characterized by the mode of composition of their matter, e.g. the things formed by mixture, such as honey-water; and others by being bound together, e.g. a bundle; and others by being glued together, e.g. a book; and others by being nailed together, e.g. a casket; and others in more than one of these ways; and others by position, e.g. threshold and lintel (for these differ by being placed in a certain way); and others by time, e.g. dinner and breakfast; and others by place, e.g. the winds; and others by the affections proper to sensible things. (M 8.2 1042b)

These accounts differ, but without too much strain all of them can be understood in terms of functional construction. In each case the matter is organized or constructed (or simply placed, or mixed) in a certain way; this organization or construction enables the thing to do what it does; to understand how the construction makes the thing capable of doing whatever it does is to have knowledge of the thing, and this knowledge is a grasp of its form. Usually the construction is an internal one, but as the cases of the lintel and the winds show, this need not be so. But in each case the form of a thing can be understood as its functional construction, and so as how it does what it does.

4. The Human Function

With that in view, let us return to the objections to the function argument. First of all, does the claim that a human being has a function amount to, or imply, the claim that a human being has a purpose? And if so does it depend upon an unacceptable teleological metaphysics?

Arguably, anything that does anything has a function in the sense of a “how it does what it does.” It doesn’t matter how or why the thing came into existence, or whether it was made for a purpose. Suppose, for instance, I construct a little mechanical device which, when set on a table, hops around in a circle. Perhaps it has no purpose—that is, perhaps there is no reason anyone would want something that does this, I don’t want it, I was not trying to make something that did this, but something else, or I was just fiddling around, and I made this thing by accident, and it is not even good for a toy, since it is not especially amusing. Nevertheless, there is something that this device does and a mechanically-minded person could tell you how it does it: she could tell you, in this sense, what its function is. And this would be the person who understands it, and so knows best what it is.

Of course, there are limits to the intelligibility of assigning functions to things without purposes. If what the thing does is not a purpose, we may not know exactly when to say that the thing has broken down. Perhaps my

device sometimes misses a step. Has it malfunctioned? Is it clumsily tripping or happily skipping? There is nothing to say. But according to Aristotle, a living thing does have a definite purpose, in the sense of a “what it does.” That purpose is to keep its own form, its own manner of functioning, in existence. It does this in two ways: first, through the continuous self-rebuilding activities of nutrition, which maintain its form in a spacio-temporally continuous stream of matter, and, second, through reproduction, by which it imposes its form on individually distinct entities. This is not a controversial metaphysical thesis about what living things are for, but rather a definition of “living.” If a thing has a form that is self-maintaining in these basic ways, then it counts as “living.” So far as this goes, there is nothing objectionable about Aristotle’s teleology. The appropriateness of teleological explanations need not have anything to do with claims about how or why the object whose parts and activities we seek to explain came into existence. Teleological explanations may be appropriate to an object simply because it has a self-maintaining form. We seek such explanations when we ask what contribution its arrangements or parts make to its self-maintenance. That is why Aristotle says that teleological or final cause explanations in nature tell us that something is better “not without qualification, but with reference to the substance in each case” (PHY 2.198b). Suppose a lion pursues an antelope, catches it, and eats it. We can give a teleological explanation of why the lion gives chase, kills, and eats—that is, of how these activities contribute to a lion’s self-maintenance, and are better for the lion. And similarly we can give a teleological explanation of why the antelope attempts to escape. We cannot give a teleological explanation of why the lion succeeds in this case, nor could we if she failed. Aristotle’s is not the complete teleology of Leibnizian optimism, or at least we need not understand it in that way. Anything capable of maintaining itself has a way that it does that. Consequently, any living thing has a function.

So when Aristotle says that the function of a human being is the activity of the rational part of the soul, he does not mean simply that reasoning is the purpose of a human being. Nor does he mean merely that it is *a* characteristic activity of human beings, if we understand that to mean only that it is an activity which, as it happens, picks out the species uniquely. He means rather that rational activity is *how we human beings do what we do*, and in particular, how we lead our specific form of life.

This brings us to the list from which Aristotle selects our function—the list of the three kinds of life. I have already suggested that the “purpose” of an animate being is to maintain itself—to live—and its function is how it lives. But there is not just one kind of thing that lives and maintains itself. Quite differently constructed things live, all of the different kinds of plants and

animals. Each of these has its own form, which is to say its own specific manner of maintaining itself. But though in one sense each species of living thing has its own manner of living, living things can be divided into larger groups which “live” in different senses. In *On the Soul*, Aristotle asserts that there are three forms of life, corresponding to what he sometimes calls three “parts” of the soul (OS 2.2). At the bottom is a life of basic self-maintenance, a vegetative life of nutrition and reproduction, common to all plants and animals. Animals are distinguished from plants in being alive in a further sense, given by a complex of powers related to the possibility of perception and action (or at least self-guided locomotion)—perception, sensation, locomotion, appetite, and imagination. The third form of life is that distinctive of human beings—the life of reason, and in particular, as I will argue, the life of rational choice.

Each “part” of the soul, and each corresponding form of life, supervenes on the one below it. The addition of each new part of the soul changes the *sense* in which the thing is said to be alive or to have a life, *both* by influencing the way the “lower” functions are carried out and by adding new kinds of activities. Because it has the complex of powers that make perception and action possible, an animal *lives* or *has a life* in a sense that a plant does not. An animal is conscious; it *does* things; it pursues what it desires and flees what it fears; in some cases it builds a home and raises a family; if it is a “higher” animal it may even know how to love and to play. But these are not just powers added, so to speak, on top of the animal’s nutritive and reproductive life: they also change the way the animal carries out the tasks of nutrition and reproduction. The animal’s capacity for perception and action determines the way it gets its food and ensures the existence of its offspring. But these capacities also lead the animal to engage in activities not possible for a plant, like love and play. These things make the “life” of an animal a different sort of thing from the “life” of a plant.

And a human being in turn *lives*, or *has a life*, in a sense in which a non-human animal does not. For a non-human animal’s life is mapped out for it by its instincts; and any two members of a given species basically live the same sort of life (unless the differences are biologically fixed, as by age and gender, or by kinds as among bees). A human being has a life in a different sense from this, for a human being has, and is capable of choosing, what we sometimes call a “way of life” or, following John Rawls, a “conception of the good.”¹⁵ Where her way of life is not completely fixed by some sort of cultural regulation—and the *Eudemian Ethics* quite explicitly addresses itself to those who get to choose (EE 1.2 1214b6)—a human being decides such things as

¹⁵ John Rawls, *Political Liberalism*, p. 19.

how to earn her living, how to spend her afternoons, who to have for friends and how to treat them, which fields of knowledge, arts, causes, sports, and other activities she will pursue, and, in general, how she will live and what she will live for. And again, we find a double result. The power of choice changes the way we carry out the activities we share with the other animals, such as housebuilding, childrearing, hunting or collecting food, playing, and sexual activity. Human beings approach these activities creatively and develop various ways of going about them among which we then choose. But we also do things the other animals don't do at all, like tell jokes and paint pictures and engage in scientific research and philosophy. So rational choice introduces a whole new sense of *life*, a new sense in which a person can be said to "have a life." And—importantly—it is life in this sense that we primarily have in mind when we say of someone that he lived well or badly—whether he was *eudaimon* or not. So this is the sense of "life" relevant to the function argument. Reason is the function of a human being, because it is *how we do what we do*, which is to lead a specifically human form of life.

We are now in a position to see not only why it makes sense to speak of human beings as having a function, but also why that function turns out to be rational activity. It is because *eudaimonia* is goodness of *life* that Aristotle's candidates for the human function are the three functional complexes of the soul associated with the three senses of "life" (M IX.8 1050b1). And it is because *eudaimonia* is not something that the other animals achieve or fail to achieve that Aristotle looks for that sense of "life" which distinguishes us from the other animals (NE 1.9 1099b33ff; EE 2.7 1217a25ff). Aristotle looks for what is unique or peculiar to us not because he values uniqueness for its own sake but because he already supposes that this particular kind of "goodness of life" is distinctive of human beings. If there were other beings capable of rational choice, this would not undermine Aristotle's argument, for they too would lead the kind of life that can be *eudaimon* or not. And in response to Nagel's question—why only one of the three kinds of life should be identified as our function—I think Aristotle could say that reason is the function relevant to *eudaimonia* because of the way that it transforms our manner of performing those activities and tasks that we share with plants and the other animals.

5. Performing Our Function Well

At this point it is important to make explicit something that has been implicit in the argument all along. The function argument depends on the fact that terms such as "reason," "rational," and their Greek equivalents admit of either a descriptive or a normative use. When we use these terms descriptively,

we use them to refer to a certain kind of activity, an activity that can be performed well, badly, or not at all. Plato, for example, characterizes the function of the soul as ruling or deliberating, things that can be done well or badly. The important point about the descriptive sense is that one counts as acting “rationally” though the reason is bad. In the descriptive sense, for example, a person who turns the hose on her neighbor because his clothes are on fire and a person who turns the hose on her neighbor because she thinks he is possessed by the devil are both acting rationally, though one of the reasons is good and the other presumably bad. But the person who turns the hose on her neighbor when she is startled into turning around suddenly does not do this rationally: she has not arrived at any deliberative conclusion in favor of hosing down her neighbor. When we use the terms normatively, however, we describe someone as being rational or reasonable only when she is reasoning *well*. It is because there are these two uses that we can say “That’s a terrible reason” (descriptive sense) and “That’s no reason at all” (normative sense) and mean essentially the same thing. When Plato and Aristotle identify rational activity as the function of the soul or the human function, it is clear that they are using reason in the descriptive sense. This is because their claim is that we need to discover the human function because our good will lie in performing it *well*—in accordance with the relevant virtues. The argument is not “rational activity is the function of a human being, so spend your life engaged in rational activity.” Rather, it is “rational activity is how a human life is conducted, how a human being does what he or she characteristically does, so a *good* life depends on performing rational activities *well*.”

But once that is clear, some readers may feel that there is something askew about the function argument as I have presented it. Aristotle began by saying that we were looking for the function because when something has a function, its good “resides” in its function. The conclusion we expect is that *eudaimonia* or happiness *consists in* performing your function well. The argument as I have presented it, however, may seem at best to suggest that *eudaimonia* or happiness *results from* performing your function well. While it is almost uncontroversial to claim that insofar as your happiness is within your own power, it depends on the quality of your choices, it would be not merely controversial but false to say that happiness consists in deliberating and making choices, even good ones. Most of us do not spend the happiest moments of our life trying to figure out what to do. So, it may be thought, Aristotle must identify happiness not with rational activity but with its results.

And when we look at the argument more carefully, that at first seems right. Plato’s version of the argument identifies *deliberation* as the function of the

soul. Aristotle's version seeks the function not of the soul, but of *the human being*, and identifies it as "an active life of the element that has a rational principle," "activity of the soul in accordance with, or not without, a rational principle," and "activity or actions of the soul implying a rational principle" (NE 1.7 1098a5–15). We need not identify the activity that involves a rational principle, and is supposedly constitutive of happiness, as deliberation itself. Nor, given that his three candidates for the main constituents of the happy life are hedonistic pursuits, politics, and contemplation, does Aristotle seem to have that in mind. So we may conclude that Aristotle must mean that our other activities—engaging in politics, science, philosophy, athletics and crafts, consorting with our lovers and friends, eating and drinking and carousing, performing noble actions, or whatever it might be—count as "activities of soul implying a rational principle" insofar as they *result* from choice. But while this defense is available, it may seem to concede, rather than evade, the difficulty—or rather to make it worse. For if this is right, it looks as if happiness isn't the activity of reasoning, but rather something that reasoning *gets* you. But in that case the whole argument threatens to become absurdly circular. For if all we mean by performing our function well is performing actions that result from good deliberation, and *if what we mean by good deliberation is successful deliberation about how to achieve happiness*, then of course happiness will consist in performing our function well. But if that is what the function argument amounts to, its claim to connect rationality to happiness is rather trivial, and its claim to connect rationality to moral virtue is probably void.

To see how Aristotle can avoid this criticism, we must take a closer look at his accounts of deliberation and choice. Earlier I pointed out that Aristotle is using "rational activity" in the descriptive sense. In fact, Aristotle needs the three options associated with the descriptive sense (acting for a good reason, acting for a bad reason, and not acting for a reason at all) in order to distinguish his four character types—good, bad, continent, and incontinent. For the bad person is distinguished from the good person by the fact that the bad person acts on a bad reason, while both are distinguished from the incontinent person by the fact that the incontinent person is not acting rationally at all. To put the same point another way, the bad person does what he does by choice (*prohairesis*), while the incontinent person, according to Aristotle, does not act from choice (NE 3.2 1111b14–15; NE 7.3 1146b22–24).

Now the claim that the incontinent person does not act from choice presents the reader with a puzzle. For choice is the outcome of deliberation, and deliberation, as Aristotle describes it in Book 3, *appears* to be essentially

FN:16 instrumental deliberation about how to achieve some wished-for end.¹⁶ But Aristotle certainly does not mean to deny that incontinent people sometimes engage in instrumental deliberation about how to satisfy their unruly passions. For in a section devoted to excellence in deliberation, Aristotle tells us that the incontinent person, who does not act from choice, may also deliberate, and in one sense (but not the sense needed for practical wisdom) deliberate correctly. “For the incontinent man and the bad man will reach as a result of his calculation what he sets himself to do, so that he will have deliberated correctly, but he will have got for himself a very great evil” (NE 6.9 1142b17ff). So all four of Aristotle’s character types can deliberate correctly in the sense of deliberating about how to achieve a certain end. But if the incontinent person’s action is the outcome of deliberation, then why doesn’t it count as chosen? Certainly, the incontinent person’s action does not seem *inadvertent*, like that of my earlier exemplar who hoses down her neighbor by accident. If you ask him why he does what he does, he can give you an answer: say, he is going to the refrigerator in order to get another beer.

It is of course possible to solve this problem simply by stipulating that the outcome of deliberation only *counts* as a choice if the agent believes that the end pursued is a good one. But this has the disadvantage of making the difference between deliberative choice and the kind of deliberation that leads to the incontinent person’s action external to the deliberation itself. And that seems to leave Aristotle open to a charge of obfuscation: when he says that the incontinent person does not choose, he makes it sound as if that person does something (descriptively) different, whereas in fact he does the same thing, only with a different belief about the normative status of his end. But there are grounds in Aristotle’s text for conceiving of deliberative choice in a way that distinguishes it more clearly from what the incontinent person does. And it is this sense of deliberative choice, I believe, that gives us the “rational activity” that is relevant to the function argument.

In a number of passages in the *Ethics*, Aristotle tells us that the good person acts on the right principle—the *orthos logos*—specifying that this means that the good person does the right act at the right time in the right way *and for the right aim* (NE 2.9 1109a 25–30).¹⁷ Elsewhere I have argued that Aristotle sees a

¹⁶ Enlarging the concept of instrumental reasoning to include deliberation about the constituents of the end will not by itself solve the problem I am working on here. Or, rather, it will solve the problem, but only given the view of the constituents of the end that I am about to advance in the text: that the constituents of the end, or of the good, are noble actions and activities, considered as including their aims.

¹⁷ See also NE 2.6 1106b 20–24, NE 3.7 1115b 15–21, and NE 6.5 1126b 5 ff. In these passages it is the feeling, not the action, which conforms to the right rule, although in the first Aristotle says the point also applies to the action.

principle of this kind as a description of an action that the agent chooses for its own sake. To introduce a bit of technical terminology, I am distinguishing between an “act” and an “action,” where the action includes both the act and the end or aim for the sake of which the act is done. For example, giving a donation is an act, and giving a donation in order to help a friend in need is an action. Including both the act and the end in the description of the chosen action enables us to harmonize what might otherwise seem to be incompatible things that Aristotle says about virtuous motivation.¹⁸

FN18 Aristotle tells us that a virtuous person does a good action for its own sake (NE 6.5 1140b6ff; 6.12 1144a16) and for the sake of the noble (for instance, at NE 3.8 1116b30; 1117a7–10; NE 3.12 1119b15). But it also seems clear that such an agent acts for the sake of certain particular ends: the courageous person fights in order to defend his city, the liberal person gives in order to help someone out, the ready-witted person wants to entertain his audience, and so on. The key to harmonizing these accounts rests in the idea that the object of choice is an action, that is, an act-for-the-sake-of-a-certain-end, where that whole thing is chosen for its own sake and because it is noble (NE 4.1 1120a23ff). The courageous person, for example, wishes to defend his city, and so he considers performing a certain action: “fighting (at a certain time and place, in a certain way) for the sake of defending my city.” He decides that this would indeed be a noble action, and chooses it—for its own sake—as such. The end is not simply given to him, by his appetite or even by his rational desire or wish (*boulesis*); rather, it is part of what he chooses, when he chooses to pursue it in a certain way here and now. He adopts both the end and the act together, as standing in the right relation to each other (NE 4.2 4–6).

A rational principle or *logos*, therefore, represents the agent’s conception of *what is worth doing for the sake of what*, and especially, of what *in his particular circumstances* is worth doing for the sake of what. It is not merely a view about which ends to pursue and how to pursue them, although of course it is that, but also a view that the end is one that, here and now, in one’s circumstances, makes the act in question, and so the whole action, worth doing. The deliberation that issues in a choice is not merely instrumental because this must be its conclusion: that the entire action is a thing worth doing for its own sake.

The incontinent person’s action does not count as *chosen* because he does not take it to be worth doing for its own sake; he just wants very badly to do it,

¹⁸ See “From Duty and for the Sake of the Noble: Kant and Aristotle on Morally Good Action,” essay 6 in this volume, especially pp. 000–000.

FN:19 or is hurried into it by anger.¹⁹ In fact, Aristotle tells us that the incontinence of anger is less disgraceful than that of appetite because it at least *seems* to the angry person as if avenging oneself for an insult is an action worth doing. But the person who is incontinent from appetite is under no such delusion—he just wants the object or end.

For reason or imagination informs us that we have been insulted or slighted, and anger, reasoning as it were that anything like this must be fought against, boils up straightway; while appetite, if reason or perception merely says that an object is pleasant, springs to the enjoyment of it. Therefore anger obeys reason in a sense, but appetite does not.

FN:20 (NE 7.6 1149a30–1149b1)²⁰

If the person who is incontinent from appetite does engage in deliberation about how to achieve his end, we may say that he *follows* the course mapped out for him by deliberation. But he does not act *on* its conclusion in the same sense as the intemperate person does. He does not adopt its conclusion as his *logos* or principle, and he therefore does not adopt the end as his good, for he does not believe that going to the refrigerator in order to get another beer to drink is a thing worth doing for its own sake—as the intemperate person certainly does.

Deliberation, then, if it is to issue in an action that is chosen, is not merely about how to achieve a certain end, but about what, in the circumstances, is worth doing for the sake of what. Such deliberation issues in rational principles, which direct us to do certain acts for the sake of certain ends, and when we make choices—act in accordance with these principles—we are choosing both the means and the end. The specifically human function is a life of activity in accordance with such principles: a life, as we might put it now, in which your actions are shaped and directed by your values. Furthermore, a principle of this kind is not external to the action performed in accordance with it, the way an end is external to the means. Rather, it is a description of the action itself.²¹ So the relation of deliberative choice to action is not merely the relation of a process to a result external to that process. A human being's activities and actions are an *embodiment* of his deliberative choices. The specifically human function is activity that represents the person's conception of what in his particular circumstances is worth doing, a kind of contextualized realization of his conception of the good. Nor is Aristotle claiming that doing

¹⁹ That remark of course is not intended as an explanation of what happens in the case of incontinence—it is just a description of the phenomenon that needs explaining.

²⁰ I take it that Aristotle is following up on Plato's idea that *thumos* (anger, spirit) is the natural ally of reason. *Thumos* responds to the *appearance* of nobility.

²¹ I discuss this idea at greater length in "Acting for a Reason," essay 7 in this volume.

things that are worth doing for their own sakes will *get* you happiness as a kind of result or external end, although he does think that worthwhile activities are, under normal circumstances, inherently pleasant. Rather, he is claiming that doing things worth doing for their own sakes, at least in sufficiently fortunate circumstances, *is* happiness. Happiness therefore does after all “reside” in the performance of our function.

Recall now Bernard Williams’s criticism—that any human capacity may be used either for good or for evil. That does not seem to be true of the human capacity to act in accordance with our views about what is worth doing for the sake of what. This capacity may indeed be exercised badly, as the bad person exercises it. But one cannot *undertake* to use one’s capacity for deciding which actions are worth doing for an evil end, the way one can undertake to use one’s capacity for instrumental reasoning or one’s knowledge of medicine for an evil end. Since the end is included in the idea of an action that is worth doing for its own sake, you cannot choose such an action for an evil end. Or at least, the claim that you could deliberately use the capacity to choose what is worth doing for its own sake for an evil end is paradoxical in the same way as the claim that one can choose evil for its own sake, and perhaps even more so. For to deliberately use this capacity to do evil, you would have to decide to do something that was ignoble and worthless, even *given* its aim. That is, you would have to decide that it was worth doing, *for its own sake*, something that you had already decided was either not worth doing or even worth avoiding for its own sake.

I think it is also true that, at least schematically, this conception of the human function explains why Aristotle found it so natural to connect the good performance of the human function with being both happy and good. Certainly, if we do not start from the view that being virtuous and being happy must be quite different things, it is natural to suppose that the person who knows *what in his particular circumstances is worth doing* will be both, to the extent that his circumstances allow. And the claim that you would need the moral virtues in order to exercise this capacity has a *prima facie* plausibility. For while anyone might know that, say, the defense of one’s city is an end worth pursuing, someone who fears the wrong things or fears the right things too much will not be a good judge of which particular risks are worth taking for the sake of this end, and so of which actions are worth doing.

But a final verdict on this last point must await a more detailed study of the process of deciding what is worth doing for the sake of what, and how exactly the moral virtues enter into that process. For recall that it is only the expert who really understands an object’s function in the sense of *how* the object does what it does. Earlier I said that an architect, for example, must understand the

functional construction of a house. That is, she must understand not merely that the bricks and timbers are arranged thus and so; and that the house must withstand the winter storms; but *how* this very arrangement of bricks and timbers enables the house to withstand the winter storms. The expert on the human function must understand our functional construction in a similar way. In particular, she must know *how* reason and the non-rational desires and appetites work together to inform an agent's view of which actions are worth doing. That is why, once they have offered their respective versions of the function argument, both Plato and Aristotle proceed to take up the study of the constitution of the soul, and of how the parts of the soul work together to produce human actions and choices (NE 1.13; *Republic* Books 2–4). To make good on the function argument, Aristotle must show us that the qualities that we ordinarily regard as moral virtues are virtues in the technical sense, properties that make us good at our function. And to do that, he must show us *how* having these qualities contributes to our capacity to make good choices. That is the task of the *Nicomachean Ethics*.^{22, 23}

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²² I examine Aristotle's answer to this question in "Aristotle on Function and Virtue," essay 5 in this volume.

²³ This essay is a somewhat distant descendant of a paper I began to write in the 1980s and never finished. That paper was intended as a companion piece to my "Aristotle on Function and Virtue" (essay 5), which follows. In it I aspired to trace the connection between the function argument of the *Ethics* and the later and more complex notions of form and matter as actuality and potentiality and of form as activity in *Metaphysics* 8 and 9, as well as giving part of the defense of the argument presented here. But I became convinced that little short of a book could do that, or could do it convincingly. I owe thanks to Myles Burnyeat, Richard Kraut, and Ian Mueller for extensive comments on that early version. I have had invaluable help giving shape to this version from Charlotte Brown.