The two kinds of end in Aristotle: The view from the De Anima

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1. Aristotle says in many places that the end or goal (telos) is a cause. In some of these places, he also warns us that the notion of a telos is ambiguous. A telos may mean the end for the sake of which a change or activity takes place, but it may also mean the beneficiary of the change or activity. Linguistically, Aristotle marks the distinction by the genitive to hou heneka vs. the dative to tini. The genitive suggests an object of pursuit, often as an object of verb for desire (such as oregetai or ephietai), while the dative is naturally taken as a dative of interest. I shall refer to the one as ‘the end-genitive’ and the other as ‘the end-dative’. Ancient commentators illustrated the distinction by the example of medicine, for the sake of the health and with the patient as beneficiary.¹

2. Teleology is of course a central tenet of Aristotle’s philosophy. So one would think that a distinction two kinds of telos was of basic importance to our understanding of Aristotle’s philosophy. Yet till recently the distinction has been met with general indifference.² So Hicks comments on its first occurrence in DA II.4 (415b2):

‘This is of the nature of a footnote. It is repeated below 415 b 20. Probably either here or there it is out of place. We find it again, unnecessarily interrupting the argument, in Metaph. 1072 b 2-6; De Gen. An. II. 6, 742 a 22 sqq., Phys. II. 2, 194 a 35 sq., Eud. Eth. vii. 15, 1249 b 15.’

The dismissal of the distinction reflects the view that Aristotle is only serious about one of the senses distinguished, the end-genitive. For it is only in this sense of ‘end’, it is thought, that ends are operative in nature. So the expectation is that when Aristotle introduces the distinction in these passages he is only doing so to set aside the dative use, and to reassure us that we are talking about the telos in its proper genitive use.

Now two of the five occurrences of the distinction occur within one page of DA II.4. It is these passages I want to focus on in the bulk of this paper. I want to argue that while the end-genitive serves to define the characteristic capacities of the soul, there is a significant use of the end-dative to explain other activities of the soul. But before attempting this argument, I shall consider the passage in Physics II.2. For the context is programmatic for the role of teleology in Aristotle’s natural philosophy, to which of course the psychology belongs. So we can hope to receive a steer from the Physics on how to understand the distinction in the DA.

‘Again, “that for the sake of which”, or the end, belongs to the same department of knowledge as the means. But the nature is the end or “that for the sake of which”. For if a thing undergoes a continuous change and there is a stage which is last, this stage is the end or “that for the sake of which”. (That is why the poet was carried away into making an absurd statement when he said “he has the end for the sake of which he was born”. For not every stage that is last claims to be an end, but only that which is best.) For the arts make their material (some simply “make” it, others make it serviceable), and we use everything as if it

¹ Simplicius, In Aristotelis physicorum libros commentaria 303.28-32.
was there for our sake. (We also are in a sense an end. “That for the sake of which” has two senses: the distinction is made in our work On Philosophy.) The arts which govern the matter and have knowledge are two, namely the art which uses the product and the art which directs the production of it. That is why the using art also is in a sense directive; but it differs in that it knows the form, whereas the art which is directive as being concerned with production knows the matter. For the helmsman knows and prescribes what sort of form a helm should have, the other from what wood it should be made and by means of what operations. In the products of art, however, we make the material with a view to the function, whereas in the products of nature the matter is there all along. (Phys. 194a27-b8; revised Oxford transl.)

One reading of this passage, which we find in Konrad Gaiser (106), says that Aristotle wants to distinguish the sort of telos we find in nature, the end-genitive, from the sort we find in the human sphere but not in nature, the end-dative. Ends in nature are intrinsic to the processes that produce them, while human beings use nature for their own sake in ways that are extrinsic to natural things themselves. Acorns, let’s say, grow into oak trees; human cut them down and make furniture of the wood. The uses we put natural things to have nothing to do with the ends that govern the natural things as such. When Aristotle says in the passage that we are ‘in a way’ (pòs) an end, he means just that we use things to our own benefit; however, our being benefitted is not an end of those things as such. So ‘in a way’ implies ‘in a qualified but not in a strict sense’. The end-dative is, then, only to be found in the context of human agents, and the relationship of the end-genitive to the end-dative is contingent. The analogy between nature and the arts is limited to the end-genitive: there are productive arts and using arts; the productive arts correspond to what nature does in bringing about a certain end, whereas the using art corresponds to what we do with the products of arts. The end-dative is restricted to cases of human agency and there is no equivalent at work in nature.

Now I think this reading both overstates and misstates what the passage is saying. One point is that the distinction between the productive and the using arts is supposed to bring out two different ways the arts relate to matter: the productive art is directly concerned with matter in reasoning about the kind of matter which will best realise a certain form, while the using art is indirectly concerned with it in prescribing the form that the matter is then to realise. However, that this distinction between the two kinds of end exists in the arts is not an indication that it does not also exist in nature or that it is only because we human beings use natural beings that they in any way have an end-dative. This may be so, but the passage doesn’t tell in favour or against it. That was the overstatement.

The misstatement is the claim that the relationship between the end-genitive and the end-dative is always contingent. Contingency may obtain in the case of some artefacts but not all. The doctor aims at the end-genitive of health, but the relationship between health and the patient, the end-dative, is clearly not contingent. This point about the way the productive art depends on the using art goes back of course to Plato’s Republic X, where the example was the flute-maker and the flautist. The flautist tells the flute-maker how to make a flute, so the end of the producer’s art is set by the user’s art. If then we associate the using art with the end-dative and the productive art with the end-genitive, we can hardly maintain as a general claim that the relationship between the two is contingent. Of course, this does not exclude that it may be contingent either in those cases where natural entities are used by humans for their own ends, or in cases, if any there be, where the end-genitive and the end-dative are

\[^3\] Gaiser (1969) 106.
\[^4\] Cf. also Euthydemus 291c-d.
both features of natural entities. But the point shown by the arts is that this contingency cannot be a feature of the relationship between the end-genitive and the end-dative as such.

One aspect of the distinction that needs clarification here is the relationship between the end-genitive and the good. Aristotle completes the first paragraph of the *Physics* passage by underlining that not every terminus of a process counts as an end, but only the best. Certainly there is no need always to qualify the best by a dative ‘for which/whom’. To make this kind of point Gaiser refers to various passages in Aristotle’s ethical works where the good simply speaking (*haplôs*) is used to contrast with the good for someone or something (*tini*). But there are two possible kinds of claim involved here: one is that we need not add *tini* when we talk about something as good *haplôs*, which is true; another claim is that it is not implied that what is good *haplôs* is good for some kind of thing, which is often, at least, false. So Aristotle distinguishes between what is good *haplôs* for man, say a life according to excellence of reason, and what is good for some individual or other (eating five pounds of flesh is good for Milo the wrestler, but not for some other man.)

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But there are also cases where the end-dative seems to articulate the goodness or at least an aspect of the goodness of the end-genitive. So in the case of health, why is health good? Clearly in part because it is beneficial to the patient. A doctor tries to make his or her patients better. We might in some cases, say where the treatment would be too painful or the patient is resolved to die, imagine a doctor who abandons the attempt to restore health, for the good of the patient. It is reasonable to say that promoting the good of the patient falls within the remit of the doctor as such; it is not just, for example, a consideration brought on by any general ethical duty to help others.

Sometimes this connection between the end-genitive and the end-dative may not be obvious because it emerges only at the level of a higher end-genitive. So brick-making is subject to the art of house-making, which is for the good of man, but one might well think that brick-making itself does not have a beneficiary. Similarly, it could be that there are processes in nature which have an end-genitive that is subject to another end-genitive whose goodness is to be referred to an end-dative only at this higher level. Think, for example, of the roots that plants shoot, which allows the plant to absorb the nutriments in the ground. The immediate end-genitive of roots’ growth might be said to be their downward position, but this process is clearly subservient to the aim of taking nutriment (cf. *Phys.* II.8 199a27-29), a good for the

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5 *EE* III.1 1228b18-30, VII.2 1235b30-1236a15; *Nic Eth* V.1 1129b3, VII.12 1152b26-33.
7 Alternatively, one might think, as David Ebrey has suggested to me, that there are nested benefits along with nested ends. So in the first instance what is benefited is the house: it has better walls, while the house in turn benefits the person. One issue with this suggestion is clearly whether we can make sense of something’s being good for a non-sentient being, on which see below.
The plant seems here to be an end-dative. Of course we may say that the end-dative is obvious at this level of nutrition given its end-genitive of preserving the plant; yet the end-dative still adds the information that this end is good for the plant. The end-genitive of nutrition makes this end-dative explicit.

Now, to generalise, it is particularly when we consider the goodness of the end-genitive that it is tempting to introduce the end-dative. There is a Platonic background to this, as we can see in the Timaeus. When Timaeus seeks to explain what the primary cause or aitia of the eyes is, he at first refers to it like this:

‘We must go on to describe the function that makes them [sc. the eyes] most beneficial, because of which god has given them to us. For I reckon that sight has become the cause of the greatest benefit to us in that not a word of all that is being said now about the universe would ever have been said if we had not seen stars and sun and heaven.’ (Tim. 46e7-47a4)

Clearly the reference to us as the beneficiary is an important aspect of the cause. But Timaeus in the following lines also uses the language of hou heneka in a way which seems at least a partial anticipation of Aristotle’s use: ‘god devised sight and gave it to us so that we might see the revolutions of intelligence in the heavens and use their untroubled course to guide the troubled revolutions in our own understanding.’ (47b6-8). Timaeus’ claims are fairly rendered by saying there is an end-genitive of vision, seeing the revolutions in the heavens and correcting our reasoning, but also an end-dative, us for whose benefit god devised sight.

Now it is no doubt relevant that Plato premises the cause (aitia) on a craftsman’s providence: the function is good because god gave the eyes to us for that reason, to be for our benefit. In the context of this kind of explanation it is no surprise that the goodness of the end-dative arises immediately in the context of explaining the end-genitive. However, there is a way of putting this point even without reference to a demiurge: there is a function which benefits the organism that has it. It is when we start thinking of end-genitives as good in this way that it becomes hard to avoid the beneficiary, the end-dative.

However, it may well be another point introduced by this Platonic background that makes scholars wary of assigning much work in Aristotle’s natural philosophy to the end-dative. Isn’t the end-dative a way of smuggling in a further end in nature, which allows for a cosmic anthropocentric teleology? So in the Timaeus it is not just the eyes that were made for our benefit, but also the Sun. However, this fear is unfounded. To say that we use natural entities is clearly not to say that natural entities themselves are for the sake of us; that nature is such as to be for our benefit. It’s just to say that the arts pick up things in nature and use them for our good, and in these cases we are the end-dative. But it does not follow from this fact about the arts, that it uses natural beings for the benefit just of man, that if there were also an end-dative in natural causation, that is an end-dative outside of artistic uses, then the beneficiary would always be the same, man or some other thing. What does seem to follow, however, is that if there is also an end-dative in nature it is reasonable to think of it as standing as a user in relation to the end-genitive in such a way that it benefits from its use.

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8 Cf. DA II.4 416a2-18; III.12 434a22-26.
10 See Timaeus 39b-c.
11 This is not to exclude that there will also be end-datives which use features that do not themselves have end-genitives. The omentum discussed below is one such feature.
As is well known, there is a passage later in *Physics* II.7 which is naturally read as restricting the use of final causes to particular essences:12

‘We must explain the “why” in all the senses of the term, namely, (1) that from this that will necessarily result (“from this” either without qualification or for the most part); (2) that “this must be so if that is to be so” (as the conclusion presupposes the premises); (3) that this was the essence of the thing; and (4) because it is better thus (not without qualification, but with reference to the substance in each case).’ (*Phys*. 198b5-9, revised Oxford transl.)

(4) seems to be the specification we want for the end-dative in cases such as *eudaimonia* for human beings and nutrition for plants. In these cases the end-dative is the same thing as the subject of the end-genitive. But what the end-dative adds is that the end-genitive is good for a certain kind of thing.

This is a feature that we shall find again in the cases of the end-dative that Aristotle uses in his psychology: the end-dative is the same entity in which the end-genitive is realised, not a distinct entity. There is an analogy between the end-dative in natural beings and artefacts: in both cases the end-dative refers to a user which benefits from the end-genitive. But the end-dative in two cases also differ in a way that parallels the way art and nature differ with respect to the efficient cause: where the efficient cause is external to the artefacts but internal to natural beings, so the end-dative is internal to the natural beings themselves, but external to artefacts. The role of the end-dative in natural causation, so understood, is not one that supports anthropocentric cosmic teleology since this would make the end-dative, man, external to many of the things of which it is the cause.

To sum up, so far: there appears to be a way in which the end-dative helps explain the works both of art and nature. This becomes apparent particularly when we consider the end-genitive as good, where the end-dative helps specify the respect in which it is good. The difference in such cases between the end-dative in the arts and in nature is that it belongs to the natural being itself, not to an external entity such as man.

3. I turn now to the *DA* to show how the end-dative helps explain psychological phenomena. The distinction between the two ends occurs twice within one page of *De Anima* II.4. The first passage, 415a26-b7, introduces the nutritive capacity. Aristotle says that animals have offspring in order to participate in the eternal in the way possible for them. For they all desire this and do everything they do in accordance with nature for the sake of this, and then he adds ‘that for sake of which is said in two ways, as that at which it aims (*to hōu*) and as that which benefits (*to hōi*).’

It is the goal-directedness of reproduction which occasions the distinction between the two ends. Participating in the eternal seems, as the object of desire, to be the end-genitive of reproduction. But it is hard to see how the end-dative applies. Surely it is not for the benefit of the eternal or god. And how could it be for our own sake? For we as individuals are not around to enjoy our own afterlife, and the species, which does survive, does not seem to be of the sort that can enjoy anything.13 Given this difficulty one might conclude that the distinction is simply there to prevent any impression that the Platonic picture is in play, that is, to block the introduction of the end-dative. To all intents and purposes we could do

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12 For this reading see Judson (2005).

without the distinction: Aristotle is interested only in the end-genitive. Trendelenburg was perhaps right to recommend excision.\textsuperscript{14}

However, before moving to such a conclusion, it is worth looking more closely at another Platonic precedent, which everybody recognises as the background to this passage, namely Diotima’s speech in the \textit{Symposium} (206a-209e). Diotima claims that lovers desire ‘the good to be theirs forever’ (\textit{to agathon hautois aei einai}, 206a6-9). The dative here is possessive, but the passage clearly suggests that we are interested in this as a good for us. The \textit{ergon} or function of love, meanwhile, is procreation in the beautiful. It aims at producing ‘another thing such as it was’ (208b). And this point of the \textit{Symposium} is clearly echoed in the passage before us when Aristotle uses the phrase ‘to make another thing such as oneself’ to describe the end-genitive of reproduction. However, this description does not show why mortal beings are interested in reproduction. This becomes clearer when we describe the end as participating in the divine and the eternal to the extent possible. For divinity sounds like something worth having for a mortal being. Once we describe the end-genitive of nutrition in this way, in a way that advertises what is valuable about the process, it seems appropriate also to specify mortal beings as the end-dative.\textsuperscript{15}

The problem remains how a mortal being could be the beneficiary of perpetual existence. There are different ways the dilemma could be diffused. Aristotle does seem to think in \textit{Nicomachean Ethics} I.10-11 that an individual can benefit or be harmed by what happens to its descendants, but it is doubtful whether the limited dependence of our happiness on the success of one’s offspring allowed for here would motivate a concern with the eternal. However, one might think there is a way in which the species, despite its eternity, is capable of being benefited in that its continued existence, as \textit{Physics} VIII.6-7 tells us, involves a process of continued generation which ultimately relies on an external cause, the first unmoved mover. In contrast, the eternal existence of the first unmoved mover involves no change and no external causes of its being, and for that reason cannot be benefitted by any changes. Since, then, the species of living beings require external help to ensure their continued existence, the obstacle that precludes the first unmoved mover’s being a beneficiary does not apply to them.\textsuperscript{16} Of course we may still think that a species is not a proper subject for enjoying anything, but a) we should be careful not to assume that only sentient subjects can ‘enjoy’ benefits in the sense relevant for Aristotle – clearly plants (which have no sentience) are beneficiaries of reproduction – \textsuperscript{17} and b) one may think of the species distributively and say that the species enjoys immortality in the sense that each and every of its members enjoys its own existence.\textsuperscript{18}

4. I turn now to the main act, the occurrence of the distinction in \textit{DA} II.4, 415b8-22:

‘The soul is the cause (\textit{aitia}) and principle (\textit{arkhē}) of the living body. But these are said in many ways, and similarly the soul is cause in the three of the defined ways: for the soul is the cause both as that from which the change is and as that for the sake of which and as the substance of ensouled bodies. That it is the cause as substance is clear: for the substance is the cause of being for all things, and living is being for living beings, and the soul is the cause

\textsuperscript{14} Importune intrusa; repetuntur infra, ubi suum locum habent, unde huc manasse videntur.

\textsuperscript{15} This indeed is the kind of reading adopted by Themistius, Simplicius and Philoponus. See the helpful discussion in Johnson (2005) 67-69, who appears to agree with this interpretation.

\textsuperscript{16} See \textit{EE} VII.15 1249b9-16.

\textsuperscript{17} As Johnson (2005) 66 n.7 rightly notes vs. W.D.Ross.

\textsuperscript{18} For the teleology of animal generation, see further D.Henry in this volume.
and principle of this. Moreover, the actuality is the formula \(\textit{logos}\) of what is potentially. It is clear that the soul is a cause also as that for the sake of which. For just as the intellect acts for the sake of something, in the same manner does nature, and this is its end. The soul by nature is such an end in animals. For all the natural bodies belonging to the soul are instruments,\(^{19}\) the bodies of animals, like the bodies also of plants [are instruments], being for the sake of the soul. For “that for the sake of which” is said in two ways, as that of which and as that for which. And the soul is also from which locomotion proceeds’ (\textit{DA} II.4 415b8-22).

Now when Aristotle again mentions the distinction between the two kinds of \textit{telos} we may think, again, that it is knee-jerk reaction to the mention of the final cause. But when we look at what comes before the distinction, there seems good reason to think that the beneficiary cause is an integral part of Aristotle’s thinking. So he points first to the way \textit{nous} makes things by analogy with nature. Intelligent production suggests the case of artefacts that have not just an end but also a beneficiary, since artefacts generally involve users and beneficiaries. Similarly, we might think that nature has created the bodies of living being so that they can use them for their own benefit. Aristotle’s thinking may, then, be close to that of \textit{Physics} II.2 where he used the arts to indicate the presence also of an end-dative. Accordingly, Aristotle here underlines the instrumental nature of the body where again we think that instruments like hammers and saws (the sorts of instruments Aristotle directed us to in II.1) have not just an end function, but also a beneficiary. We would think then of the soul not just as the fulfilment of the body in the sense that its capacities and activities realise the body’s potential as an instrument, that is, think of the soul as an end-genitive, but also that the soul benefits from the body in that it uses parts of the body in realising its characteristic activities.\(^{20}\) We need not separate the soul from the body to make this point: we can think, for example, of the whole living being using a part of its body to realise a certain function. By analogy, a corporation may use an employee, who is part of the organisation, to execute a certain job, which is good for the corporation as a whole. Or we might say that one part of the organisation, the administration, say, uses another part of it to fulfil its ends. There need be no contradiction for Aristotle in the notion of the living being using a part of itself for its own benefit.

Is it right, however, to think of the soul in this case as the end-dative rather than the living being as a whole? One might think that the soul as such does not have its own interests and benefits just for the reason that the soul is not a substance in its own right. Humans, dogs and trees have interests: it is after all such substances that live and live well, not their souls as such. To avoid the implication that that the soul has interests in a manner appropriate only to substances,\(^{21}\) one may take the sense in which the soul is the end-dative to be as a specification of the respect in which the whole living being is properly said to be benefitted. In \textit{DA} II.4 Aristotle (415b11-14) refers to the soul as being most properly the substance of the living being, that in virtue of which it lives. If, then, we think of the soul as that in virtue of which the living being is alive, we may also consider that it is the living being in virtue of being ensouled which is most properly in a position to enjoy benefits. The instrumental body helps us live and live well, and living and living well are something we do in virtue of our soul. Similarly, you might think that it is in virtue of being ensouled that a living being is

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\(^{19}\) ‘all the natural bodies are instruments of the soul’ may be the more obvious translation, but it is not the kind of thing Aristotle would want to say or want to say here.

\(^{20}\) See the helpful discussion in Menn (2002) 110-114.

\(^{21}\) Menn (2002) argues that Aristotle presents the soul as being like the art rather than the artisan in order to avoid the implication that the soul is a distinct substance in relation to the body it uses. But it is not clear to me how (if at all) Menn would avoid the impression that the soul understood as the beneficiary is like a substance in having its own interests.
properly able to enjoy good health, because the benefit is tied to the states and processes of living. (Of course the perception of well-being will be one of those but there is no need to limit the benefit to this life function.) Given then that the benefit of the body accrues to us in virtue of living, and living is a function of the soul, it makes sense to think of the living being *qua* ensouled as the beneficiary. Overall, we might prefer to say, in line with 408b13-15, that the living being *qua* ensouled uses its bodily parts to realise its functions.

5. So the claim is that the soul, or the living being *qua* ensouled, is the end-dative of the body considered as its instrument. The soul uses the bodily parts for its own benefit rather in the manner a craftsman uses his instruments for his own ends. The difference is that the living being’s instruments are part of it, not distinct as are the craftsman’s tools. This, however, is not the end of Aristotle’s interest in end-datives.

What I want to suggest is that the end-dative is a handy device for Aristotle when he seeks to explain teleologically a wide range of things we do in virtue of our soul. I shall argue that while it is the end-genitive that serves to define the various capacities of the soul that define the soul as such, there are also uses of these capacities which do not themselves have end-genitive though they can be explained in relation to the living being as the end-dative. The use of the end-dative presupposes capacities with ends-genitive but allows us to extend teleological explanation in the *DA* to psychological activities not captured by the end-genitive.

Consider the capacity to perceive. The capacity to perceive is the formal cause of the sense organs. It is the presence of the capacity to perceive that makes the sense organs *such*. But prior in account (*logos*) to the capacity is the activity of perception, and again prior to this is the object of perception, the sensible form. If you really want to know what a sense organ is you have to understand what it is to be able to perceive, and perception is the reception of sensible form. Our sense organs are instruments whereby we are able to engage in perception so defined. Formal and final causation coincide in the account for the sense organs: the activity for the sake of which we have sense organs is also the activity that ultimately defines them, defines them, that is, via the definition of the capacity to perceive. We meet again the characteristic feature of the natural philosophical accounts: formal and final causes coincide.

Now I want to show how Aristotle’s account of perception also involves a final cause, in the sense of an end-dative. The end-genitive of sight, say, is the actual perception of the proper object of sight, colour. This is what sight is *for* and how we define sight as a capacity. However, it is clear that Aristotle also thinks that sight has further functions. So in *DA* III.12-13 he argues that vision, and the other distal senses, are necessary for the survival of animals that move around, to avoid dangers and spot food and drink from afar. However, the distance senses also contribute to our well-being. This claim is further developed in *Sens.* 1 where

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22 ‘For it is probably better not to say that the soul pities or learns or reasons, but that the human being does so with the soul.’

23 ‘The living being *qua* ensouled’ might in some contexts be distinguished from ‘the living body *qua* ensouled’. So in nutrition (416b10-30) Aristotle says that the nutritive faculty uses food to nourish the living body *qua* ensouled. Here, while only living, ensouled beings are nourished, it is clearly important to specify what is nourished as a body, since it is as a *quantity* that needs to maintain its form that it is nourished.

24 As Menn (2002) 113 puts it, ‘the body is for the sake of the soul as τὸ ὄργανον is for the sake of the art or the artisan’.

25 I argue for this claim in Johansen (2012). For a contrasting view, which denies that capacities define the soul, see C.Frey’s contribution in this volume.

26 See *DA* II.4 415a14-23.
Aristotle points to the ways in which sight and hearing contribute to our knowledge. Now it is clear from what I have already said that the end-genitive of sight is not realised in locomotion or knowledge as such: the capacity of sight is for the sake of seeing colours and this is the activity that defines it. Seeing may in turn be used in our perambulations and cogitations, but we do not make reference to locomotion or knowledge when defining what sight as such is.

While these passages show that perception contributes to moving and thinking it does not yet follow that the way to think teleologically about this contribution is to bring in the end-dative. For we might think that this is a case of an end-genitive being subordinate to a higher end-genitive, rather the way the art of brick-making served the art of house-making. This perspective too could accommodate the holistic implications of the cooperation of the various capacities, when we say that certain animals need distance sense to move. So a variety of arts come together in the building of a house, the arts of brick-making, plastering, plumbing and so on, each with its particular defining end, but all contributing to the making of a house. Similarly, the various functions of the soul might come together with the soul as a whole being their overarching end. Such a picture can be maintained simply in terms of thinking of end-genitives, one might say. There is no need yet to bring in the end-dative.

However, if this holds for the capacities of the soul, we would expect there to be a closer definitional and explanatory connection between the lower and the higher ends than appears to obtain between the capacities of the soul. Bricks are after all made for the sake of houses, so it seems that the account of brick-making is not complete, to say the very least, unless house-making has been brought in. Similarly, the account of bridle-making is not complete without reference to the use of bridles in horseback riding. Perhaps we do not need the connection between the lower and the higher art to be very specific: there may be arts that prepare rather general-purpose products, such as rubber or steel. However, not even such a general-purpose connection seems to obtain between the capacities of perception and locomotion. Perception may in some animals contribute to locomotion, but the account of perception as such makes no reference to any further use, let alone locomotion or knowledge; and it couldn’t make such reference, given that the account has to apply to creatures that possess no such further functions. The definitional independence of perception from locomotion or knowledge suggests, then, that it cannot be understood as having a further end in either of these that functions as its end-genitive.

Moreover, it is clear that DA III.12 uses the dative to pick up on what is good for the organism. This comes in extension of the claim that nature does nothing in vain:

‘Why should it not have perception? It would have to be better either for the soul or for the body; but in fact it is neither – for the absence of sensation will not enable the one to think or the other to exist better. Therefore no body which is not stationary has soul without sensation.’ (434b5-9; revised Oxford transl.)

The notion of well-being, as expressed by the good (to eu) plus the dative, seems exactly to introduce the perspective of the end-dative, the perspective of what is good for a certain kind of substance. This is also why the teleological explanation involving the same capacities can differ for different substances; what is necessary for one is also for the well-being of another. The teleological perspective goes beyond the end-genitives that apply by virtue of the capacities themselves.

27 The point I’m making here is specifically about the instrumental relationship between end-genitives; this does not tell against there being explanatory connections between end-genitives and end-datives of the sort we observed in the case of medicine between health and patient.
Compare the discussion in Sens.1 (436b18-437a17). Aristotle here distinguishes between, on the one hand, sight’s contribution, by its proper function of perceiving differences in colour, to our knowledge of the world and, on the other hand, the way hearing contributes per accidens to knowledge, insofar as it allows us to hear speech. It seems clear that what sight does as such is something all sight does, animal or human, but also that humans use colour differences, given that they have intellect, to extract other information about the world. In contrast, the proper object of hearing, i.e. sound, doesn’t as such tell us much about the world. Speech does, but it is accidental to sound as such that it makes up speech. Aristotle’s point here is not that vision as such contributes to knowledge, but that what vision as such is of, colour, contributes to knowledge for human beings, while hearing neither contributes as such to knowledge nor has a proper object, sound, which is such as to contribute to knowledge. In both these cases, if in rather different ways, it seems attractive therefore to say that the final causes involved are not causes that belong to the visual or auditory capacities as such, rather hearing and sight serve a purpose insofar as they are used in a certain way by human beings for their benefit.

These instances point, then, to a significant role for the end-dative when Aristotle explores the functions of psychological capacities beyond those that serve to define them as such. This is no doubt part of the reason why such ends-dative occur at the end of the DA, and then in the Sens. after the capacities have been defined by their proper functions. The end-genitive we looked at earlier in the DA attached to the capacities of the soul themselves, and made no reference as such to the whole soul or living being to which they belonged. And that is why Aristotle in DA II.5-11 could define the perceptual capacities, for example, in the same way for all animals. However, the good that perception served had to be specified in different ways for different animals. These goods are not involved in strictly defining the capacities of the soul as such, but rather emerge when we consider, more holistically, how these capacities are employed by various kinds of living beings for their overall good.

The similarity between the end-dative in art and nature can now be restated. In the arts we have the distinction between the producer’s and the user’s arts. Here the end-dative is linked to the user’s art. This art tells the user how to use the artefact to his benefit. In the psychological case the end-dative is the organism as a whole. The organism uses the various end-genitives for its own good. So the end of sight is discriminating colours, and man will, as a natural knower, use this end for his good in acquiring knowledge. Bringing in the end-dative, as the whole organism, allows us to see explanatory connections between perception and knowledge. It is when we bring in man as the end-dative that we can properly understand the teleological contribution that perception makes to knowledge.

So introducing the end-dative allows us to understand the cooperation between capacities from the point of view of the organism they serve. But we can go further. It also allows us to give teleological explanations of psychological phenomena for which end-genitives are not available.

Kullmann offers some helpful examples of the end-dative performing a similar role in Aristotle’s biology. There are, he points out, material structures that arise by necessity but which the organism then co-opts for its own benefit. In this case the structures do not themselves have an end-genitive. One such case is the genesis of the omentum, the double fold of peritoneum which covers most of the intestines. This is at first explained as a

28 The opening of Sens.1 alerts us to the distinction: Ἐπεὶ δὲ περὶ ψυχῆς καθ᾽ αὐτὴν διώρισται πρῶτον καὶ περὶ τῶν δυνάμεων ἐκάστης κατὰ μόριον αὐτῆς, ἐχόμενον ἔστι, κτλ. (436a1-2).
29 Kullmann 173-4.
necessary consequence of the formation of the intestines; once formed the omentum is given the function of improving digestion. But, as Kullmann puts it, ‘this function is only secondary’. There are other structures, such as hair and horns (PA III.2 663b22-24), which arise from material necessity but are then used by the animal to protect itself. Such cases seem to illustrate Aristotle’s observation that ‘At times nature seems to make use even of remnants for some benefit. But that is not a sufficient reason to inquire what all remnants are for the sake of.’ (Parts of Animals IV.2 677a15-17)

Now we have already seen reason not to restrict the end-dative to features that arise merely by necessity without end-genitives. So the nutritive and perceptual organs each have their proper end-genitive, but they are also for the sake of the living being, qua ensouled, as their end-dative. Here it made sense to say that the end-dative made explicit the way in which these end-genitives were good: so in nutrition the end-genitive was participating in the eternal and divine. I also suggested we could understand the coordination of capacities such as perception, locomotion and knowledge within the individual organism from the point of view of this end-dative: aspects of perception, say, the perception of voice could be understood teleologically by the reference to the good of the animal, even if such perception went beyond the end-genitive that strictly defined the capacity of perception.

Now in the case of useful remnants such as omentum the end-dative relates to features that are not essential and do not by nature have an end-genitive. It is an important point about Aristotle’s psychology, just as it is about his biology, that there are features without an end-genitive which can be teleologically explained by reference to the end-dative. Mor Segev has recently suggested that dreams can be understood in this manner. He argues that dreams arise from necessary processes that do not themselves serve a purpose, but may be put to use by nature for the good of the organism in question. Dreams are in other words like Kullmann’s useful residues.

Now dreams are a specific instance of phantasia. Without going into detail, I want here to make a similar point to Segev’s about phantasia as a whole. Aristotle understands phantasia as a movement resulting from the activity of perception (DA III.3 429a1-3). It is involved in a range of perception-like activities, such as dreaming, remembering, and, generally, entertaining images and representations. Much of this work is not to be explained by end-genitives. So Aristotle indicates that dreaming as such does not serve a purpose. However, phantasia clearly also contributes to the way we develop knowledge. Knowledge presupposes memory, a kind of phantasia, and as Aristotle says in the DA III.7 (431a15-17) it is impossible to think theoretically without entertaining a phantasma. Perception strictly

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30 η μὲν οὖν γένεσις ἐξ ἀνάγκης συμβαίνει τοιούτη τοῦ μορίου, PA IV.3 677b21-35.
31 Kullmann’s own taxonomy of final causes would suggest that he agrees with this.
32 A similarly line is taken by Leunissen (2010). She distinguishes between primary and secondary teleology, and associates secondary teleology with further uses of material causes. However, her distinction, on her own admission (5, n.11), does not represent Aristotle’s distinction between the end-genitive and the end-dative, and I shall not to try to assess it here, other than to say that I would take it that Aristotle’s end-dative does not coincide with her secondary teleology insofar as the latter only applies to what has come about because of material rather than hypothetical necessity.
33 Segev (2012). My own suggestion was made, independently, in Johansen (2012) 219-220. I differ from Segev in that a) he does not explicate his claim about the usefulness of dreams in terms of Aristotle’s distinction between end-genitives and end-datives, and b) he presents dreams as a product of phantasia where phantasia itself is taken as a distinct faculty with a proper function, whereas I prefer to see phantasia not as a faculty in its own right with a proper end-genitive, but rather as a movement arising from perception and so as belonging to the perceptual faculty.
34 The reader will find a fuller account of phantasia from this perspective in Johansen (2012).
35 Though, if Segev (2012) is right, dreams may be useful to the organism that has them.
understood does not suffice. Actual perception is of the present. It depends on a perceptual object which is immediately present to cause perception. Without phantasia, it is not clear how perception could retain and process perceptual information in a way that makes it serviceable to our intellect. But insofar as the perceptual faculty also retains sensory images, as a result of actual perception, we can see how perception can retain perceptual information and make it available to higher order cognitive processes: memory, experience, skill, practical and theoretical knowledge. Again this point may be best expressed in terms of the end-dative since phantasia does not occur in order to satisfy these cognitive needs and is not generally defined with reference to its contribution to knowledge. Nor again is perception as such defined with reference to its contribution to phantasia or knowledge, since there are animals which have neither phantasia nor knowledge, though they must have perception qua animals. It seems better therefore to understand phantasia as a process that necessarily arises from perception but is used by different animals in different ways according to their varying needs and interests. The distinction between the two kinds of final cause offers us a way of drawing phantasia in under a final causal explanation without ascribing an end-genitive to phantasia as such.

Consider in the same way, again, the contribution that perception makes to locomotion. We saw earlier how animals that move use perception in a certain way to guide their movements. Now perception strictly defined will only give you access to your immediate current environment. Perception is of the present. But often our movements are directed towards what is not yet present, an object we anticipate or fear. Aristotle refers in the De Motu Animalium to phantasia as performing an analogous function in movement to perception and thinking (701a34-6). Now if phantasia allows us to retain perceptual information, it is possible to see how an animal that moves might employ such information to direct its future actions. A wildebeest might recall drinking water from the Masa and direct its future migrations towards that river. While phantasia itself does not have an end-genitive in locomotion, we can say that wildebeest uses the phantasmata in this way because it is an animal with locomotion. Earlier we saw the end-dative help explain the integration of faculties within the organism, where those faculties themselves had an end-genitive. In the case of phantasia, we see how functions beyond those that serve to define the faculties can also be explained by their usefulness to the organism as a whole. It may be right to describe the use of phantasia by the organism as ‘secondary’, to Kullmann’s phrase, from the point of view of perception itself, yet it is clearly not secondary from the point of view of the organism. A human being would be not be able realise its nature as rational without the availability of phantasia, nor would the migratory wildebeest fulfil its nature.

To conclude: scholars are often sceptical about ends-dative because of their association with cosmic teleology. However, there is a danger here that interpreters in their wish to avoid the coordinating role of end-datives in the cosmos, also do away with their coordinating role within individual organisms. I hope in this paper to have shown that there is some reason to think that end-datives are important to Aristotle’s psychology, and that his psychology is of a piece with his natural philosophy and biology on this point.

Works cited:

36 See On Memory 449b27.
37 Ancestors of this paper were delivered to the Explaining Nature conference at the University of Patras and the Oxford Workshop in Ancient Philosophy. I am grateful to members of those audiences and to Istvan Bodnar and David Ebrey for much constructive criticism.

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