

RECYCLING THE SOUL:
THE PHYSICALIST ANTHROPOLOGY OF NANCEY
MURPHY

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Can religion accept a naturalist or physicalist view of the human being and still address its core business, or does it need something more, like a soul or spirit, or at least a spark of freedom, some concept invisible to the scientific eye, which has been traditionally drawn from metaphysics? The idea that we need to appeal to something beyond the reach of science, if we are to explain human things, goes back a good way in Western history. In Plato's *Phaedo*, Socrates records his disappointment with those who want to explain human realities through the workings of "sound and air and hearing," and his excitement on discovering Anaxagoras, who appeals to mind and soul, and explains the behavior of a thing by noting what is "best" for it.¹ Aspiration towards a good, the typical activity of soul or mind, seems to point to mysterious depths that go beyond anything explainable by combinations of materials. It reflects perhaps an attraction towards a fullness of life which transcends mere current physical states. Aristotle says that "the goal towards which all things strive" is that they may "partake in the eternal and divine."²

Modern science, in the person of programmatic figures like Bacon and Descartes, set out to banish any sense of aspiration from the workings of the new scientific method. Sometimes there were hesitations when it came to the human being. Along with a materialist notion of nature, Descartes offered a well-developed doctrine of the soul. Nancey Murphy's position on such questions is however straightforward: "My central thesis is, first that we are our bodies – there is no additional metaphysical element such as a

¹ Plato, *Phaedo* 98D, 97c, in *The Collected Dialogues of Plato* (trans. Hugh Tredennick; eds. Edith Hamilton and Huntington Cairns; Princeton, NJ: Princeton University Press, 1963), 79–80.

² Aristotle, *De Anima* 415a28–29, in *The Complete Works of Aristotle* (vol. 1.; trans. J. A. Smith, ed. Jonathan Barnes; Princeton NJ: Princeton University Press, 1984), 661.

mind or soul or spirit.”³ Religion can make do with the physical explanations offered by the sciences, and needs no deeper mysteries than these. With suitable adjustments, a physicalist outlook can accommodate intelligence, morality, and spirituality, qualities which were once thought to require a base of a thoroughly different sort. I want to suggest in this paper that it is not so easy. The concepts developed in the tradition of philosophical anthropology are peculiarly tenacious, and cannot be dismissed without further ado. Sometimes even the very reflections which are meant to dispose of them, in fact unwittingly assume their validity. I will argue that this is the case with Nancey Murphy. In particular, the notion of life itself, with its associated idea of end-directedness or teleology, is assumed by the very reflections which want to insist that modern “scientific” concepts are enough. The human order clings to fundamental mysteries, however much we try to rid ourselves of them.

I

In an article that is some decades old, Richard Taylor sets out the basic lines of the program which Nancey Murphy adopts for understanding the human being.⁴ Taylor asks why I do not see myself as the totality of my bodily parts, in roughly the way that I see a table as four legs and a top, or a bicycle as wheels, frame, seat, and handlebars. He answers that it is because some of the things which are true of me, do not seem to be true of the connected parts of my physical body. I can be morally blameworthy or praiseworthy for example, while it seems strange to regard my body or its parts (e.g. my brain), in this way. Similarly, it seems odd to say that my body, or some part of it, wishes it were somewhere else, or has thoughts of the gods, or loves God and neighbour.⁵ Since these things can be said of me, and not of my body, it seems I cannot describe myself simply as my body.⁶ After rejecting a dualist option, Taylor makes a simple suggestion for settling the quandary, one which perhaps frees us from a case of what Wittgenstein

³ Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* (Cambridge: Cambridge University Press, 2006), ix.

⁴ Richard Taylor, “The Case for Materialism,” in *Philosophy: Contemporary Perspectives On Perennial Issues* (ed. E.D. Klemke, A. David Kline, Robert Hollinger; New York: St. Martin’s Press, 1994), 179–89.

⁵ Socrates relies on this sense of oddity when he makes his famous joke that if it had been left to his bones or sinews, they would not have remained in prison but would have taken themselves to Megara or Boeotia. Cf. *Phaedo* 99a.

⁶ Richard Taylor, “The Case for Materialism,” 181–83.

would have seen as bewitchment of our intelligence by means of language.⁷ Taylor points out that when we form an idea of a body or physical object, we tend to think of a stone or a piece of marble, rather than of a human or an animal. We then ask if *something like that* could be blameworthy or praiseworthy or religious, and conclude that it is impossible. Taylor suggests that if we begin with a wider set of core examples, the question changes its nature. If someone points to a human and a stone, and asks whether at least one of these might be able to think, choose, and deliberate, we have no problem in giving an affirmative reply. If someone then objects that a “mere physical object” cannot do these things, we answer that we are talking about a physical object of a certain kind, one equipped with a complex nervous system and so on. With this, the hesitation vanishes.⁸

Nancey Murphy is keen to fill in the detail of this sort of proposal, showing that there is no contradiction in our thinking of certain configurations of materials as acting freely, or pursuing a spirituality. They will be complex bodies of a special sort, which contain feedback loops and representations of other entities and of their own states, as part of their workings. But they will be bodies for all that, in full continuity with the simplest types of natural things. Murphy discusses several common examples of complex systems, including one which we will take as representative, a thermostat heater.⁹ Such a heater registers the temperature of the air in the room, compares it with a pre-set norm, and gives instructions to its output mechanisms to change the room temperature until it corresponds to what is pre-set. We could take the example a step further and imagine a heater that could tell when an apartment was empty for a significant time, and would move to shut off the whole system during this time. This would be an example of a meta-function, in that the entire previous operation is registered as an object, and compared in turn with the wider system within which the heater is embedded (the economics of running the apartment), giving rise to a further level of output. Nancey Murphy thinks that if we imagine increasingly complex examples of such things, which include numerous meta-levels, we eventually arrive at bodies that we describe as acting freely, and having a spiritual dimension. Perhaps we can even talk about them as

⁷ Ludwig Wittgenstein, *Philosophical Investigations* n.109 (trans. G.E.M. Anscombe; Oxford: Basil Blackwell, 1974), 47e.

⁸ Taylor, “The Case for Materialism,” 187.

⁹ Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* 86.

having “souls” if we want, though Murphy would prefer to do without such an expression.¹⁰

Such “spiritual” functions can therefore be seen as dimensions of a body which has reached a certain level of complexity. Murphy wants to oppose any suggestion that the spiritual side of the human being goes back to a particular *part*, a spiritual soul or whatever, which has to be added to the other parts, as if along with receptors and comparators, the body needed something further of a different “spiritual” kind. Those who believe that something additional is necessary, perhaps because they remain bewitched by a picture of bodies as always being like heaps of stone, fall easily into a dualist position. Dualism is of course a main target of Nancey Murphy’s program. She holds that talk of the soul or of the freedom of humans is not talk about a particular non-material part, but rather talk about an *aspect* of a type of natural body. She quotes with approval James D.G. Dunn, who holds that the Greeks saw humans “partitively,” as made up of distinct parts, while the Hebrews saw humans “aspectively,” as organic units which have different dimensions, one of which might be described by the word “spiritual.”¹¹

She realizes that conflicts between fundamental approaches will not be resolved by an appeal to the facts, since each approach can account for the facts in its own way. She encourages us rather to regard the conflict between naturalists and dualists as if it concerned competing research programs or hypotheses, proposals which are to be judged by their fruitfulness for further discovery and research.¹² To adopt the “aspective” view is to see the question of the soul as coming down to the question of whether we want to use this expression to describe particular aspects of the human person. Once we see the question in this way, we will quickly conclude there is not much reason to talk any more in the “partitive” way. The “aspective” naturalist program has gone from strength to strength, while the “partitive” dualist programme, with Sir John Eccles as its sole eminent champion of recent decades, has gone nowhere.

Nancey Murphy maintains that the difficulties associated with a theological program that bases itself on a naturalist position are often exaggerated.

¹⁰ She recounts her reply to a reporter who thought that clones were zombies, and wanted a condemnation of cloning: “don’t worry. None of us has a soul and we all get along perfectly well!” *Bodies and Souls, or Spirited Bodies?* 1.

¹¹ James D.G. Dunn, *The Theology of the Apostle Paul* (Grand Rapids: Eerdmans, 1998) 54. Cf. Murphy, *Bodies and Souls, or Spirited Bodies?* 21.

¹² Nancey Murphy, “Nonreductive Physicalism: Philosophical Issues,” in *Whatever Happened to the Soul?* (ed. Warren S. Brown, Nancey Murphy and H. Newton Malony; Minneapolis:

Much of the detail of her case is directed towards showing that the naturalist framework offers a plausible and fruitful alternative for describing human beings and that it can accommodate most of our traditional concerns. This requires a demonstration of credible naturalist equivalents for the aspects of human beings which dualists cite as evidence for special spiritual “parts.” Her argument relies heavily on two related concepts, those of “top-down causation” and “emergent properties.” Top-down causation is best seen in an example like that of the heating-system which turns itself off when the apartment is empty. Here various material parts support the articulation of a whole system which in turn controls the movement of the parts from which it arises. The notion of “emergence” covers a wide range of cases, usefully listed and discussed by William Hasker.¹³ For Nancey Murphy, a significant emergent property is one which arises not from the parts of the material base, but from the whole system, first appearing as a property when the whole system is in place. Emergent properties are not reducible to the combination of properties of the parts. Sensitivity to the economics of heating an empty apartment cannot be deduced straightforwardly from the properties of the parts which make up the system, but emerges only when the whole system is in place. What we refer to as “consciousness” is regarded as a property of this sort.¹⁴ Murphy thinks that with the help of the concepts of top-down causality and emergent properties, she can avoid what she describes as “reductive physicalism,” the view that, as Paul Churchland puts it, the notion of “soul” is no more than a name for “a particularly exquisite articulation of the basic properties of matter and energy.”¹⁵ For reductive physicalism, there is in the end nothing more than the building blocks, along with their physical properties.

Nancey Murphy wants to resist this “no more than” approach. She describes her position as “non-reductive physicalism.” The position sees humans and other animals as natural bodies which have developed interesting emergent properties which enable a fair measure of top-down causation. The processes of an organic body loop round on themselves, sometimes objectifying their own states and reacting to them. Humans do this to a higher degree than other animals. Murphy mentions an experiment where chimpanzees always choose the larger of two piles of candy, in spite

Fortress Press, 1998), 139–40.

¹³ William Hasker, *The Emergent Self* (Ithaca: Cornell University Press, 1999), 171–203.

¹⁴ Murphy, *Bodies and Souls, or Spirited Bodies?* 77.

¹⁵ Paul Churchland, *The Engine of Reason, the Seat of the Soul* (Cambridge: MIT Press, 1995), 211.

of the fact that a researcher awards them the *other* pile of candy each time, and gives away the one they choose.¹⁶ Even small children quickly come to a higher level of abstraction here, and choose the smaller pile, so as to be rewarded in turn with the larger pile. The chimpanzees lack the ability to turn the operation of choosing into an object of higher-level abstraction like this, and are frustrated again and again as the object of their choice is taken away from them. For Nancey Murphy, at a certain point in this ascent, we start talking about “freedom,” of a sort which is admittedly not “libertarian,” but which offers enough to satisfy many philosophers.

II

The power of Murphy’s position, like that of all naturalisms, comes from its use of a few simple principles, which can be easily grasped, and which have great explanatory force. We quickly intuit the kinds of answers the position will offer to most of the usual objections. Perhaps we sense that in its own terms it is impregnable. And yet it gives an impression of overlooking one of the central things it is trying to explain, the most basic feature of life itself. While we sometimes have difficulty in knowing whether a particular thing should count as living or not, the simplest phenomenology of life as experienced seems to indicate a sharp distinction between living things and non-living things, implying that “living” does not just reduce to occupying a particular level in a continuity of material differences. This is reflected in the sense of alarm that often comes over us as we suddenly realize that something we had thought inanimate is in fact alive. The difference between the simplest living thing like an amoeba and an artificial thing like a heating-system seems somehow fundamental, so that it is of a different order from the difference between two sorts of artificial things, like a heating-system and a cooling-system. It is however difficult to argue for a qualitative difference here, which can withstand Nancey Murphy’s proposal that the difference can be explained by quantitative factors.

A first piece of evidence for our intuitive sense of a qualitative difference comes from biology. The biologist Maureen L. Condic insists on the almost-instantaneous moment of change from the presence of seed materials and nutrients to the presence of a zygote, in that the materials are suddenly taken over, and become something that is self-directed, as though a new entity has

¹⁶ Murphy, *Bodies and Souls, or Spirited Bodies?* 88.

suddenly arisen, rather than just a new moment in a continuous process.¹⁷ Aristotle would see this as confirmation of a position he formulated long ago, that there is a qualitative difference between two kinds of change. In the first, which characterizes artificial things, a material base remains in place throughout the change, while it loses certain properties and acquires others. In the second, which characterizes living things, a new thing comes into existence, which was not there before.¹⁸ With non-living things, parts move other parts around, while with living things, there is a mysterious unity, where something seems to come into existence as an integral whole. Aristotle uses this point as the basis of a sharp little argument against reductive physicalism. If the life principle were a just a moving material of some sort within the living body, then in principle we could imagine it leaving the body and returning, so that the body could die and come to life again. “But, if this is possible, it would also be possible for a soul which has left the body to enter in again; and upon this would follow the possibility of resurrection for animals which are dead.”¹⁹

The fact that this is not possible, indicates that we are dealing with a different sort of unity, which he refers to as soul-body unity, or “hylomorphism.” His argument can be applied to the sort of non-reductive physicalism favoured by Nancey Murphy. When the complex non-living systems which serve as her prime analogues for physical entities break down, they seem always in principle recoverable, in that we can repair the damaged parts and the system will work again. Living things are however subject to the strange transformation called “dying,” from which they do not seem recoverable any more. For Aristotle, this is evidence that there is something in play which cannot be reduced to the interplay of physical parts. One can however imagine counterarguments from the non-reductive physicalist side. A particular combination of parts might lose the coordination which allowed it to develop top-down causality, in such a way that it cannot recover it again. This is what the phenomenon of dying comes down to. For all the power of a reply of this sort, the suggestion that such damage can be *irreparable* seems strange. We feel that in principle, something understood in this way is always repairable, and that the contrast with living things, which are not susceptible to such repair, needs explanation. The naturalist might of course

¹⁷ Maureen L. Condit, *When Does Life Begin?* (New York: The Westchester Institute For Ethics & The Human Person, 2008), 3.

¹⁸ Aristotle, “On Generation and Corruption,” 314a1–7, in *The Complete Works of Aristotle* (vol. 1.; trans. H.H. Joachim; ed. Jonathan Barnes; New Jersey: Princeton University Press, 1984), 512.

take the bull by the horns and suggest that in the future, it might become possible to recover the lives of things which have died, if the conditions are right.

A second argument that the act of living is more than just a function of organization, comes from thought-experiments involving simulations. We seem always to be able to imagine the processes of a living thing occurring in a non-living simulation, with feedback loops from sensors playing the part assigned to animal vision and so on. We can imagine robots or zombies that mimic humans down to the last detail. The contrast between Nancey Murphy and some of her opponents can be neatly defined in relation to such examples. The opponents believe that the possibility of simulation shows that the concept of life involves more than mere top-down functioning, given that a simulation has all of the functioning without having any of the life. Nancey Murphy can reply however that the appearance of a consequent simulation like a zombie, which by definition duplicates all of the outward activities of an ordinary human, is in fact the very kind of thing which qualifies for the description "living,"²⁰ given that such a thing is identical to humans in all respects that can be registered. It seems reasonable therefore to accept a continuity of "behaviour" stretching from things that are not alive, like a heating system with a thermostat, to plants and animals and humans. Murphy wants us to recognize that once we reach a certain level of complexity, it is sensible to use the word "life."

These arguments focus on observed complexity, and assume that life can be defined in terms of such complexity. But while everyone accepts that living things have a high degree of complexity, it does not follow that "life" can be *defined* in terms of such complexity. I want to suggest that the missing piece, which turns mere complexity into "life," is the notion of "end-directedness." Complex mechanisms, like a heating system with a thermostat, might serve ends (of an apartment owner), but they do not *have* ends. By contrast, the simplest living thing *has* ends. It approaches some of its possible futures as better than others, in that they represent the completion at which it is aimed. This is to say that it has "ends" or "goods" or "goals." These notions seem to be primitive. While they have connections to other concepts (like

¹⁹ Aristotle, *On the Soul*, 406b4–5, in *The Complete Works of Aristotle*, 1:647.

²⁰ This does not apply to Hollywood zombies, which show outwardly some of the effects of not having an inner life. Real zombies are outwardly indistinguishable from ordinary humans. The zombie argument is developed by David J. Chalmers, *The Conscious Mind* (Oxford: Oxford University Press, 1996), 94–99.

“complexity” “responsiveness,” or “reflexivity”), they are not reducible to these. Nor do they necessarily imply awareness or consciousness. They refer to a certain sort of relation, a tendency towards a completion, which humans experience directly in their own lives, and which they also attribute to other living things. The act of living seems to set up an entity in this way, standing with its interests over against the world, “wanting” some things, and wanting to avoid other things. Once we accept that life is like this, we can regard certain machines as simulating it, in that they perform the actions of the living things which have such interests. But they do not themselves share the interests.

The difference that this notion of end-directedness makes is seen in expressions where Murphy seems to attribute life-functions to organic parts. When talking about language, emotion and “decisionmaking,” Murphy says that “(l)ocalization studies... provide especially strong motivation for saying that it is the brain that is responsible for these capacities... In Owen Flanagan’s terms, it is the brain that is the *res cogitans* – the thinking thing.”²¹ She often repeats this point:

As neuroscientists associate more and more of the faculties once attributed to mind or soul with the functioning of specific regions or systems of the brain it becomes more and more appealing to say that it is in fact the brain that performs these functions.²²

In brief, this is the view that the human nervous system, operating in concert with the rest of the body in its environment, is the seat of consciousness (and also of human spiritual or religious capacities).²³

While these statements are not without ambiguity, they clearly exhibit the difference between an Aristotelian approach to living things, and the approaches of contemporary naturalisms. For an Aristotelian, we cannot imagine the brain or the nervous system as having ends, or as engaging in end-directed activity, at least in the fundamental meaning of these terms. To imagine such a thing is to see the brain or nervous system as having a kind

²¹ Murphy, “Human Nature: Historical, Scientific, and Religious Issues,” in *Whatever Happened to the Soul?* 1.

²² Murphy, “Human Nature,” 13.

²³ Murphy, “Nonreductive Physicalism: Philosophical Issues,” 131.

of life, aimed at sets of fulfilments which satisfy them, in much the same way that life around a pond satisfies a frog. But we cannot make sense of an organic part like a brain as having life-ends like this.

The difference between the two is shown in a humorous example in the television series *The Addams Family*, which shows a hand (called “Thing”) which seems to have a life of its own, transporting itself around as though it were a species of small animal. This shows what it might be like for a hand to exercise existence in the way that a living whole does. Probably to complete the picture we need to think of it as nourishing and repairing itself in some way, so that it includes broadly reflexive activities. But it is significant that to think this, we cease to think of the hand as an organic part, and start to think of it as a straightforward animal, with a whole life of its own and a set of characteristic goods. The example stands at the boundary line between two different categories, that of a functioning part which might serve ends, but does not have ends, and that of a living whole which has ends of its own. The humour of the example comes from combining these two aspects, perhaps implying that in reality, it is not possible to do this.

Certainly a hand that has acquired a life of its own no longer resembles something like the brain or nervous system. We cannot imagine these as having *goods* that they pursue apart from their functioning as organic parts of a larger whole. (One of Aristotle’s criteria for an end-directed substance is that it not be *part* of something else.)²⁴ In attributing life-actions to the brain or the nervous system, Murphy is overlooking this distinction, and treating the brain as though it has a life that it wants to realize. But we find such a life unimaginable, because a brain, unlike an animal, has no ends. What would such ends look like – a desire to get as much sugar as possible? Similarly, we cannot imagine a computer as having life-ends, however sophisticated it may be. What would they be – to have a nice clean screen? The point is captured in a remark said to have been made by Noam Chomsky – one which I have never been able to source – that to attribute a living action like a conscious act to “the brain” is like awarding an Olympic weightlifting medal to a forklift.

For Aristotle, a living thing is something whose very existence consists in having and seeking ends. The point is encapsulated in the famous Latin formula *vivere est viventibus esse*, that when it is a question of living wholes,

²⁴ “For a primary substance is neither said of a subject nor in a subject,” Aristotle, “Categories,” 3a8, in, *The Complete Works of Aristotle* (vol. 1.; trans. J.L. Ackrill; ed. Jonathan Barnes; New Jersey: Princeton University Press, 1984), 6.

“their being is to live...”²⁵ Life is a kind of background activity which forever seeks further fulfilment, and is identical with the existence of the subject whose life it is, so that the existence of a living thing is always a pursuit of completion. It means that for Aristotle there is a fundamental difference between the processes of change which characterize a living thing, and those which characterize mere materials. Materials exercise causal influence on one another in a way which strikes us as “external.” A fire increases as fuel is added, growing by accretion, in that new parts simply join on to it as the process continues. Aristotle notices that the process of a living thing’s nourishing itself is not like this.²⁶ A living organism takes food into itself, but does not simply join new parts to its existing exterior. Rather it uses the food as material for an action of a different sort, which oddly completes the living organism, representing not only an end-point of a process, but also the *good* of the process, the completion at which it was aimed. This striving for completion constitutes the very existence of the organism that is in question. Once it ceases, it is not as if the organism simply loses a quality, even an emergent quality. Rather it is no longer there at all. The body of a living thing is not a stable base from which the emergent quality we call “living” proceeds. Rather it is itself a *product* of the act of living, the strange end-directedness which brings living things into existence in the first place.

III

I believe that Nancey Murphy overlooks this original end-directedness of living things. But she nonetheless needs the notion, if she is to get her physicalist alternative off the ground. She defines a living thing as “a bounded organic structure capable of taking nutrients from the environment for the purposes of self-repair, growth, and reproduction.”²⁷ This is to see living things as particular examples of general abstract systems, of which some non-living things are also examples. A sophisticated heating-unit exemplifies such a system at a low level. We can imagine a heating-unit which registers when one of its pipes is cracked, and immediately activates a repair mechanism which moves to seal the crack, or which activates a fuel pump when it registers that its own supplies are running low. This exemplifies the same structure as living systems, in that it maintains its own stability in relation

²⁵ Aristotle, “On the Soul,” 415b14, *The Complete Works of Aristotle*, 1:661.

²⁶ Aristotle, “On the Soul,” 416a16–19, *The Complete Works of Aristotle*, 1:662.

to the wider world, and manages an ordered transformation of inputs into outputs. A living thing includes of course features that are specific to a living system, having a greater degree of complexity, and possibly displaying unusual emergent properties like awareness. It is constituted mainly from carbon, at least in our world. But these features inevitably look secondary when placed alongside the common structural elements.

It is striking that Nancey Murphy's description sees the differences between non-living and living things as the same *sorts* of differences as those which exist between non-living things and other non-living things. A heating system with a thermostat differs from a living thing in more or less the same way as a heating system differs from the autopilot system on an airliner, namely in degree of complexity and in materials used. The three hold their most significant identity in common, in that they all exemplify patterns of self-maintaining wholes, and differ only in that they realize these in more or less complex ways, with different materials. Given the limits imposed by the framework of enquiry here, it is no surprise that the enquiry concludes to the relative equivalence of living and non-living things as functional wholes, and insists that the former need no additional "parts" to make them what they are.

While Nancey Murphy's position overlooks the direction towards a good which sets living organisms apart from what is not living, it also *assumes* this notion in its attempted reconstruction of living things on the model of functional systems. This becomes clear if we look closely at how the parts of a heating system come to be seen as a functional whole. Away from the viewpoint of human beings there are no heating-systems, but merely parts alongside one another in continuity with their surrounding parts, materials in continuity, where everything touches on something else. The philosopher Descartes noticed this when he described matter as a single continuous substance, whose nature consists in extension alone.²⁸ These parts and their relations produce an infinite number of effects, none of which is privileged. For example the parts of a heating system block other things from moving into their space. They interfere with the movement of air, bring weight to bear on floors and walls, and react chemically with what is around them.

²⁷ Murphy, *Bodies and Souls, or Spirited Bodies?* 85.

²⁸ Descartes, "Principles of Philosophy," II, 4, in *The Philosophical Works of Descartes* (vol. 1.; trans. Elizabeth S. Haldane and G.R.T. Ross; Cambridge: Cambridge University Press, 1931), 255.

The outcome of keeping a stable room temperature does not stand out among the many outcomes that such a system produces.

Some might argue that the maintenance of a constant room temperature is a privileged outcome, in that only if we keep *this* outcome in mind can we account for *all* the parts of the heating system, whereas if we take the system as a way of blocking spaces, we account only for part of it (the mass which keeps the space blocked). This is in fact a circular argument, in that it assumes that we know the boundaries of the heating-system (i.e. what counts as “all” the parts) *before* we have ascertained its purpose. In fact, it is only because we already have an idea of a purpose that we know what to include or exclude from the list of parts. By varying our glance, we can alter what is relevant or irrelevant, in principle rearranging the world into whatever systems we like, by taking different focal points around which we make sense of the rest. The French Renaissance thinker Montaigne has a philosophical goose who thinks that geese are the apex of the creation, for which all the rest has been designed, and in relation to which the rest can be understood. In this scheme, humans are means by which geese are provided with food.²⁹

It is only when we single out one of the outcomes (constant room temperature) as the overarching goal, with all the rest directed towards it, that the heating-system comes into focus as an integral whole, something which can function more or less efficiently, and which can on occasion break down. The system is conceived as though it is *trying* to achieve something, though we know that in fact this is not so, as it is only a *simulation* of a living thing. But to do this, we need to import the notion of end-directedness. Where do we get it from? It obviously comes from the ends and purposes of the designer or maker or owner of the heating-system. We have a primitive experience of what it is to be directed towards something in this way. This experience is more primitive than any systems-theory, and is presupposed if we are to get the notion of a system off the ground. The irony of Nancey Murphy’s attempt to understand living things, including human beings, as types of “systems,” now becomes evident. To think a “system” as such, we need to smuggle in the notion of end-directedness, our instinctive grasp of what it means to see some futures as better and others as worse. Only if this thought is allowed, can the notion of a system come together as an intelligible concept. This suggests that living things have an important priority over

²⁹ Michel de Montaigne, “An Apologie of Raymond Sebond,” in *Essays* (vol. 2.; trans. John Florio; London: J.M. Dent & Sons, 1910), chapter 12, 240.

artificial things, in that they need to be presupposed in order to explain the notion of a system. Nancey Murphy wants to reverse this order, and explain humans by seeing them as particular sorts of systems.

If the notion of a system presupposes the notion of aspiration, it cannot be used to explain the notion. The idea of a system takes shape against a background of assumed aspiration. The argument brings us starkly against the strange notion of end-directedness, raising questions about how we arrive at it, and what kind of primacy it has. It might encourage us (or perhaps discourage us) to know that the dispute we are considering is centuries old in Western history. Bacon long ago banished consideration of the tendency which living things have towards a good (“final causes”) from scientific enquiry, not in the first place because there were no such causes, but because it did not suit our purposes to consider them. Their investigation was “barren,” as he famously put it.³⁰ Those who stand with Plato and his view that the notion of good is the ultimate principle of explanation, being “the authentic source of truth and reason,”³¹ realize that final causes, for all their mysteriousness, will not go away.

Present-day controversies between theology and science tend to focus on the mechanisms of living organisms, asking whether it is conceivable that such mechanisms should come into existence without the direction of an intelligent designer. This way of framing the question focuses on the ways in which life articulates itself, and tends to overlook the strangeness of the phenomenon of life itself. Organic life is a form of existence whose core is aspiration towards something not yet possessed. That anything should be related like this beyond its current present states is surprising, and suggests a missing dimension to our explanations, as though things are haunted by a completion which has somehow insinuated itself at their origins. To be alive is to be restless for such a completion. While falling short of a deductive proof of the matter, such a state of affairs fits well with a view that sees living creatures as created participations in a life that was there before them, and which they obscurely seek throughout their earthly journey. In other words it fits a view that sees the world and human life as fundamentally secondary, in thrall to an original fund of perfection to which it refers as the “creator.”

³⁰ Francis Bacon, “De Dignitate et Augmentis Scientiarum,” III, 5, in *The Philosophical Works of Francis Bacon* (trans. James Spedding; ed. John M. Robertson; London: George Routledge and Sons, 1905), 473.

³¹ Plato, *Republic* 517c, in *The Collected Dialogues of Plato* (trans. Paul Shorey; eds. Edith Hamilton and Huntington Cairns; Princeton: Princeton University Press, 1963), 750.