

Aristotle and Aquinas on the Teleology of Parts and Wholes

C.F.J. Martin
Center for Thomistic Studies
University of St. Thomas

Aristotle, in the first book of the *Nicomachean Ethics*, makes two attempts at establishing the thesis that being a human being has a point (a *telos*)¹, using two parallel sets of examples. His first step is to claim that whenever anything has a characteristic activity (*ergon*) that activity is its end (*telos*), using the example of “the flute-player, the sculptor, and in general any craftsman”². This identification of the characteristic activity of a craftsman with the location of his “good and well”³, *qua* craftsman, and thus presumably with the *telos*⁴ of the craftsman may be questioned, of course, but it does not affect the course of the arguments and the use of the examples I wish to pursue. It is enough that for given roles there should be a teleological relation to some point for that role.

Besides the craftsmen mentioned above, Aristotle speaks of the carpenter and the leatherworker⁵. The choice of the examples may be

¹ I translate “telos” as “point” or “end” rather than as “purpose” because “purpose” seems to presuppose a conscious agent. I believe Aristotle probably, and Aquinas certainly, wished to use the words “telos” or “finis” to signify either an unconscious point, finality or teleology, on the one hand, or to signify a conscious point, finality, teleology or purpose, on the other. That is, there need be no conscious agency involved.

² *Nic. Eth.* I, 7 1097b 25-28 .

³ *Nic. Eth.* I, 7 1097b27.

⁴ *Nic. Eth.* I, 1 1094a1-3.

⁵ *Nic. Eth.* I, 7 1097b 28-29.

important, but it is not relevant just yet. Having established that craftsmen have a *telos* or point, which is their characteristic activity – or alternatively, that they have a characteristic activity which is their *telos* or point, in so far as they are this or that kind of human beings – Aristotle asks rhetorically, ought not the human being [*qua* human being] to have a point? Or is it to be by nature pointless?⁶

The other set of examples he gives, to the same effect, is that of the teleological relation of organic parts of the human body to the whole body. The parts of a human body, e.g. the eye, hand or foot, have a point, which is their characteristic activity. Similarly, the human body as a whole ought to have a point⁷.

The two sets of examples are rather different. The first seems to relate to a kind of conscious teleology which exists, if at all, when the craftsman exercises his or her craft for an end which he himself grasps and actively seeks, or which is set for him or her by another. Or, one might say, the teleology of the different craftsmen exists only within a context of society, society (and its point or good) being themselves things which can be rationally grasped and pursued.

By contrast, the teleology of the second set of examples seems to be a much less conscious kind of teleology. Legs are for walking, we may want to say, eyes are for seeing, and hands are for manipulation, independently of anyone's conscious choice to exercise these characteristic activities on a given occasion or ever.

Despite this difference between the two sets of examples, which will be referred to later, there seems to be a fallacy of more or less the same general kind underlying both sets. We are expected to grant that a particular role in human society has a characteristic activity and thus a point or *telos*, which is reasonable enough, but then we seem to be expected to pass to the conclusion that human life as a whole has a *telos*. Or, having granted the premise that any one of the organic parts of a human body has a *telos*, we are expected to pass to

⁶ *argon pepyken: Nic. Eth. I, 7 1097b 29-30.*

⁷ *Nic. Eth. I, 7 1098a 30-1.*

the conclusion that a human being as such, as a whole, has a *telos*. These inferences fail to be compelling, to say the least. In each case we are expected to infer, from the fact that a part has a teleological relation to a whole, (i.e. that the part exists for the sake of the whole, or has the whole as its end) that the whole itself has an end.

However, to begin with, it does not seem that all teleological relations are of this kind, and a wider consideration of examples may make us yet more doubtful. For example, the egg exists for the sake of the chicken: are we supposed to apply the same kind of reasoning and claim that this proves that the chicken must itself have some further end, and is not an end in itself?

The matter is more complicated than this objection suggests. We might say that the chicken is no more an end in itself than the egg is, and both of them need to be understood as different parts of a generative cycle, or of the life of the species. This would be the end or point of both the chicken and the egg. This leads us back to a teleological relation which is that of part to whole, and which thus parallels the examples Aristotle gives. But we find at this point that we have only pushed the question further back. Grant that eggs are for chickens and/or that chickens are for eggs, and that both /either are for the sake of the life of the species, does this recognition also oblige us then to ask, and to answer in the way Aristotle would expect, an analogous rhetorical question to the one cited: "Will not the life of the species then have a point? Or will it be by nature pointless?" The expression "by nature pointless", translating Aristotle's "*argon pephuken*"⁸, seems to have a special poignancy and paradoxicality here, when we ask about a species or nature, but still we may find that we do not yet have sufficient reason to say that the life of the species is *not* pointless.

It is not, in fact, clear that we have the right even to *ask* "what is the point of the whole?" merely on the basis that we have established that the part is for the sake of the whole. That is, it is not at all clear that the question makes sense. For, in order for such a question to be

⁸ *Nic. Eth.* I, 7 1097b30.

reasonable, on the analogy of the question about part-to-whole teleology which we have already asked, there must be a greater whole of which the lesser whole forms a part. What is the whole of which human life or nature forms a part? Perhaps the *Nicomachean Ethics*, together with the *Politics*, are an attempt to give an answer to this question, and perhaps we should throw in the context of the *De Anima* and the *Metaphysics* too: but then the best one can say for Aristotle is that his answer to his rhetorical question is extremely allusive, not to say elusive.

I wish to draw a parallel between this apparent gap or leap of reason in the first book of the *Ethics* and a passage, at first sight not very clearly connected, in the *Summa Theologiae* of St. Thomas Aquinas. Both passages are extremely well-known, but I do not think that their parallelism, if there is indeed one, has ever been commented on. The passage in question is that of the Fifth Way of showing the existence of God⁹:

“The fifth way is taken from things’ being directed.

We see that there are things that have no knowledge, like physical bodies, but which act for the sake of an end.

This is clear in that they always, or for the most part, act in the same way, and achieve what is best. This shows that they reach their end not by chance but in virtue of some tendency¹⁰.

But things which have no knowledge do not have a tendency to an end unless they are directed by something that does have knowledge and understanding.

An example is an arrow directed by an archer.

Therefore there is some being with understanding which directs all things to their end, and this, we say, is God.”

⁹ *S. Th.* I q.2 a.3 c.

¹⁰ Compare *Comm. In Phys* L. 11. 13.

The parallel I wish to suggest is the following. St. Thomas, like Aristotle, takes for granted the existence of teleology – unconscious teleology, as he insists – in the natural world, and perhaps for the moment we can do the same, for the sake of argument. Like Aristotle, Aquinas thinks that feet are for walking, eyes are for seeing, hands are for manipulating, eggs are for chickens, and so forth. There are some readings of the Fifth Way which try to make its structure parallel to those of the other four Ways. One of these readings would require that we should regard the universe as a whole as being a system of teleological explanation¹¹.

To state this account of the Five Ways briefly, I agree with Geach that Thomas begins, in each of the Five Ways, in identifying a “feature X” such that any whole which contains parts which display feature X must itself display feature X; and such that anything which displays feature X requires an explanation in terms of a relation to something other than itself¹². Thus, in the First Way, the world contains things that are in process of change, and is thus itself in process of change: but being in process of change requires having that change initiated by another. Therefore there is some initiator of the process or processes of change in the whole world: and this, we say, is God. In the Fifth Way we are required to see the world as containing entities that require a teleological explanation, and being for that reason something that itself requires a teleological explanation. Thomas is here stressing that the teleological explanation of the universe as a whole cannot be of the same kind – part-to-whole explanation, unconscious explanation – as that which we find within the world.

Thomas seems to be faced with the same kind of gap as that which Aristotle faced. It may be that each part of the world is for the sake of some other part of the world, or for the sake of the world as a whole, but still it is not clear that it even makes sense to ask what

¹¹ See GEACH, P.T.: *Three Philosophers*, Oxford: Blackwell, 1961, pp. 112-4, and my *Thomas Aquinas: God and Explanations*: Edinburgh, Edinburgh University Press 1997, pp. 196-202.

¹² See my *Thomas Aquinas: God and Explanations*, Edinburgh: Edinburgh University Press 1997, pp. 126 – 131

the point of the world is, let alone that we can at once be happy with the reply Thomas gives.

It is arguable that Thomas boldly, or perhaps rashly, faces up to the problem of whether it makes sense to ask what is the point of a whole which is made up of parts which themselves have a point in relation to the whole. He does so by saying that the whole doesn't have a point, if the teleology is understood to be unconscious: but while the teleological relations of the part to the whole may exist without consciousness, the point of the whole, if any, must be given in terms of some conscious teleology, as the point of the arrow's flight to the target is given by the archer.

One may return at once to Aristotle to establish a new parallel, or strengthen the parallel we have already seen. What Aristotle claims as the characteristic activity (*ergon*) and point (*telos*) of the human being is thought, or passion and activity directed by thought¹³. Thus rational direction and consciousness come into the picture even already in Aristotle. It is also perhaps worth picking up, what we glossed over before, that the activities of foot, eye, and hand, walking, seeing and manipulating, are for Aristotle imperfectly so called: each of them is the activity of a human being, who walks, sees, manipulates, and who gives direction and or at least point to the activities¹⁴. (This last distinction may be over-subtle: I mean to say that one's seeing is not always looking for something, but nevertheless, irrespective of what one may be looking at or for, which may even be nothing at all, our seeing is for our protection and preservation, at some level, as is that of the other animals.)

Likewise, it is not impossible that the examples of roles in human society which Aristotle gives are deliberately chosen by him. He does not choose examples of activities which the liberal gentleman,

¹³ See *Nic. Eth* I, 7 1098a3-11: though the question is more complex than can be shown by citing a brief proof-text. Broadly speaking, Aristotle seems to regard the point of being human as "action and passion directed by reason" in Books II-IX, and as "thought itself" in Book X.

¹⁴ See e.g. ARISTOTLE: *Met.* X 1036b, 30 - 32, AQUINAS: *In Met. Expositio* L. VII, I. 10, 1484-92.

the *kalos kagathos*, might perform for their own sake, or for his own sake, such as disputing, composing or listening to poetry etc. Instead he chooses the activities of the sculptor, the flute-player, the carpenter, the leather-worker. The sculptor is told by the *kalos kagathos* to carve a grave-stone for the patron's father, or a statue of Zeus for a temple the patron is dedicating for worship; the flute-player is told to play music in the Lydian mode and dance to it for a gentlemen's club dinner, and the carpenter and leatherworker are told to make a bed or a pair of shoes for their customer.

This leads to yet another parallel. To the very extent that we are willing to agree with Aristotle that the characteristic activity (*ergon*) of a human being is rational activity of some kind, we will be made doubtful about identifying the characteristic activity of human life with its point (*telos*): we will think that we have been taken too far and too fast. That is, we will find ourselves questioning the basic assumption which Aristotle makes, that the *telos* can always be identified with the *ergon*, which we have so far accepted, at least for the sake of argument. Or, conversely, in so far as we agree on identifying the point of being a thing of a certain kind (*telos*) with its characteristic activity (*ergon*), we will be chary about finding the good of that thing in its point or characteristic activity.

In much the same way St Thomas seems to take us too far and too fast, and thus to lead us to question what we may already have accepted, if only for the sake of argument. I for one am more than inclined to admit that there is unconscious teleology within the world, but precisely for this reason but it is not at once obvious to me that it even makes sense to ask after the teleology of the universe as a whole. This is because, as above, the teleology we find within the universe, especially within the biological realm, is in general the teleology of part to whole – though this may need expanding and spelling out, as in the case of the egg and the chicken. And we may want to say that it simply does not make sense to ask after the teleology of the universe as a whole, in this mode of teleology, since the universe is precisely the whole towards which everything *in* the universe is directed.

Thomas grants this: but his solution does not seem to make the whole account more acceptable to us. St. Thomas first grants that it is impossible to find an unconscious teleology for the universe as a whole, but then he demands a conscious teleology. We may want to draw back at this point, asking either "Why should there be a teleology for the universe as a whole, anyway?" or "What makes us so sure that there is unconscious teleology within the universe, after all?" If acknowledging that there is unconscious teleology within the world means admitting the existence of God, then perhaps we want to think twice about admitting the existence of unconscious teleology within the world. It looks like a trick. Modern thinkers are unwilling to recognise the existence of any teleology at all, even an unconscious teleology, even within closed systems within the world. This is probably for Hume's reason¹⁵, that they think that admitting the existence of even unconscious teleology will in the end somehow entail the admission of Someone's conscious purpose. Thomas seems here to be playing the trick or making the move perfectly openly here, at least – there is no smoke and no mirrors – but it is seen by many as none the less a conclusion so unwelcome as to make us want to re-examine the steps that have brought us here.

We should see, at least, that Thomas has no alternative. If there is to be a point to the universe as a whole, it cannot be of the kind of unconscious teleology, of part-to-whole teleology, broadly understood, such as we might admit within the universe¹⁶. If the universe as a whole is to have a point at all, it must be the conscious teleology or purpose of some agent.

The natural question still remains, "Why, after all, should the universe have a point?" Granted that it may on some occasions make some sense to ask after the point of this or that part of the universe,

¹⁵ See the discussion of the argument from design in MACKIE'S, J. L.: *The Miracle of theism*, Oxford: Clarendon 1982.

¹⁶ It may be objected that I am taking it for granted that all unconscious teleology is of the part-to-whole type. This may be a weak point in my argument, but I would challenge anyone to suggest a form of teleology which cannot be brought under this description. The river flows *to meet* the sea, Aquinas might say: but we now know that this is just a part of a whole cycle of the circulation of water.

does it follow that it makes sense to ask after the point of the universe as a whole? let alone, that we can find an answer?

It is at this point that the apparently objectionable gaps in Aristotle's reasoning and those in Thomas's reasoning seem to coincide. Aristotle sees partial teleology within the human realm, both in terms of a human being's organic structure and in terms of a person's relation to society, or to the whole human cycle of generation. Thomas sees partial teleology within the world, in unspecified locations. Both, unlike our contemporaries, feel driven to ask the question: "What then is the point of the whole? – what is the point of human life, the point of the universe?"

It seems that both are depending on the following preconception: if there is no ultimate point for the whole, then the apparent point (*telos*) of any part of the whole, indeed any apparent teleological structures we seem to observe, is merely illusory. Neither Aristotle nor Thomas is willing to grant this¹⁷. It is perhaps worth noting that St. Thomas seems to argue in a similar way as regards efficient causality in the first Two Ways: if there were no first cause, then there would be no secondary or ultimate causes, but we see that there are. Therefore there is a first cause. So here: if there were no ultimate point for the universe, then there would be no point for anything in the universe. But we see that there is: therefore there is an ultimate point for the universe.

Underlying their view would seem to be a further presupposition that we can recognize individual cases of teleology, microstructures of teleology, if you like, even in advance of being able to recognize or even investigate what is the point of their point, or what are the larger structures of teleology within which they fit¹⁸. This recognition, if not infallible, is nevertheless capable of being true

¹⁷ But see fn. 19 below.

¹⁸ This is brought out particularly strongly by St Thomas at *Expositio in Metaphysicorum* V, 1.6, 1000, where he claims that even brute animals recognize ends. See *Met.* V, 102212-25, and compare the example given above, that we recognizes that the river flows *to meet* the sea long before we recognized the complete system of the circulation of water.

and usually is true: it answers to something that is really there. But equally presupposed is a view that if *a* is for the sake of *b*, and *b* is for the sake of nothing, then ultimately *a* is for the sake of nothing either. Thus if the universe as a whole had no point, our recognition of microstructures of teleology would be erroneous. But our recognition of microstructures of teleology is not erroneous: hence, the universe as a whole must have a point¹⁹.

A lot will depend on what evidence our two authors can bring in favour of the view that we have veridical cognitive access to microstructures of teleology in the world. To investigate this would be a task beyond the scope of this paper. A start might be made by looking first at the well-known passages where Aristotle and Aquinas discuss chance or hap, cases where we can recognize that there is efficient causality at work, even if we do not and cannot have any "scientific" knowledge of the causal structures involved. Given our authors' insistence that efficient and final causality are always correlative, this should be a useful point of departure. Alternatively, one might pursue the same point by following Geach in his insistence that efficient causality needs to be explained in terms of the tendencies of agents. Since tendencies need to be specified in terms of their ends, this argument means that wherever efficient causality is recognized, final causality should be recognized too²⁰. Be that as it may, we may compare the views which both

¹⁹ But my student Mr. Stephen Peña has suggested to me a strong counter-example. Suppose that the astronauts visiting the moon took with them tiny and undetectable organisms, and suppose that these organisms evolved over millions of years to something similar to a colony of ants. (We have to suppose, I think, that the Moon, after the first visits, remains unvisited thereafter.) The different ants and kinds of ants within the colony would have clearly defined roles, and thus ends: but it would be rash to say that the life of the ant-colony has an end other than itself. Nevertheless, this is what Aquinas seems obliged to say. But he is surely right in implying that *if* the life of the ant-colony has an end beyond itself, it must be an end imposed from outside by some directing intelligence.

²⁰ See ANSCOMBE, G.E.M., and GEACH, P.T.: *Three Philosophers*, Oxford: Blackwell 1961, pp. 101 – 109. I have attempted to defend this account twice: once in the context of the Fifth Way, in my *Thomas Aquinas: God and Explanations*, Edinburgh: Edinburgh University Press 1997, pp. 191 – 196, and (more generally) in my article "Voluntary action and non-voluntary causality" in HALDANE, J., (ed.)

Aristotle and Aquinas would take of efficient causality. Individual cases of efficient causality can be recognized, even in advance of our being able to recognize or even investigate a grander scheme of efficient causality to which they belong. The leg moves the foot, the party-giver tells the flute-player to strike up the Lydian mode, and of this we have a veridical awareness, even if we know nothing of what moves the leg or why the party-giver is asking for this kind of music.

To speak in the event-causality jargon our day, for a moment: *b* brings about *a*, and we can know that this is true, even when we don't know what brings about *b*. But in this case, even we in the contemporary world are inclined to agree with Aristotle and St. Thomas that there must be something that brings about *b*. If there is any doubt here, it is only because contemporary thinkers are disinclined to recognize individual instances of causality, unless they can be seen as instances of some kind of law or law-like pattern: but such an account of causality ties the individual case of causation, even if more tardily or more cautiously recognized, much more strongly into the system of causality which is the world as a whole. This fact might strengthen the case of Aristotle and Aquinas, at least for causal connections which are admittedly real.

Why then are we so unwilling to grant the presupposition of Thomas and Aristotle that where we have a set-up in which it is impossible to avoid recognizing that *a* is for the sake of *b*, we have at least to ask whether *b* is for the sake of something? Should we not grant their presupposition that if *a* is for the sake of *b*, and *b* is for the sake of nothing, then *a* is also for the sake of nothing, at no very great remove? If *a* is for the sake of *b*, and *b* is pointless, then surely *a* is pretty pointless (*argon pephuken*) as well?

St. Thomas is more explicit than Aristotle: when unconscious teleological explanations of the part-to-whole variety break down, we have to seek for conscious teleology. There is no hope of explaining what is the point of the arrow's flight to the target, except

by going outside the flight itself and postulating its being directed by the archer. Aristotle does not feel he has to have recourse to this: he is merely explaining the point of human life, which is itself not a complete whole but only a partial one, a whole in itself but a part relative to the universe as a whole²¹. Also, as we find out in Book X of the *Nicomachean Ethics*, human life is a part of and has a point relative to the existence of divine thought in the world²². I take it that both Aquinas and Aristotle believe that the existence of divine thought, whether in the world or out of it, is an end in itself, is something that exists for its own sake.

In both cases, then, that of Aquinas and that of Aristotle, we see an apparent gap between the existence of part-to-whole teleologies and the existence of a teleology for the whole. Aquinas is more explicit than Aristotle about the need for the teleology of the whole necessarily having to be derived from the conscious direction of some agent, but the point is clear enough in Aristotle. The principal difference between them, on a careful reading, would seem to be that for Aristotle the rational direction of the agent as a whole is grasped by the agent himself, while Aquinas, presumably, does not regard the Universe as a conscious agent which can grasp its own end and direct itself towards its own end. One may object to the sketchiness of both accounts, but neither is playing a trick on the reader.

²¹ This is my reading (in context) of such passages as Aristotle's encouraging us to "take the side of the divine" or "imitate the divine" or "become divine" (*athanatizein*) at X, 7 1177b33. See also my comment above about how the *Ethics* ought perhaps to be read within a context of the *Politics*, the *De Anima*, and the *Metaphysics*.

²² See e.g. *Nic. Eth.* X, 7, 1177a13-16.

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