**Chapter 3 *Goodness as Natural Perfection***

In chapter 2, I explored five types of analytic theory of goods: viz. non-naturalistic, rationalistic, under-theorised, welfarist and quasi-Aristotelian. On the one hand, these were highly instructive, insofar as the ultimate intrinsic goods they proposed were often plausible and insightful. On the other hand, however, those goods were provided with insufficient grounding. Whether resting on an occult, non-natural quality, a prioristic or formal rationality, pure intuition, what purportedly makes a life ‘go well’ or what capacities are ‘characteristically’ human, each theory of goods left us needing to know more – wanting to push, as it were, both further and deeper. Although there were gestures toward a more robust form of grounding – in, for example, ‘the elements in the life of the soul’ (Ross 1930: 140) or ‘the growth and development of the capacities of a living thing’ (Kraut 2007: 148) – the forms of grounding actually proffered were, overall, thin and under-textured. There was thus an unavoidable fortuitousness and over-stipulativeness about the genuine, positive, insights such theories could afford. What we need, then, is the antithesis of ‘lucky strikes’ or plausible intuitions at the level of goods; rather, we need a theory of goods perspicuously and systematically grounded in a theory of goodness. In this chapter, I shall elaborate my own theory of goodness, before expounding (in Part II) the theory of goods that flows from it.

I shall proceed as follows. First, I shall explore how Aristotle ties human goodness to our variegated functioning as a species of animal. In doing so, I shall respond to scepticism about the very existence of human functions, and delineate (what I will call) the ‘bottom-up’ and ‘top-down’ dimensions along which they operate. This should give a working picture of how goodness, on my view, is constituted by ‘natural perfection’, itself an inherently functional idea. Secondly, I shall investigate how modern, post-Darwinian, philosophers have analysed organic functioning, and what challenges this poses for the traditional, Aristotelian conception. Having, as I hope, overcome – or at least palliated – these challenges,[[1]](#footnote-1) I will, thirdly, go on to unpack an early twenty-first-century theory of goodness, which claims to be a descendant of Aristotle’s: namely, Philippa Foot’s theory of ‘natural goodness’. Building on the work of Michael Thompson, Foot’s theory is a valiant attempt to capture goodness in naturalistic, neo-Aristotelian terms. But, as I shall argue, it is hampered by at least two major flaws: first, its reduction of natural to moral goodness, constituting a ‘short cut’ (as I shall call it) to the latter; and second – especially in its specifically Thompsonian form – its perilous closeness to neo-Kantian a priorism about the human ‘life form’. Fourthly and finally, I shall come full circle, summarising how the original, Aristotelian analysis of human goodness as natural perfection is sufficiently robust to withstand not only the criticisms of evolutionary biologists, but also any attempts to revise it in a generically Foot/Thompson direction.[[2]](#footnote-2)

Before embarking on all this, I should, as promised (in § 2.1, n. 7), explain why ‘goodness as natural perfection’ is a metaphysical rather than linguistic or conceptual thesis. For much of the twentieth century, philosophers were preoccupied with ‘good’ as a term or concept. We have already seen this in the cases of Moore and Ross; but the subsequent debate centred on ‘good’ used emotively, to express approval (or a more generic ‘pro-attitude’), as opposed to ‘good’ used prescriptively, to commend or recommend things or courses of action. The original contenders here were A. J. Ayer and R. M. Hare, who gave birth to what became known as ‘emotivism’ and ‘prescriptivism’ respectively.[[3]](#footnote-3) On the one hand, I have no objection to the view that ‘good’ and its cognates can, and sometimes do, play these emotive or commendatory roles. Indeed, it seems plausible that, in one and the same discursive context, a single use of ‘good’ can be both emotive and prescriptive in force (we are not dealing with rival ‘theories’ here, therefore, but rather with compossible construals.) On the other hand, however, I firmly reject the notion that such analyses of meaning or force exhaust what can be said about goodness, and more particularly about what goodness *is*. For this, we must turn to metaphysical analysis, rather than to what people express with the word ‘good’ or use it to achieve. And this not because of any animus against linguistic analysis as such,[[4]](#footnote-4) but rather because when people approve of x or commend y, we can always ask: *why*? It is the radical incompleteness of both emotivism and prescriptivism, in other words, and the pressing need they raise for explanation or justification, which a metaphysical approach to goodness is intended to address and satisfy.[[5]](#footnote-5)

At this juncture, it is worth noting that there is a linguistic or conceptual project which, in some ways, parallels my own, metaphysical one. This is Judith Jarvis Thomson’s project of analysing ‘good’ as fixed in content by the substantives or kinds to which it is linguistically attached.[[6]](#footnote-6) As I touched on in § 1.1, this builds on Geach’s claim that ‘good’ is an attributive adjective: ‘good’ never behaves predicatively, that is, as ‘red’ does in ‘red car’, where both ‘red’ and ‘car’ have independent senses. Rather, ‘good’ depends intimately for its sense on what it qualifies.[[7]](#footnote-7) Now in one respect this is congenial, since I shall be arguing that the goodness of living things – in our case, humans – is fixed in content by the nature of those things, and specifically by the natural perfections to which that nature is ordered. Where I shall part company with Thomson, however, is in resting this claim not on any (purported) linguistic facts, but rather, squarely, on metaphysical analysis. And this for two main reasons. First, it is dubious whether Thomson manages to secure her claim that ‘good’ is *never* used predicatively. We can infer, after all, from x’s being a ‘good man’ to x’s being both good and a man. Perhaps it is true that *what it is* to be a good man requires a grasp of the natural kind ‘man’. But this does not preclude the predicative behaviour of the term ‘good’ in this particular linguistic context. Secondly, Thomson applies her view not only to living things, but also to artefacts like tables, tablets and aeroplanes. It seems highly plausible, however, that what is ‘good’ about these – when they are good – is wholly parasitic on human goods.[[8]](#footnote-8) Once again, then, we are called to the metaphysical task of elucidating human goodness, rather than hoping linguistic analysis can do the essential work.

**3.1 Aristotle on Human Functioning**

We come, then, to the core question of what (ultimate intrinsic) goodness – in particular, human goodness – consists in. As I’ve suggested, Aristotle is still our best guide here, even if his account is misguided in some respects. True, he over-privileges non-ultimate intrinsic goods (viz. the virtues), and in NE X.7-8 he hyper-privileges the virtue of contemplation (*theōria*), on what appear fundamentally theistic grounds.[[9]](#footnote-9) But the heart of his account – which lies in the function argument (NE I.7), and holds that human functioning is the key heuristic for human goodness – remains invaluable.[[10]](#footnote-10) I shall unfold that argument in this section. As I do so, however, we must bear in mind the deep scepticism which the very notion of a human function (or functions) has elicited since the seventeenth century. How can Aristotle help himself to such a notion in the first place? What does it mean, and what, exactly, is its relation to goodness? Are functions not something imposed by a designer? Even if not (or not necessarily), the idea of a, singular, human function looks particularly suspect. In elucidating Aristotle’s position, therefore, we will have to be particularly careful to distinguish the sense in which humans have many, and the sense in which they have a single function. And we will have to pin down the precise relation between these levels of functioning, given that humans are not like Swiss Army knives – viz. mere concatenations of functional parts, with no internal integration – but functional *wholes*.

Aristotle opens his argument with an analogy. As he puts matters, ‘just as the good – the doing well – of a flute-player, a sculptor or any practitioner of a skill [*technē*], or generally whatever has some function [*ergon*] or action, is thought to lie in its *ergon*, so the same would seem to be true of a human being, if indeed he has an *ergon*’ (1097b25-8). In one way, this is a logical remark, to the effect that goods are (or at least can be) grounded in functions: a good sculptor, say, fulfils or completes his function well, viz. sculpting (cf. Nussbaum 1995: 112). And this seems helpful, so far as it goes. But problems appear immediately on the horizon. For even if goods can be grounded in functions, Aristotle leaves it open here whether humans have a function or functions. And his analogy to the skills or *technai* hardly inspires confidence. For why think that humans, as such, are analogous to tanners or carpenters (1097a28-9)? Granted, he soon enlarges his analogy to include human body-parts, viz. eyes, hands and feet – and these are very plausibly functional items (1097a30-31). But again, why think humans, as such, are analogous to these? This worry about arbitrary or flawed analogies has generated a significant literature, which is almost entirely critical. Perhaps Aristotle is relying here on a fallacy of composition, which infers (illegitimately) from parts to wholes. Or perhaps he is tacitly committed to a ‘fallacy of irrelevant privilege’, which holds that if (inferior) parts have functions, any correlative (superior) whole must have one.[[11]](#footnote-11) But either way, we are still dealing with fallacies, and hence an argument from analogy which is markedly difficult to salvage.

Precisely because these opening moves look weak as an argument for *a* human function – no more, that is, than a failed induction (Bostock 2000: 225) – I suggest they should not be taken as such. Rather, they should be taken as implicating the human ‘life form’, as Foot and Thompson call it, in a thoroughly functional nexus. From above, as it were, we can see that humans perform all kinds of functional roles, typically those defined by the *technai*. And from below, we can see that humans incorporate – quite literally – numerous functional parts: typically organs or body-parts, but also the functional systems they subtend, such as respiration, digestion, metabolism, etc. So we can say that, at the very least, human life is no stranger to functionality: both at the level of activities people choose, consciously and deliberately, and at the level of activities they find themselves engaged in willy-nilly (autonomic functioning). At both these levels, crucially, we can make secure inferences from functioning to goods. If I am a flautist, for instance, and play the flute well, I can infer that I am a good flautist. If my eyes see, and see well, I can infer that I have good eyes. And if I have a liver, and it performs its functions well, I can infer that I have good digestion and metabolism. With these brief opening salvos, then, Aristotle has achieved more than it first appeared.[[12]](#footnote-12) He has shown how human life is the locus not only of multiple functions, but also of multiple goods, these being constituted by the fulfilment, completion or perfection (*teleiōsis*) of the functions in question. The one thing he has manifestly not shown, however, is that human beings have a *single* function. He clearly believes that, in some sense, and at some level of analysis, they have ‘their own’ function.[[13]](#footnote-13) But what justifies that belief?

At this point, Aristotle’s argument begins in earnest – an argument I shall divide into two ‘movements’, viz. bottom-up and top-down. The bottom-up movement effects a basic re-orientation in Aristotle’s approach. For so far, we have been focusing on human beings *per se*, the (skilled) activities in which they participate, and the parts which they uncontroversially contain. But now Aristotle widens his vision, placing the human species in the context of organic functioning as a whole. In order to do this, he draws on his own biological research, which posits two ‘kingdoms’ or domains of life (*psuchē*, often translated ‘soul’): namely, plant life and animal life. How does human life stand with regard to these? To answer this, he turns, plausibly, to the modes of functioning which these organic domains display. Plant life, Aristotle adjures, is characterised by deriving nutrients and thereby growing to a certain average height or extent (determined, presumably, by plant-species).[[14]](#footnote-14) Clearly, this type of functioning is shared with humans: we are, at a rudimentary level, a plant-like form of life. Since we are not only *studying* humans, however, but also – self-evidently and by hypothesis – human ourselves, we can tell immediately that our form of life extends beyond the vegetative. As Aristotle puts things, ‘For living is obviously shared even by plants, while what we are looking for is something special [*idion*] to a human being. We should therefore rule out the life of nourishment and growth’ (1097b34-8a2). Crucially, Aristotle is not claiming here that we do not partake in ‘the life of nourishment and growth’: we do, and without it we would not be human (it is plainly necessary, but also essential, to our form of life). But this type of functioning does not exhaust our life form. To discover what could be called our ‘proper’ function – another rendering of *idion* – we must press further, and complete the bottom-up movement Aristotle has begun.[[15]](#footnote-15)

In order to achieve this, Aristotle builds – methodically and non-arbitrarily – on the kind of functioning we have seen, generically, in plants. For he notes that all animals share in vegetative functioning, on pain of their, too, forfeiting their essence (without it, they would lose their identity and cease to be). Yet, on the basis of his field studies, Aristotle judges, further, that animal life is not exhausted by plant-like functioning. Rather, the life proper to animals adds something – namely, perception-cum-sentience (*aisthēsis*).[[16]](#footnote-16) Once again, then, we can see ourselves in this portrait. For humans, too, are essentially perceptive and sentient: if these functions were permanently withdrawn, we would be left with life, but not human life.[[17]](#footnote-17) Does it follow, then, that we are merely a species of animal, that our level of functioning adds nothing essential to – and hence distinct relative to -– that of the non-human animal kingdom (apes, dolphins, dogs, etc.)?[[18]](#footnote-18) Not so, Aristotle claims. For on the one hand, we can tell through third-person, empirical, enquiry that humans are capable of both practical and theoretical activity that outstrips the attainments of any other animal. And on the other, it is implicit in our asking the question – viz. in the very possibility of our making such an enquiry in the first place – that we, although generically animals, also add something vital to animal functioning: namely, rationality (*logos*). In what I take to be this quasi-Cartesian move – relying, as it does, on a reflexive realisation internal to human thinking itself – Aristotle completes the bottom-up movement to ‘the’, viz. the definitive, human function. As he summarises things: ‘perceptive-cum-sentient life … is clearly shared by the horse, the ox, indeed by every animal. What remains is a life, concerned in some way with action, of the element that possesses reason’ (1098a2-4).

This arrival at rational functioning completes the bottom-up movement of Aristotle’s argument. In and through it, we can see that both vegetative and ‘aesthetic’ functioning support their rational counterpart. They constitute its necessary conditions,[[19]](#footnote-19) and furthermore, they supply, in large part, its subject-matter or intentional content. How so? To see this, we need to reverse direction, as it were, and proceed top-down. For once apprised of rationality as our specific difference, we can see not only how our animality conditions it, but also how rationality, in turn, itself has pervasive conditioning power.[[20]](#footnote-20) This is because our rationality is not just one function among many – à la Swiss Army knives, as I said above – but rather our governing or coordinating function. Without it, indeed, none of our other functions would continue.[[21]](#footnote-21) From this perspective, then, we can see how, as Aristotle puts it, ‘the whole is of necessity prior to the part’ (*Politics* 1253a20). To take a particular example, ‘it is not a hand in any state that is a part of man, but the hand which can fulfil its function, which therefore must be alive; if it is not alive, it is not a part’ (*Metaphysics* 1036b30-32). Aristotle’s point here is that our hands do not function merely as such, any more than our eyes can see on their own: rather, they must be incorporated within a rational life form – the life of a human being – in order to do so. In short, it is a particular rational animal who ‘manipulates’ and sees, and without this controlling or guiding centre, his or her hands and eyes are such only homonymously.[[22]](#footnote-22) Without, that is, our active, choosing, rational core – a core that is no less practical and affective than intellectual and cognitive – our other, subordinate, functions can remain such only in name.[[23]](#footnote-23)

This completes, in effect, both the bottom-up and top-down movements of Aristotle’s function argument. What they reveal is that humans possess not only functions, but also a definitive function – namely, *rational* animality. And because rationality is no less a function than (say) seeing, it, too, is the locus of goods. But because it is a superordinate function, those goods can be achieved only in and through the exercise of lower functions.[[24]](#footnote-24) (We construct theories, for example, but only on the basis of perceptual and sensory awareness; we choose to eat, but need our body to do so.) With all this in place, then, we can dispel at least three, residual, concerns. First, functions do not entail design. For when detailing human functions, we have not invoked a designer once, or even had to infer to one; hence the idea that those functions necessarily presuppose design is otiose.[[25]](#footnote-25) Second, because rationality is our core or essential function, we can put to rest the idea that (say) prostitution, laughter or ten-pin bowling might be the human function instead.[[26]](#footnote-26) For all three of these activities presuppose the nature of a rational animal, and no one of them depends on that nature more than the others. Although such activities are, admittedly, unique to humans, Aristotle is not concerned with uniqueness here, but with broad-based explanatory power across *all* human activities. And only rationality answers this heuristic requirement.[[27]](#footnote-27) Third and last, because essential functions are not unique but only relatively distinct properties – distinct, that is, relative to lower forms of life – the existence of another rational kind beside ourselves would not undermine the human essence. So long as that kind were sufficiently different from us – by, for instance, being disembodied or hyper-rational (like Aristotle’s god) – its having rational capacity would in no way impugn *our* being essentially rational animals.[[28]](#footnote-28)

**3.2 Post-Darwinian Conceptions of Function**

Given this account of our rational animal nature – including its manifold functions and correlative perfections or goods – it is time to confront a radically different approach to human functionality: namely, that developed in the light of post-Darwinian evolutionary biology. Owing to the seriousness with which this is taken, and rightly taken, no neo-Aristotelian can afford to ignore it. In what follows, I shall delineate two basic interpretative options that have emerged from the pertinent, philosophically-informed literature. Characterising these as ‘Scylla’ and ‘Charybdis’, I shall argue that both options are problematic – owing, primarily, to their relativism and reductivism respectively – and that neither yields sufficient reason to abandon our original, Aristotelian, functionalist schema.

The Scylla in the evolutionary literature originated in Robert Cummins’s seminal paper, ‘Functional Analysis’ (Cummins 1975). According to Cummins, ‘To ascribe a function to something is to ascribe a capacity to it which is singled out by its role in an analysis of some capacity of a containing system’ (765). The scope of this definition seems to include both organic and inorganic ‘containing systems’; I shall dwell, however, on organic examples. Take the case of the heart (in many animals, including humans): the neo-Aristotelian, along with the ‘man in the street’, would designate its proper function as to pump blood around the body. From this, we can infer what a good heart is – one that pumps blood efficiently – and thus what a defective, bad (or at least sub-optimal) heart is: one that does not. For Cummins, by contrast, this is to pick out a cardiac capacity that merely *happens* to interest some (or maybe many) enquirers. But the heart also has other capacities, such as to produce various thumping sounds – and there is nothing, in principle, which excludes this ‘function’ as an equally legitimate object of interest. As he puts matters, what these different specifications of function show is an ‘implicit dependence on an analytical context’, and hence the need for ‘an explicit relativization in our regimented reconstruction of function-ascribing statements’ (762). In other words, no talk of ‘functions’ is absolute or to be taken *simpliciter:* functions always and necessarily presuppose particular analytical interest(s), and it is only relative to such analytical contexts that function-ascriptions have sense or truth-value. To recur to the heart example, if our interest were people’s disposition to respond to noises, ‘‘The heart functions as a noise-maker’ (e.g., as a producer of regular thumps), would not even *sound* odd’ (762 n. 21).

Now this relativising or interest-based account of functions raises a host of problems. First and foremost, there seems an effective (yet unacknowledged) change of subject, from proper functions – and hence from ‘what is x for?’ or objective teleological questions – to ‘how?’ questions,[[29]](#footnote-29) which focus on a purely efficient, rather than final, conception of causation or explanation. Granted, the heart brings about what Cummins calls ‘a variously tempoed throbbing sound’ (763). But this seems a merely accidental side-effect of the essential cardiac function, which is to pump blood. That someone happens to be interested in such a side-effect, or that it can be used to discern the health or good condition of the heart (via a stethoscope), may be so. But it appears beside the point, and certainly insufficient to characterise the production of throbbing sounds as the heart’s proper function. At an explicitly metaphysical level, what Cummins seems to have done, then, is to erase the distinction between essential and accidental effects, placing them all on a par.[[30]](#footnote-30) But this is a far from innocent move: it effectively eviscerates the ordinary (and neo-Aristotelian) conception of function, replacing it with something akin to ‘effect of a containing system’. Not only, however, is this to eradicate the very idea of objective, non-relative functions; it is also, by implication, to import a purely relativised conception of evaluation. If I am interested in heart noises, for instance, then an efficient production of these entails a good heart. But if I am uninterested in them, the heart’s goodness or perfection will, *pro tanto*, be moot. Cummins’s interest-relative account thereby precludes genuine disagreement about cardiac goodness or badness – it all depends on one’s antecedent interests.

A key corollary of Cummins’s relativism about function is an alarming proliferation of what he calls ‘function-ascribing statements’. As William FitzPatrick points out, since Cummins accepts inorganic functions, there appears nothing to rule out the claim that, say, ‘the rain functions *as* a street cleaner, or functions *to* clean the streets’.[[31]](#footnote-31) After all, the rain does have this effect – among an indefinite number of others – and someone might be interested in this ‘analytical context’. Worse, perhaps, this diagnostic promiscuity about functions generates very untoward judgements about the organic world. As Philip Kitcher argues, Cummins-style functions enforce ‘functional analyses’ even where ordinary judgement would discern malfunctioning. A mutant DNA sequence, for instance, because it produces tumours as an effect, could be judged as no less functional than a non-mutant sequence which fails to have this effect.[[32]](#footnote-32) In this way, judgements of goodness or natural perfection are ‘scrambled’, and come wholly apart from standard modes of functional interpretation. And this scrambling will, moreover, have the proliferating effect we saw previously in the inorganic world. To adapt an example from Michael Ruse, long hair in dogs may characteristically lead to fleas; but no one would say that the proper function of canine hirsuteness is to harbour fleas.[[33]](#footnote-33) Finally, if there are no clear limits to the types of effect Cummins considers functional, their temporal extent seems equally hard to pin down. To adapt an example from FitzPatrick, the heart’s activity is a necessary condition of the operation of the lacrimal glands.[[34]](#footnote-34) But we do not want to say that, on this basis, that operation constitutes the function of the heart.

All in all, then, the Scylla of Cummins’s pseudo-functions is something we have reason to avoid. What we need is a conception of function that is objective, non-relative, preserves the distinction between essential and accidental effects, and thereby precludes the proliferation of functionality we saw above. All these features are promised – and, indeed, delivered – by what I shall call the ‘standard evolutionary conception’ of biological function. But the latter constitutes, nonetheless, and as I shall argue, an interpretative Charybdis we also have reason to avoid. Why so? In order to answer this, we need to unpack the standard evolutionary conception.

The standard evolutionary conception of organismic function, as found in writers like Richard Dawkins, is, as FitzPatrick puts it, ‘that organisms work ultimately in the service of gene replication’ (2000: 233).[[35]](#footnote-35) Put more precisely, the work or function of an organism is, according to this conception, ‘contributing to the replication of genes of the types represented in the organism’s co-adapted genome’ (ibid.) This objective, non-relative, idea of function thus retains what purports to be a *bona fide* teleological element: gene replication is what organisms are *for*, it is not just one effect among others. It therefore preserves a real distinction between essential and accidental effects, which acts, in turn, as an analytical bulwark against the proliferation of pseudo-functions. Analogously to the Aristotelian functionalist schema, then, we have a clear, univocal, conception of organisms’ singular, ‘ultimate’ function. But *contra* that schema, this function (viz. gene-replication) is not indexed to species – as is (e.g.) rationality; rather, it is something maximally general, characterising *all* species. Furthermore, the standard evolutionary conception supplies a *definition* of function that applies to organisms not just *qua* wholes, but also to their component, contributory parts. This definition is grounded directly in the history of ‘natural selection’ – i.e. the conditions that enable a particular species to survive. As Larry Wright expresses things, ‘the function of x is z’ means ‘(a) x exists or is present because it does z, and (b) z is a consequence (or result) of x’s being there’.[[36]](#footnote-36) In other words, all organic functions rest on ‘consequence-aetiologies’: we can identify such functions, that is, by their contribution to the survival of organic parts, which contribute, in turn, to the survival of organic wholes, which contribute, ultimately, to the survival of the relevant organic species.

At an abstract, formal, level the standard evolutionary conception parallels the Aristotelian functionalist schema, since it both determines an organism’s singular function – its ultimate ‘work’ – and serves to identify its component functions. As in Aristotle, moreover, there is a coherent story to be told about how these two functional levels are related.[[37]](#footnote-37) But there the similarities end. For by contrast with the Aristotelian account, the evolutionary alternative is highly reductive. All organic functioning, that is, is ordered – either mediately or immediately – to the replication of genes. While this is explanatorily parsimonious and maximally wide in explanatory scope, it manifestly fails to save the phenomena. For while a neo-Aristotelian would say that a life forgoing reproduction and devoted to (e.g.) sporting or intellectual goods can itself be functional and good[[38]](#footnote-38) – albeit lacking one type of good – an evolutionary biologist would say it is perforce dysfunctional, missing out on the ultimate end of all (not just human) life. But why think this more than a merely question-begging, highly reductive, conception of human functionality? Perhaps the evolutionary biologist could reply that his concern is the survival not of individuals, but of species;[[39]](#footnote-39) his account thereby allows a small number of people to forgo gene-replication, on condition that a strong majority do not. But this focus on species survival is itself problematic, since it denies the appeal of the Aristotelian functionalist schema, which delivers common-sensical judgements of natural perfection at the *individual* level.[[40]](#footnote-40) It does so, moreover, by refusing to ‘blanch out’ all functioning to a level shared, universally, across species, thereby offering a more fine-grained (because species-indexed) account of proper function.

I have argued, then, that the standard evolutionary conception propounds a coarse-grained, reductive, definition of ‘function’. But it would be more accurate to call it ‘hyper-reductive’ – at least in the human case. For why accept that ‘gene-replication’ is an adequate characterisation of any, let alone ‘the’, human function? Maybe, and as I shall argue in § 5.1, human *life* is a functional notion, and thus constitutive of a natural perfection or good. But sub-personal genes are life merely *in potentia*, not life itself and actualised. As Mary Midgley comments, a world of untouched sperm banks would contain less ‘real value’ than one in which ‘life is still going on’: ‘Potentiality only matters’, that is, ‘because of what will happen when it is actualized’.[[41]](#footnote-41) There are also real doubts about the evolutionary definition of function in the case of other species. As FitzPatrick contends, ‘the [sea] turtle’s tail, for example, can have the function of protecting [its] eggs, even if this is not the effect that enters into the natural selection explanation of the presence of the tail’.[[42]](#footnote-42) In other words, we can readily identify organic functions, in this and similar instances, even where they have made no historical contribution to the fitness of their ‘containing systems’. And this points to a wider, deeper, fact: that the past-orientated evolutionary account of function seems otiose. For even if a natural selection history lies, inescapably, in the background of (say) the sea turtle’s tail, that originative story plays no direct or salient role in identifying its present function(s). As FitzPatrick summarises matters: ‘The tail has the egg-protecting biological function it does *not* because of anything about *past* contributions to turtle fitness, but simply because it currently plays a non-incidental role in the biological working of sea turtles’.[[43]](#footnote-43)

In conclusion, I have argued that the standard evolutionary conception and definition of organic function is hyper-reductive. Whereas the Aristotelian functionalist schema delivers a common-sensical account of subordinate functions along with ultimate function – owing to its focus on the individual, and sensitivity to species differences – the evolutionary alternative fails on all three fronts. Its account is species-focused, yet insensitive to species differences, primarily owing to its sub-personal and maximally indiscriminate view of ultimate function.[[44]](#footnote-44) Whereas neo-Aristotelians look at how types of organism actually work, evolutionary biologists are beholden to a backward-looking conception of function, which asks what historical effects enabled those types to survive. But not only does this only dubiously align with present functions, it also (and once again) effectively changes the subject. For what we want to know is not ‘how did this thing come to be and sustain itself in being?’, but rather ‘what is this thing for?’ By collapsing the latter question into the former, the standard evolutionary conception is guilty – as is Cummins’s relativistic account – of replacing an essentially teleological enquiry with one about merely efficient causes. And this is, to put it bluntly, not to save but simply to lose sight of the phenomena.[[45]](#footnote-45) All in all, then, instead of retaining both Cummins-style and evolutionary ‘functions’ – deploying them as and when we see fit, as Godfrey-Smith recommends[[46]](#footnote-46) – I suggest we retain neither. Neither has proven cogent, leaving only the Aristotelian functionalist schema in command of the field.[[47]](#footnote-47) The latter can hardly claim victory, however, since another theoretical contender has arisen since the millennium, one that promises a new, alternative and vindicatory approach to functionality and goodness. This is what I shall call the ‘Foot/Thompson alternative’, which – notwithstanding its avowed Aristotelian pedigree – claims to succeed not only against Aristotle’s teleological naturalism, but also against its post-Darwinian challenger.

**3.3 The Foot/Thompson Alternative**

Philippa Foot and Michael Thompson present us with a further Scylla-and-Charybdis pair, which builds, in effect, on the deliverances of the one above. This time the theoretical pairing is not internal to the evolutionary biological literature, however, but holds between traditional Aristotelian naturalism on the one hand, and post-Darwinian naturalism on the other. For both theoretical options are, on their view, deeply misguided. Traditional Aristotelian naturalism is, by their lights, tantamount to what Thompson calls ‘egregious organicist metaphysics’ (2008: 48): in other words, it partakes of a teleological naturalism which philosophers as diverse as Bernard Williams and Alasdair MacIntyre have assumed is no longer tenable.[[48]](#footnote-48) At the same time, Foot and Thompson are no less unfriendly toward post-Darwinian naturalism as a basis for their normative project of unpacking ‘natural goodness’ (the title of Foot 2001). As Foot puts matters, while ‘patterns of natural normativity’ (2001: 38) are crucially relative to species – human goods diverge from, even if they overlap with, (e.g.) feline goods – such patterns nevertheless cannot be revealed by functions as these ‘would generally be interpreted in evolutionary biology’ (2001: 40 n. 1). This is because, and in line with what I argued above, human goods – Foot’s core concern – cannot be hyper-reduced in the way evolutionary biology requires. Take the key example of reproduction: ‘Lack of capacity to reproduce is’, Foot affirms, ‘a defect in a human being. But choice of childlessness and even celibacy is not thereby shown to be defective choice, because … other elements of good such as the demands of work to be done may give a man or woman reason to renounce family life’ (2001: 42).

The upshot so far, then, is purely negative: neither traditional Aristotelianism nor evolutionary biology is methodologically suitable for uncovering the ‘norms of nature’. What do Foot and Thompson put in their place? Here they draw on a research programme initiated, but left substantially incomplete, by G. E. M. Anscombe. Instead of invoking natural *telē* or ‘naturally selected’ functions, Foot argues we can devise ‘natural-history accounts’ that pick out natural goods embedded in the ‘life form’ of particular species.[[49]](#footnote-49) These accounts rest, fundamentally, on ‘natural-history sentences’[[50]](#footnote-50) such as ‘roses have thorns’, ‘rabbits eat grass’ and ‘humans have thirty-two teeth’. Following Thompson, Foot dubs these ‘Aristotelian categoricals’, highlighting their peculiar – because logically unquantifiable – form. For the claims they make are neither about some, nor about all, species-members, nor do they reflect statistical probabilities or enter some inductive generalisation. (Indeed, they can hold true, in some cases, even if no species-members exhibit the properties or behaviours they describe.) Rather, they each assert a species-relative *norm*, according to which we can judge the soundness (natural goodness) or defectiveness (natural badness) of individual species-members. To recur to the example of reproduction: ‘human beings reproduce’ entails that someone incapable of reproducing, or choosing arbitrarily not to reproduce, is *pro tanto* naturally defective or bad. In this way, Aristotelian categoricals underwrite what Anscombe calls ‘Aristotelian necessities’: i.e. ‘that which is necessary because and in so far as good hangs on it’.[[51]](#footnote-51) The kinds of ‘vital description’ at stake here not only capture natural, species-relative facts, therefore – these facts are also inextricably normative. In short, they register the vast array of natural species-goods.

For the moment, I do not want to dispute the well-foundedness (or otherwise) of Foot and Thompson’s analytical apparatus – an issue I shall return to below. Rather, I want to investigate what, exactly, ‘natural goodness’ consists in in the human case. For although Foot does refer to reproduction, say, as a human good, and acknowledges that our animal nature imports many goods relevant to ‘self-maintenance’ (2001: 33) – such as digestion and respiration – she does not thematise such goods, or explore them in any detail. Rather, her whole focus is on *moral* goods – in particular, the virtues.[[52]](#footnote-52) For Foot, natural human goodness is thus tantamount to moral goodness, which is tantamount to moral virtue; likewise, and by analogous transitivity, natural human badness or defect is tantamount to moral vice (2001: 27, 37, 116). To illustrate, she dwells on examples like ‘free-riding’ – which is a moral vice and hence a natural defect or bad (16) – and promise-keeping, which is a moral virtue and hence a natural good (45-52). Sometimes Foot switches from an aretaic to a deontic moral idiom, speaking of (e.g.) lying as wrong but sometimes permissible (77), and torture as wrong and never permissible (‘it is in my firm opinion morally ‘out’’, 78). But when giving reasons for such judgements, she rests them not on natural goods in the sense I gave them in chapter 1: namely, as the pre-moral *foundations* of moral goods. Rather, her ‘reasons for action’ remain squarely in the moral orbit. Torture, for instance, is wrong not because it is a direct assault on and destruction of the good of bodily functioning. Instead, its wrongness lies in being ‘the ultimate negation of the impulse humans have to come to each other’s aid’ (78 n. 21). In this way, ‘reasons for action’ come to rest not on natural goods *qua* ultimate intrinsic goods, but rather on further moral claims: in this case, the aretaic claim that not aiding a torture victim is a form of vice (viz. callousness).

According to Foot and Thompson, therefore, human natural goodness reduces, in effect, to moral goodness. Admittedly, Foot allows that promise-keeping is virtuous because of the goods that ‘hang’ on ‘be[ing] able to bind each other’s wills’ (2001: 46). But these goods are just assumed and not explored or given any structure. Likewise, she acknowledges that ‘deep happiness’ rests on ‘things that are basic in human life, such as home, and family, and work, and friendship’, along with (arguably) more rarefied goods such as ‘the quest for truth’ and ‘artistic creation’ (88). These are, I take it, examples of genuine natural goods, ones I shall explore in detail in Part II. But Foot merely gestures at them, and they remain wholly peripheral to her main (viz. moral) account. Now it is true that she tries to provide a specific locus for ‘natural’ (i.e. moral) goodness, something she calls the ‘will’ or ‘rational will’. As she puts things, ‘to speak of a good person is to speak of an individual not in respect of his body, or of faculties such as sight and memory, but as concerns his rational will’ (66). But this looks like an attempt to explain the obscure by the more obscure. Aristotle, for one, gets by without any ‘faculty’ of the will, the concept arising only later with Augustine.[[53]](#footnote-53) And even if we accept talk of the ‘will’ as a mere *façon de parler*, it is unclear – as I shall argue further at the start of chapter 8 – how it is a specification of *natural* goodness in any recognisable sense. What we seem left with, indeed, appears simply a form of moral rationalism. As Foot holds, ‘rational choice should be seen as an aspect of human goodness, standing at the heart of the virtues …’ (81); by the same token, ‘the actions of anyone who does not φ when φ-ing is the only rational thing to do are *ipso facto defective*’ (59).

My contention, then, is that the Foot/Thompson account of human ‘natural goodness’ serves as a *short cut* to moral goodness, bypassing the hard work of unpacking genuine natural perfections or goods. It focuses, unduly, on what Foot calls ‘goodness of the will’ (2001: 11), which devolves into ‘virtues of the will’ (79), which devolve, in turn, into dispositions to think and act in a morally ‘rational’ manner. But this is not to advance, but rather to retreat from, the project of analysing natural goodness. This retreat can be seen most starkly in Thompson, whose paper ‘Apprehending Human Form’ (2004) signals an abandonment of any genuinely (even neo-) Aristotelian method or apparatus, and an embrace of Kantian rationalism. Rejecting the ‘coarse empiricism’ characteristic of what he calls ‘biologism’ (2004: 69), Thompson asserts that his notion of a ‘life form’ is a ‘logical or quasi-logical notion’, indeed one that is a priori (63). As he expresses things, ‘The concept human is a pure concept of the understanding devoid of even the least empirical accretion’ (69). But this strongly Kantian construal insulates life forms from anything recognisable as naturalistic in an Aristotelian sense. And given this, we can legitimately ask: how are we meant to move, perspicuously and with warrant, from life forms to judgements of natural goodness or badness in the first place? As Irene Liu remarks, ‘On the Aristotelian view … the specific instantiations of life, or species, are matters of empirical, contingently determined fact … Without the input of empirical content, it is unclear how an appeal to an a priori concept of ‘human being’ would . . . ground [. . .] standards for human action and character’.[[54]](#footnote-54) Quite so. But if so, we are entitled to wonder whether the Foot/Thompson project – this time at the level not of its deliverances, but of its methodological foundations – has much to do with articulating ‘natural goodness’ at all.

In conclusion, I have argued that the Foot/Thompson alternative to traditional Aristotelian naturalism on the one hand, and post-Darwinian naturalism on the other, promises more than it delivers. When it comes to human ‘natural goodness’, the positive norms it propounds prescind from natural perfections or goods in any substantive sense, reflecting instead a mixture of deontic and aretaic moral values – ones whose notional habitation is the ‘will’. But not only does this represent an improper ‘short cut’ to moral goodness, it also effectively reduces natural goodness to the latter. And things are no more satisfactory when it comes to Foot and Thompson’s apparatus of life forms, natural-historical judgements, Aristotelian categoricals, etc. Although supposedly Aristotelian in inspiration, on closer inspection these turn out to be a neo-Kantian, a prioristic set of concepts,[[55]](#footnote-55) whose primary dividend is to shield Foot and Thompson’s claims about ‘goodness of the will’ from deeper scrutiny. Indeed, one could say that their methodological apparatus is wholly commensurate with such claims: the opacity of the former mirroring the stipulativeness and insufficient grounding of the latter.

The Foot/Thompson research programme has, admittedly, been deepened and rendered more subtle by a second generation of neo-Aristotelian ethical ‘naturalists’. Three names stand out here: namely, John Hacker-Wright, Micah Lott and Parisa Moosavi. Notwithstanding the incisive and eloquent nature of their work, none of these scholars has managed, unfortunately, to overcome the two basic objections outlined above – indeed, they have doubled down on both fronts. First, they maintain that the moral virtues are the primary locus of natural goodness, rather than (as on my account) pre-moral – or ultimate intrinsic – goods. Secondly, although they sideline talk of a priori life forms, they posit, instead, ‘internal observation’ (Hacker-Wright), ‘self-interpretation’ (Lott) or practical reason (Moosavi) as the proper source of knowledge of the virtues. And these are presented by all three scholars as legitimate alternatives to naturalistic investigation.[[56]](#footnote-56) Human nature thus comes to figure in their work as what Moosavi calls a purely ‘metaethical’ notion – and this because it cannot supply substantive normative knowledge.[[57]](#footnote-57) But this is to miss, I take it, both the theoretical salience and continuing viability of the Aristotelian functionalist schema. In the end, and as with the Foot/Thompson project in its original incarnation, second-generation neo-Aristotelians seem to be ‘naturalists’ in only an etiolated or fundamentally self-effacing sense.

I suggest, therefore, that neither post-Darwinian naturalism nor the Foot/Thompson alternative – in either its first- or second-generation form – has proven more robust or propitious than the Aristotelian functionalist schema I initially outlined. Not that Aristotelian teleological naturalism or ‘goodness as natural perfection’ are out of the philosophical woods yet – far from it. They are so only relative to the dialectical point we have reached so far. In the next chapter, I shall countenance further criticisms of and alternatives to that schema, as well as offering several theoretical fortifications of it of my own.

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1. I shall address them more fully in chapter 11, just as I shall address the precise relation between natural functioning and goodness more fully in chapter 10. Both these chapters perform a primarily apologetic, rather than expository, role: i.e. they are meant as defences against modern critiques (this being the purpose of Part III more widely). [↑](#footnote-ref-1)
2. A key qualification is in order: namely, that my neo-Aristotelian, functionalist, approach to human goodness is compatible with criticisms of Aristotle. Two criticisms are worth mentioning here. First, that Aristotle’s perfectionism strongly thematises the virtues, rather than the ultimate intrinsic goods to which they are ordered. Second, that his perfectionism is embedded in what could be called a ‘supernatural’ metaphysics, which is theoretically otiose (at least for the purposes of elaborating a *natural* perfectionism – which is my task). I will expand on these two criticisms below. [↑](#footnote-ref-2)
3. The classic sources here are Ayer 1936 and Hare 1952. Ayer’s emotivism was later reconfigured as ‘expressivism’: see, for instance, Gibbard 2003 and Ridge 2014. [↑](#footnote-ref-3)
4. Indeed, and as I mentioned at the start of chapter 2, in § 10.3 I shall focus on Moore’s conceptual critique of normative naturalism – a critique which bears directly on the cogency of any metaphysical analysis. [↑](#footnote-ref-4)
5. The ‘why?’ question could, of course, be answered in (say) hedonistic or desire-satisfaction terms. But as I outlined in § 1.1, the idea that goodness is reducible to pleasure or satisfied desires is at best *prima facie* attractive, and, on reflection, has much positive evidence against it. (In § 9.2-3, I shall deepen this critique, by looking at pleasure and well-being *per se*.) In short, whereas emotivism and prescriptivism both delay the question of what goodness consists in (cf. Foot 2001: 37), hedonism and desire-satisfaction theories both answer it – yet wrongly. [↑](#footnote-ref-5)
6. See Thomson 2008. [↑](#footnote-ref-6)
7. See Geach 1956. [↑](#footnote-ref-7)
8. A table might be ‘good’ because (e.g.) it facilitates human nutrition; a tablet because it promotes various intellectual goods; and an aeroplane because it allows fast access to a whole panoply of goods. This strongly suggests artefacts are only ever extrinsically and non-ultimately good. Indeed, I would argue that ‘good’ in such contexts is simply a transferred epithet – artefacts acting as mere means to things that are genuinely (intrinsically and ultimately) good. For argument along similar lines, see Foot 2001: 36, Oderberg 2020: 47-8 and Moosavi 2022a: 82, 95. [↑](#footnote-ref-8)
9. NB ‘The person whose activity is in accordance with intellect and who cultivates it seems to be in the best condition and dearest to the gods. For if the gods feel any concern for human affairs, as they seem to, it would be reasonable for them to find enjoyment in what is best and most closely related to them – namely, intellect’ (NE X.8, 1179a23-7). In *Metaphysics* XII, Aristotle claims, in line with this, that intellectual contemplation is the closest human activity comes to that of the ‘Prime Mover’, which is his definition of god or the divine. (See Sedley 1999 on the Greek tradition of self-divinisation or ‘becoming like god’, and Angier 2019 on Aristotle’s ethics as ordered, ultimately, to the same end.) [↑](#footnote-ref-9)
10. Here I am in systematic disagreement with Sylvia Berryman, who argues that Aristotle is no ‘Archimedean naturalist’, i.e. he does not deploy human nature as a ‘fulcrum’ by which to determine and elucidate human goods (2019: 79). This is because she conceives of Archimedean naturalism as ‘looking to a value-neutral investigation of human nature as the ground for ethical values’ (2019: 62). Put otherwise, such naturalism appeals to ‘an externally validated, scientifically grounded notion of human nature’ (2019: 73). By contrast, I take Aristotle’s conception of human nature to be inextricably both natural and normative, because it predates the modern notion of science – and of biology in particular – as properly non-evaluative. I will argue, fully, for the continuing cogency of this conception in chapters 10 and 11. For now, I hope to at least ‘warm the reader up’ to naturalism in this more capacious sense. [↑](#footnote-ref-10)
11. See Suits 1974: 27-8. [↑](#footnote-ref-11)
12. To this extent, I agree with Barney 2008, which (unusually in the secondary literature) places a lot of weight on Aristotle’s opening analogies. Unlike Rachel Barney, however, I think the main argumentative work takes place only subsequently, especially with regard to establishing that humans have a single function. For criticism of those who place heavy emphasis on Aristotle’s opening analogies, see Charles 2017: 111-12 and Karbowski 2019: 218 f. [↑](#footnote-ref-12)
13. This is implicit, not least, in his rhetorical questions: ‘Well, do carpenters and tanners have *erga* and actions, and a human being none? Has nature left him without an *ergon* to perform? Or, as there seem to be *erga* of the eye, the hand, the foot, and generally of each part of the body, should one assume that a human being has some *ergon* over and above all these?’ (1097b28-33). [↑](#footnote-ref-13)
14. Plants are characterised also by their ability to reproduce themselves. See *De Anima* II.4. [↑](#footnote-ref-14)
15. ‘Proper’ here does not entail ‘unique’, on pain of plants’ losing their proper function – we *share* nutrition and growth with them, after all. I shall come back to the vital difference between properness and uniqueness below. [↑](#footnote-ref-15)
16. Animals are distinguished also by their ability to locomote or move themselves. See *De Anima* III: 9-10. [↑](#footnote-ref-16)
17. Even if these capacities are not fully exercisable at the earliest stages of our development, we have the potential to exercise them, and essentially so. (I shall return to this point in chapter 5.) By contrast, those permanently unable to exercise such capacities are only very dubiously human: hence the notion of a ‘permanent vegetative state’. [↑](#footnote-ref-17)
18. For the human essence as picking out properties that are distinct or peculiar *relative* to plants and other animals, see Kraut 1979: 474 ff. Richard Kraut draws here on *Topics* I.5, 102a18-30, where Aristotle distinguishes two senses of *idion*: as meaning ‘absolutely’ (*haplōs*) or ‘relatively’ (*pros ti*) distinct. The former entails uniqueness, the latter does not. [↑](#footnote-ref-18)
19. This is what Aristotle means, I take it, when he says that ‘the body … is in a way for the sake of the soul [*psuchē*]’ – our *psuchē* (viz. human life) being rational in form. See *Parts of Animals* 645b14-20. [↑](#footnote-ref-19)
20. As I shall explain in § 5.3, rational functioning conditions human life at a formal level, whereas both vegetative and ‘aesthetic’ functioning condition it at a material level. [↑](#footnote-ref-20)
21. True, our autonomic functions could continue a while without it, but even they are bound to collapse not long after brain-death. For rationality as our highest, i.e. organising or structuring function, see Nussbaum 1995: 114-16. [↑](#footnote-ref-21)
22. This is the force of Aristotle’s view that ‘if the whole body be destroyed, there will be no foot or hand, except homonymously, as we might speak of a stone hand; for when destroyed, the hand will be no better than that’ (*Politics* 1253a20-22). Cf. ‘By nature, a person is a thing with a body, and that body is animated by rationality, down to its fingers and toes …’ (Oderberg 2007: 249). [↑](#footnote-ref-22)
23. At § 5.3, and more fully in § 9.2-3, I shall revisit the nature of rationality, underlining the importance of its affective or emotional aspects – we are, after all, not disembodied rational spirits, but rational *animals*. [↑](#footnote-ref-23)
24. Rationality not only arranges or coordinates our other functions, it also transforms them. We not only eat, for instance, we can also dine or prepare banquets. We not only see, but can discern the beautiful. In this way, our modes of perception and sensing are far more sophisticated than those of other animals – in virtue of being imbued with rationality. I shall have more to say about the transformative power of rationality in Part II, esp. in chapter 7. [↑](#footnote-ref-24)
25. Something missed by W. F. R. Hardie, who infers from functionality to design (see Hardie 1980: 23-4). This stems from his prior inference from having-a-function to being-a-tool, and the further (plausible) assumption that tools have designers. But human rationality does not render us tools, so Hardie’s conclusion is unwarranted. [↑](#footnote-ref-25)
26. An objection made by Bernard Williams (see Williams 1972: 59, 63). [↑](#footnote-ref-26)
27. For more on essential functions and their relation to explanatory power, see Whiting 1988, esp. 37-8 (on Aristotle) and Oderberg 2007: 47 (for a neo-Aristotelian or neo-scholastic view). [↑](#footnote-ref-27)
28. Robert Nozick is the source of the objection here (see Nozick 1981: 515-17). Just as our having (e.g.) vegetative functions does not call into question the essence of plants, so an angel’s or god’s having rational functions would not call into question the human essence. [↑](#footnote-ref-28)
29. I borrow the ‘what for?’/‘how?’ contrast from FitzPatrick 2000: 271 n. 32. [↑](#footnote-ref-29)
30. This point is made by Peter Godfrey-Smith, though he avoids any Aristotelian vocabulary. He contrasts ‘mere contribution to a goal’ with genuine functionality (Godfrey-Smith 1993: § 2). [↑](#footnote-ref-30)
31. FitzPatrick 2000: 4; cf. 272 n. 34. [↑](#footnote-ref-31)
32. Kitcher 1993: 390. [↑](#footnote-ref-32)
33. Ruse 1973: 182 f. [↑](#footnote-ref-33)
34. FitzPatrick 2000: 288. [↑](#footnote-ref-34)
35. The term ‘work’ here reflects, nicely, Aristotle’s concept of *ergon*, which can be translated not just ‘function’, but also ‘work’ or ‘job’. I acknowledge that not all writers on evolutionary biology follow Dawkins in foregrounding gene replication as *the* ‘selected effect’ of natural selection. Ruth Garrett Millikan, for instance, has a more capacious view (see Millikan 1984, esp. Part I). But since the ‘genocentric’ account of natural selection (Moosavi 2018: 290, 302-303) remains widespread, even prevalent, in the ‘Modern Synthesis’ theory of evolution, I shall take it as typical – and instructively so. [↑](#footnote-ref-35)
36. See Wright 1976: 81. Cf. Denis Walsh: ‘In this reductive approach to teleology, ‘the function of *x* is to *y*’ simply means that *x* has been promoted by natural selection … for its capacity to do *y*. Function ascriptions involve no irreducible commitment to organismal purposes, or to teleology as a mode of scientific explanation’ (Walsh 2021: 284). [↑](#footnote-ref-36)
37. Particular, low-level, organic functions enable survival, and thence subserve the ultimate *ergon* of gene replication. [↑](#footnote-ref-37)
38. This is arguably the view of Socrates in Plato’s *Symposium*, who distinguishes pregnancy in body from pregnancy in soul, and maintains that the latter yields higher goods. One does not have to agree with this hierarchical judgement to see his basic point: that there are a plurality of goods, which are not all reducible or contributory to one good. [↑](#footnote-ref-38)
39. Hurka notes both the reductiveness of evolutionary biological explanation, along with its focus on species or groups, at Hurka 1993: 48-9. Cf. Sher 1997: 239. [↑](#footnote-ref-39)
40. Comparatively recent work in evolutionary biology has, admittedly, highlighted the role of individual organisms in achieving key evolutionary effects. I shall come back to this qualification later (see note 47 below). [↑](#footnote-ref-40)
41. Midgley 1995: 89. [↑](#footnote-ref-41)
42. FitzPatrick 2000: 234; cf. 241, 275. [↑](#footnote-ref-42)
43. FitzPatrick 2000: 241. Cf. Hurka on how biological origins have no direct relevance to identifying extant biological functions (Hurka 1993: 49). A key historical corroboration of this is Harvey’s discovery of the heart’s function, well before the advent of Darwinian evolutionary theory. And prescinding from actual scientific history, Cummins holds that even if wings (e.g.) ceased being survival-promoting, they would still have the function of enabling and sustaining flight (Cummins 1975: 755). In chapter 11, I shall explore evolutionary biology in more detail, and return to the vital contrast between a species’ origins and its current functional profile. [↑](#footnote-ref-43)
44. Cf. ‘the goals associated with evolution … seem far too crude and undifferentiated’ (Sher 1997: 227). [↑](#footnote-ref-44)
45. As Denis Walsh presses: ‘what looks like an elegant eliminative reduction of biological teleology is an impediment to the proper understanding of the place of teleology in evolution … The Etiological Theory of Function does not provide a suitably sanitized, univocal translation scheme for teleological talk in biology … The stricture against biological teleology has, in my view, … led to an impoverished, etiolated conception of adaptive evolution’ (Walsh 2014: 195, 212-13). Cf. Peter Hacker: ‘the etiological reduction of teleological explanation of organs conflates two quite distinct questions: ‘what is this organ in animals of this kind FOR?’ … and ‘how did it come about that animals of this kind have organs of this type?’’ (Hacker 2007: 165). [↑](#footnote-ref-45)
46. ‘The analyses of Wright and Cummins locate functional attribution within two distinct explanatory modes which are legitimate parts of our contemporary world view’ (Godfrey-Smith 1993: § 4). [↑](#footnote-ref-46)
47. True, the ‘revised’ evolutionary synthesis is keen to emphasise the active role of individual organisms in natural selection, as opposed to mere sub-organismal parts like genes (see (e.g.) Walsh 2021; Ramsey and Aaby 2022). As Parisa Moosavi puts things, on this view ‘the main processes of evolution are consequences of the distinctive capacities of whole organisms such as their plasticity and robustness’ (2018: 303). But even if this ‘organocentrism’ is a much-needed corrective to the ‘genocentrism’ and ‘anti-individualism’ of traditional evolutionary biology, it still takes an interest in individual organisms only insofar as they have wide population effects, and thereby shape the course of evolution. And this falls short of the *per se* interest and focus that neo-Aristotelianism brings to the functioning of individual organisms. [↑](#footnote-ref-47)
48. Williams refers in this context to ‘metaphysical teleology’ (1985: 43-4, 48), MacIntyre to ‘metaphysical biology’ (1981: 162-3, 196-7). Like Williams and MacIntyre, Foot and Thompson never demonstrate, or even give reasons for, the untenability of Aristotelian teleological naturalism. At the same time, neither ‘Darwin’ nor ‘evolution’ appear in their respective book indexes (beyond two footnotes in Foot 2001). This is disappointing, to say the least. [↑](#footnote-ref-48)
49. Here I focus on Foot’s exposition, since although it is largely and explicitly indebted to Thompson’s work, her mode of exposition is clearer and less complex. For Foot’s core exposition, see Foot 2001: 28-9. [↑](#footnote-ref-49)
50. Thompson prefers ‘natural-historical judgements’ (2008: 48). [↑](#footnote-ref-50)
51. Foot 2001: 15. [↑](#footnote-ref-51)
52. I refer the reader here to what I said about ‘morality’ in the Introduction, and to how I expounded it in chapter 1. In short, ‘morality’ for the neo-Aristotelian is nothing over and above the practically rational, i.e. the deployment of reason in the context of practical choice. [↑](#footnote-ref-52)
53. See Dihle 1982. [↑](#footnote-ref-53)
54. Liu 2018: 281. Agreeing with Liu, I disagree with John Hacker-Wright’s judgement that ‘despite its distance from empirically-oriented ethical naturalism, . . . neo-Aristotelian ethical naturalism [of Thompson’s kind]. . . does not merely fold into Kantian non-naturalism’ (Hacker-Wright 2012: 23). To be precise, I think Thompson’s (purported) neo-Aristotelian naturalism collapses into Kantian rationalism *at least in the human case*. Hacker-Wright comes closer to conceding this in the case of Foot, when he writes that ‘there is a significant Kantian strain [in her work] that is surprising to find in someone who calls herself an ethical naturalist’ (Hacker-Wright 2009: 308). [↑](#footnote-ref-54)
55. Oddly enough, Tim Lewens – although he is highly sympathetic to evolutionary biology, and highly sceptical of the Foot/Thompson project – ends up affirming a more radical version of Thompson’s a prioristic neo-Kantianism. Labelling his position ‘neo-Kantian antirealism’ (2020: 485), or Kantian ‘projectivism’ (480, 498-9), he presents life forms as constructions or projections onto nature, a mode of approach he claims has heuristic or pragmatic value for discerning and understanding ‘proper developmental trajectories’ in the natural world (498). Whatever the merits of this approach, it clearly embodies a further retreat from Aristotelian realism about natural goodness, more dramatic even than Thompson’s. Indeed, given its avowed anti-realism, it strongly echoes Cummins’s interest-based relativism about proper functions. For while both Cummins and Lewens think it possible, in some sense, to ‘organise our knowledge of the natural world’ (498), that ‘knowledge’ fails, paradoxically, to make contact with how things actually are. As Lewens puts matters, ‘there are several alternative, equally productive or reasonable, ways of constructing these images of ‘life-forms’’ (499). For a similar retreat to a neo-Kantian position, though without Lewens’s explicit anti-realism, see FitzPatrick 2000: 25, 367-70 and FitzPatrick 2014. [↑](#footnote-ref-55)
56. See esp. Hacker-Wright 2009, Lott 2012 and Moosavi 2022b respectively. [↑](#footnote-ref-56)
57. See Moosavi 2022b: 355-6, esp. n. 53. [↑](#footnote-ref-57)