The Role of Thought in Animal Voluntary Self-locomotion

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1. Introduction: DMA 7, 701a7-b1 in Context

The organizing topic of On the Movement of Animals is an animal’s movement of itself from place to place, for example by walking or swimming or flying. I will refer to these as its “self-locomotions.” The treatise’s ambition is to consider, and provide a common account for, these movements—an account that covers and explains them in a single theory, encompassing the self-locomotions of animals of all species. These movements are the ones that, in retrospect at the beginning of the last chapter of the treatise, Aristotle refers to as the animals’ voluntary self-movements, though he has not used the term “voluntary” previously. In general, DMA aims to avoid going into differ-

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1 We see this from the opening lines of chapter 1. However, Aristotle quite naturally includes within the scope of the treatise’s enterprise not only to explain the causes of the movement of, for example, the legs, involved in walking (i.e. in moving the whole animal to a new place) but also the movement of other limbs, such as arms or head, when the animal executes other tasks, while as a whole staying put. Exactly the same causal principles are involved in both types of case. For good measure, in close connection with his central concern for an account of the causes of animal self-locomotion, he adds discussion, in chapter 11 (anticipated in the last part of chap. 4 and in 5), of the automatic movements of breathing, the beating of their hearts, the processes of metabolism of their food and growth, and even such involuntary movements as coughs (see ch. 4, 700a23-25), as well as both the movements and non-movements of sleeping and being awake, and self-alteration in qualities, as well as involuntary self-initiated movements in place of parts of the body (when getting angry or sexually aroused, say). He even alludes (700a12-17) to the movements in place of inanimate things, insofar as those movements are due to voluntary animal self-movement. But all these are side-issues for Aristotle in this work; they are pursued for the full and rich grasp of what is special about animal self-locomotion that attending to these other movements enables.

2 See τὰς ἐκουσίους κινήσεις, 703b3, contrasted there with certain ἀκουσίους or countervoluntary movements, and also with a large group of others that are at any rate not
ential details of the theory’s application to the different animal species—those going from place to place in water, on land, or in the air. From the beginning, it is true, as his examples show, Aristotle is clearly focusing on the specific case of human animals, but, as we will see in our discussion of chapter 7, he does sometimes take into account separately the theory’s application to non-human animals (of whatever type) as well as to human ones. The explanatory account that he develops aims to explain animal self-locomotion within the broadest possible animal context.

Moreover, he situates these movements alongside and in causal relationship to all the other movements taking place in the physical world as a whole. For him, the physical world’s most characteristic feature is its constantly being in movement in many, many different ways. In order to understand animal self-locomotions fully we must grasp them in relationship to the other ones belonging to the whole system of nature: how do they fit in, in relation to those? Though his principal focus is on the causes of these movements that lie within the individual animal (thought and desire), he looks outside too, as we see already in earlier chapters, both to the immediately environing conditions that are required for, and that help to explain, animal self-locomotion (e.g. the outside spring-board an animal has to use to get itself going), and all the way out to the circular movements of the whole cosmos and to their ultimate unmoved cause—those too are involved among the ultimate causes of animal self-locomotion. Animals would not have the natures—the capacities for self-locomotion—that they have if not for the regular

voluntary (οὐχ ἐκουσίους). One should note that the voluntary local movements that Aristotle is primarily concerned to explain are not to be identified simply as all and only the voluntary actions or doings of an animal: they include both involuntary and countervoluntary, as well as voluntary, actions. When an animal does something involuntarily or countervoluntarily out of ignorance or under force, its self-movements in doing it are caused by the same sort of combination of thought and desire that, on Aristotle’s analysis in the part of the treatise I address in this chapter, are the ultimate and principal cause of its voluntary actions.
and orderly movements of the stars, the sun and the moon in constantly bringing them into and sustaining them in existence.

Besides, as we see in chapters 3-5, in order properly to grasp even all the internal causes of animal self-locomotion, we must examine closely the self-locomotion of the heavens, and the dependence of that movement upon an external unmoved mover’s action upon them, in close comparison with that of animals living on and around the earth. Attending to that vastly more impressive self-locomotion and its dependence on an eternal, external, absolutely and completely unmoved, mover leads us to recognize the need for an external unmoved mover in the human and other animal case, as well—in addition to the internal articulation through a limb and joint as what the animal moves itself with and to the external springboard off which it pushes itself, discussed in chapters 1 and 2. Animals need an external object as a cause of their self-locomotion: as we see in chapter 6, this is an external object of desire that moves the animal to self-locomotion by being desired by it. Thus both an internal and an external source of self-movement, connected together, are required for animal self-locomotion, in addition to the joints and limbs (and the external relatively stationary springboard) recognized in the first five chapters of the work.  

In turning, in chapter 6, to address this further cause, the external object of desire, Aristotle rather abruptly mentions for the first time in this treatise the animal’s soul as a cause of the movement of its body: “it remains to consider how the soul imparts movement to the body, and what is the starting point [or originating cause—ἀρχή] of

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3 Here I follow Ursula Coope’s and Benjamin Morison’s analysis in their contributions to this volume, above.
the [self-]movement [from place to place] of an animal” (700b9-11).² Note that there are two questions here: the second, concerning the source or originating cause from which the self-moving movements of the animal’s body derive, sets Aristotle’s specific objective in chapter 6 and the first part of chapter 7. This is the subject of my discussion in this paper. To answer to the broader, first-mentioned question, how the soul moves the body, requires discussion not only of this originating cause, whatever it turns out to be, but includes also the discussion, beginning in the second part of chapter 7 and carrying through to the end of the treatise, of the physiological processes and anatomical facts (such as the location of the heart and its controlling role, for Aristotle, as the ultimate organ for locomotion, as it also is for perception) that are part of the causation of animal self-locomotion.

As to the originating cause, Aristotle states his view almost right away, in chapter 6. He says: “So that the first mover is the object of desire and the object of thought ... “ (700b23-4); and then he adds (b35-6), “So then, the first mover imparts movement [to the animal’s body] without being in movement. But desire and the desiring [aspect of the soul] impart movement while being moved.” Thus, on Aristotle’s analysis, the origin of animal self-locomotion—what begins the internal processes of change that lead to the movement of its limbs for locomotion (in the human case, its legs and feet,

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² It is true, of course, that the animal’s soul also moves it (or rather, it moves itself by virtue of having a soul) in all its other self-movements (nutrition, growth, heart-beat, breathing, etc.). But, as always in this treatise when Aristotle refers simply to animal movement (κίνησις), as here, and the context does not indicate otherwise, we are to understand a reference to self-locomotion, in particular. Hence my bracketed expansions of Aristotle’s text in my translation.
³ I follow Oliver Primavesi’s text, retaining the τὸ before διανοητῶν in line 24 (Nussbaum’s text omits it, following only ms. N, which is not an independent authority for the text). I also follow the interpretation proposed at the Symposium by Primavesi: the thing that initiates the movement of the animal is some object (a thing, or a state of affairs) that is both desired and thought about by it.
with which the actual walking begins)—is the external object or anticipated stated of affairs which constitutes the “that for the sake of which” or end (τέλος) for those movements. That external object, a different one in different self-locomotions, sets the animal in motion, but of course it cannot do that, so to speak on its own: it can only do it by being desired by the animal. The animal’s desire must somehow get connected to that object or state of affairs, in order for the unmoved object to move the animal’s desire toward it, and so for the animal to set itself in locomotion. Aristotle has told us, in the passages of chapter 6 just quoted, that thought plays an indispensable role here: it is by thinking of the object that the animal directs its desire toward the external objective: that is an object both of desire and of thought, he has said.

So Aristotle turns, in chapter 7, to examine first the role of thought in animal self-locomotions. It turns out, as I have just said, that among thought’s functions is precisely to provide the needed connection between desire and the objective for action, so that that objective can act upon the animal’s desire—the unmoved mover acting upon the moved mover of the self-locomotion—in such a way that a voluntary movement from place to place is the result, if all goes well.

In what follows, I divide this first part of chapter 7 into three subparts (701a7-16, a16-25, and a25-b1), commenting upon and discussing the text segment by segment. I begin each of the following three sections of the paper with my translation of one of these segments of the text, expanded with some explanatory additions of my own in square brackets, accompanied by textual footnotes. In segments II and III I provide also parenthetical numerical indexes, so as to flag specific bits of text for ease of reference in the commentaries that follow. My aim in introducing these brackets and

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6 See 700b16 and 27.
indexes is to make the progress of Aristotle’s thought in this highly compressed discussion as clear and explicit as I can.\textsuperscript{7} My interpretation, thus conveyed, I explain and defend, segment by segment, in the appended running commentaries. As the final result of his analysis of thought’s role in animal self-locomotion, I will argue, reached only in the last lines of the third segment, Aristotle makes a perhaps unanticipated, but momentous, addition to his bare claim in chapter 6 that the causal origin of animal self-locomotion is the unmoved external object of both desire and thought. In fact, he concludes, although the objective for action is indeed the causal origin, by being desired, of the changes and movements within the animal that generate the action of self-locomotion, thought is a prior cause of the action, namely the cause of the objective’s being \textit{capable} of moving the animal. So the priority in causation goes to thought, not, as one might have expected, to desire. Thought is what connects a potentially actionable objective to the animal’s desires, so that the movements of self-locomotion can and do then take place, due to desire. Thought, then, is the \textit{ultimate} cause at work in animal self-locomotion—not by being a cause of movement (as the external objective and the desire for it are), but by connecting the animal’s desire to that objective and thereby enabling the requisite processes of change and movement in the body to get underway. I discuss this final result in sections 4 and 5 of the paper.

It turns out that this overarching, general account of the causes of animal self-locomotion applies with significant differences to two different types of animal action. First come those human actions that are consciously done by the agent for the sake of some (at least apparent) good, conceived as a good, and consciously done (at least implicitly) for that reason as they act. Such actions are in Aristotelian terms ones done on

\footnote{\textsuperscript{7} Except where noted I translate Oliver Primavesi’s text.}
a “decision,” a προαίρεσις. No non-rational animal is capable of such actions. Second, there are the actions of non-rational animals, done not on a decision but solely out of non-rational desire, as well as the similar non-rationally motivated actions of human beings.\(^8\) This difference of application too becomes clear in segment III. It is of very great philosophical importance when we attempt to interpret Aristotle’s overall account of desire (and the external objective of that desire) as what initiates any animal self-locomotion. I discuss and emphasize those differences in section 5 below.

Aristotle begins, then, in chapter 7, by discussing in segments I and II solely human actions that are done for reasons of the good that the agent holds in mind while doing them. Here, Aristotle holds, thought alone is the cause of the action. The application of his theory to other human actions and the doings of non-rational animals comes later, in segment III. There, for the first time in chapter 7, Aristotle speaks of desire (ḍρεξίς), too, as an additional cause.

2. How thought moves animals to action: “simple” actions

Even when one bears in mind the mention in chapter 6 of thought’s role in the generation of animal self-locomotion, Aristotle seems to begin the chapter quite abruptly. Rather out of the blue, he asks how it is that thought sometimes does but sometimes does not lead to action.

\(^8\) Decisions involve desire too—that is, they possess motivational force: so when in chap. 6 Aristotle says that all actions are motivated by desire, “desire” there includes, as he says, decision. Note that some human actions are jointly motivated by reason (i.e., wish, βουλήσις, the type of motivation found in decisions) and by non-rational desires of appetite (ἐπιθυμία) or spirit (θυμός).
But how does a person, in thinking, sometimes act but sometimes not act, and sometimes move themselves but sometimes not move themselves? In any event, it [the thinking, viz. that involved in acting] seems to correspond quite closely in fact to the thinking when people are reasoning concerning unchanging things and are making deductions. But in that case the final outcome is asserting in one’s mind a proposition of theoretical science (for whenever one thinks the two premises, one thinks and puts together the conclusion), while here the conclusion coming from the two premises is the action. For example, (1) whenever one thinks that every human ought to take a walk, and that one is oneself a human, one walks off right away; but (2) if one thinks that at the moment no human ought to take a walk, and that one is a human, straightaway one stays put. And one does both of these actions unless something prevents [walking, in the first case] or forces one [to walk, in the second]. (701a7-16)

In this passage Aristotle provides the basic framework for his account of the essential role played by thought (διάνοια, νοῦς) in every animal voluntary movement.

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9 It seems that the subject of the verbs in this sentence ought to be τὸ ζῴου, carried over from 701a4. But the participle is masculine, so we have to take Aristotle here to shift his attention unannounced from animals in general to specifically human beings. Hence, in this segment of the text Aristotle is not yet discussing both human and non-rational animal processes of thought leading to action. He certainly does intend, by the end of the whole first part of chapter 7, to give a common account, applicable both to human reasoned action and to animal (and human) action from non-rational desires—from appetite or spirit. But this general account is postponed to segment III; it is worked out on the already established basis of what Aristotle says in segments I and II about specifically human, reasoned action. See below, sect. 4.

10 It seems best to construe συµβάνειν in a8 as in LSJ, s.v. II 3.

11 One might translate θεώρηµα at a10 simply as “theorem,” but my cumbersome paraphrase is less misleading, since it is common to restrict the English word “theorem” to use in strictly mathematical contexts, not other scientific ones.

12 If we follow several mss., which omit ἦ in 701a12, one would get a slightly more attractive text, “is an action” (corresponding to “is a proposition of theoretical science” in the contrasted case). But the article is omitted below, at a20, in all mss.

13 Aristotle uses these two terms and their cognates in chapters 6 and 7 with no significant difference in sense or application, so far as I can see (see, mostly clearly, 700b17-19 in ch. 6, but also 701a7-9, where νοῶν in a7 is followed in substitution by διανοουµένοις in a9). In my translations and in my discussion I render both of them and the verbs from which they derive by “thought” and “think.” It seems evident that in the context of animal action overall Aristotle wants νοεῖν, νόησις and νοῦς to be understood broadly or loosely, rather than with a narrow reference (as he often elsewhere in these chapters intends) to the intellect and its exercise in theoretical thought in particular (or to practical intellect and its activities). We see this when he says at 700b16-20 that not only διάνοια but also αἰσθησίας and φαντασία can be subsumed under νοῦς (be-
However, as I said, he starts here specifically with the case of a human action that is not only done for reasons the agent holds in mind as reasons, but, as we will see made explicit in segment II of the text, for the reason that what they are doing is a good thing to do, or something one ought to be doing. Later, in segment III, he will show how this same framework also holds (with modifications) for other human actions, ones that are not done for such reasons, and for non-rational animals' actions. Here, then, in segment I, Aristotle compares the role of reasoned thought in human action to thought in contexts of mathematical and mathematical-scientific theorizing. This is the sort of thought he gives an analysis of in *Posterior Analytics*.\(^{14}\) He speaks of two premises and a conclusion in each case. In theoretical reasoning, he rather strikingly says that whenever one thinks the two premises, one therein draws and thinks the conclusion. I take him to mean here thinking both the two premises and the conclusion in an assertive way, not merely as something being entertained in one's thought. So when he says you think the conclusion upon thinking the premises he means you think it not merely as something somehow suggested (or even logically implied) by the premises. You assert it in thought. Apparently, then, though he does not put it this way here,\(^{15}\) Aristotle is saying that it is by a necessity of the rational nature that when a rational animal assertively cause all three present their objects in a way that distinguishes them from others—the essential role of νοῦς), and that those two “take the place,” in certain cases of action, of νοῦς (strictly conceived). This becomes important in segment III; but, as noted above, here, and indeed also in segment II, Aristotle is speaking explicitly only of the fully reasoned actions of human adults.

\(^{14}\) He makes a similar comparison, to the same effect, in *Nicomachean Ethics* VII 3, 1147a24-8. There he speaks of practical reasoning in order to relate actions displaying lack of self-control to considerations of the natures of things (so as to consider them φυσικῶς): we can see why the discussion in this passage counts as belonging to the study of nature when we see that what is briefly sketched there is fully worked out here in DMA 7, a treatise in natural science.

\(^{15}\) Aristotle does speak of necessity in the parallel context referred to in the previous note, at *NE* VII 3, 1147a27.
thinks a pair of premises in a scientific argument that are related to one another in such a way that they validly imply a conclusion, it sees and accepts the implication, drawing the inference and asserting the conclusion as something that it now declares to be true. In order for this to make any plausible sense, Aristotle must be intending “thinking (νοεῖν) the two premises” to mean actively holding them and asserting them in mind as things understood to be true, on the grounds offered in the science as making them true.\(^\text{16}\)

Moreover, the premises are being understood not one after the other, or merely alongside one another in the mind, but together, in a single thought. Thus Aristotle’s claim is that when a rational animal understands the truth of a pair of scientific truths, in terms of the scientific system (say, plane geometry) in which, on the basis of fundamental insights into the nature of geometrical space (the “axioms”), they are established as true, and when it grasps them with that understanding in a single thought, then they right away see the logical connection, and affirm the truth of the theorem that follows immediately from them. Once we understand carefully the background assumptions (just noted) on which he makes it, this seems to me quite a reasonable claim to make.

\(^{16}\) Hence Aristotle need not worry about deranged people, as if there might be derangements allowing a person to grasp the two premises (even to grasp them together in one thought—see below in my main text) but still not put them together and infer the conclusion. (Such people would challenge or be a counterexample to his claim of necessity.) Any derangement that could allow the not-drawing of the conclusion would arguably be one where the person didn’t in fact grasp the two premises at all, i.e., understand them as true, on the scientific grounds that establish them as such. His claim is that any rational animal that does understand two premises in that way cannot fail to put them together in the required way and draw the inference. Nor need he worry (since he is presupposing his own syllogistic) about a vast or even infinite set of implications a pair of propositions might have: for him, there won’t be such a case.
What else could one do, if one really understood the grounds from which it immediately follows that something is true, but affirm its truth?  

Aristotle’s chief interest here is of course in the other sort of reasoning, which he proposes that we understand in parallel with scientific reasoning and understanding. The only difference Aristotle points to is that, in the case of practical reasoning, the conclusion to which the reasoning leads the person, rather than being merely a thought held in mind and affirmed, is an action. Here, the thought concluded to, that precisely this is to be done, is something that in and of itself reaches out into the world and brings about physical changes—first, changes and movements within the body, beginning (as Aristotle will argue in the last paragraph of chapter 7 and in chapters 8 to 10) with alterations in the heart, causing alterations in and movements of the surrounding tissues and other

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17 As I have emphasized, and as his own language makes clear, when Aristotle speaks of reasoning specifically in the sciences, with a θεώρημα as the conclusion, he is speaking solely about scientific deduction from established scientific truths, fully understood and grasped as true. It is in this case of “theoretical” reasoning, and only in this one, that Aristotle says explicitly that the agent at once draws (has to draw) the conclusion once they think together the two premises. There may, of course, be “theoretical” reasoning (anyhow, reasoning that is not practical, as Aristotle explains the latter in this passage) outside such a confined context. For example, one reasons (in an Aristotelian syllogism) that all men are animals (something you believe to be true) and that all animals are mortal (another thing you believe), and then immediately you draw the conclusion that all men are mortal, since that follows validly from those two premises. But in such cases you don’t have to draw the inference, or do so immediately, as something belonging directly to that kind of reasoning. Just by seeing the validity of the inference you don’t have to believe the conclusion, as other examples show: you could, upon seeing what your premised beliefs, in fact, logically lead you to, instead immediately doubt one or the other or both of the premises—so sure are you that the conclusion is false. Perhaps it is a necessity of the rational nature to see what follows from at least some premises, ones where the implication is immediate and evident (as with humans being mortal); but it is no necessity of the rational nature to believe such conclusions simply because one believes the premises and sees the deductive implication. It is believing conclusions, not just seeing logical implications, that Aristotle is talking about here. It is important to see that he is not saying in his discussion of “theoretical” reasoning, as commentators sometimes make him say, that in all instances of it anyone who believes two premises immediately therein draws and affirms the conclusion. See further p. 13 [the third paragraph below].
organs and, finally, movements of the limbs for locomotion. Those in turn lead to movement of the animal as a whole from place to place. Aristotle gives two carefully chosen illustrations, first an action of a positive character—going off on a walk—and then the contrary negative action, an act of staying put. Even the latter is an action, and even it involves internal changes in organs and limbs, and the thought behind and in it reaches out into the world: the animal exercises its force for staying put. Aristotle’s claim is that, in parallel to the thought involved in scientific understanding, a rational animal, just by its nature as rational, immediately acts in the way its practical reasoning indicates it is to act, as soon as it thinks together in one thought the relevant pair of premises: “at the moment [i.e., in circumstances like these] no human ought to take a walk, and I am a human,” or “[in circumstances like these] every human ought to take a walk, and I am a human.”

These examples are schematic, and appropriately, even helpfully, so. We do not need to know, or speculate about, what the circumstances could be in which every human ought to take a walk, or when no human should. Aristotle wishes to claim simply this: whenever a rational being thinks assertively a pair of premises together in a single thought, not one after the other or simply alongside in their mind—holding them to be true, with a conviction parallel to the complete grasp, in unison, of a pair of scientific truths—and these premises validly imply that they should act in some particular way, then they inevitably act that way right away.18 Unless, he adds, something prevents the

18 That is, as noted above, their internal organs at once begin a process of alteration that leads, after intervening steps, to the movement of their limbs for locomotion, and then a movement to a new location of their whole bodies (or, in the negative case, they hold themselves fixed where they already were). The bodily movement from place to place, itself, does take place right away (εὐθέως, εὐθύς), but that does not preclude any intervening short time for the initial change in the body, from which the movement from place to place is started, to have that effect.
movements of the whole animal from taking place, or, in the negative case, unless something forces it to move even though it is trying to stay put. Nothing needs to be added between the drawing of the conclusion and the beginning of the action: for example, there is no triggering of some desire, a separate conative state or event, which has to take place first. The drawing of the conclusion in thought is (also) the beginning of the action. By a necessity of the rational nature, rational animals just do do what they think is to be done at that moment, when they do have such thoughts. Their very nature is to do that—unless of course they are otherwise prevented or forced, either by some outside agency or through akratic effects of appetite or emotion on their power of practical reasoning. No further causal explanation of their acting that way is either called for or possible. Their thought that this is to be done is the whole explanation.

I need to make two observations about Aristotle's application to practical reasoning of what he has said about theoretical-scientific reasoning. First, Aristotle's claim about the effects of practical reasoning on behavior is much stronger than the parallel one about theoretical thought. His claim is not merely (in strict parallel to the case of scientific theory, where understanding a truth on the basis of the reasons which make it true) that whenever a rational animal grasps the truth about what to do in given circumstances, they immediately do it, and are caused to do it by their thought, unless prevented. He claims that whenever they think two relevant premises, whether these are true or not, it belongs to the nature of a rational animal, as such, to do (unless prevented) what those premises imply is to be done. In the practical case, then, rational nature includes not just an inherent disposition to accede to the truth, when it is made evident,

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19 On the latter possibility, see my comments below, at the end of sect. 5.
and to be caused thereby to act accordingly. It includes a disposition to do whatever one even thinks (firmly) is true about appropriate action.

There is a second way, as well, that Aristotle’s claim about practical reasoning is extremely strong. As I mentioned above, Aristotle recognizes that some actions of rational animals, like all actions of other sorts of animals, are not reasoned ones, of the kind he has illustrated with his examples about walking. Some actions are done from appetite or from emotion, and without reasoning about what is appropriate or right or best to do being any part of the causal background to those actions. I will say more in discussing segment III of the text below about those sorts of actions, both as done by human beings and as done by non-rational animals. But already here we see that Aristotle is claiming in rational animals a default preference, grounded in their nature as rational, among available alternative actions that might somehow occur to them to do on a given occasion, for the one supported by a pair of premises held in reasoned thought about what it is best to do. He is saying that rational animals, by their nature as rational, follow reason in selecting their actions, whenever their reason, whether rightly or wrongly, says definitively what they should do. Even a faulty and incorrect reason, whenever it speaks to them at all, is always effective for them; it always has the greater causal force, in comparison to non-rational desire or any combination of such desires, in relation to those bodily changes and movements that cause action. If it ever happens that they do not follow reason when it speaks, some special explanation is called for about how that can have happened. (I return to this feature of the rational nature below, section 5.)
3. The thought involved in “complex” actions

So far Aristotle has considered simple actions only: ones that consist of one set of movements taking a short time (like flipping a light-switch or scratching your arm or kicking a ball that is standing in front of you) or that, as in Aristotle’s examples of going off on a walk or staying where one is, consist of a single such action repeated in the same way more or less continuously over some period of time. Aristotle now turns, in segment II of his text, without any sort of break or indication of a shift of topic, to consider the application of his basic account, presented in segment I, to complex cases of reasoned actions, such as making a cloak or building a house, which consist of an ordered series of actions, over a considerable extent of time, of several, or many, different simple kinds, such as cutting some cloth, stitching it together, applying a collar, etc., or assembling some bricks, applying mortar, placing them in a row, adding a row on top of an existing one, etc. Such complex reasoned actions of human agents are done in the course, and for the sake of, making something, of acting (πράττειν) so as to yield some product (ποιεῖν).

Segment II

(1) I ought to make a good, and a house is a good: straightaway he makes a house [i.e., begins making a house].20 (2a) I need clothing, and a cloak is clothing: I need a cloak. (2b) What I need I ought to make, and I need a cloak: he makes a cloak [i.e., begins making a cloak].21 (2c) And the conclusion, that I ought to make a cloak, is an action. He acts beginning with a

20 Aristotle cannot mean that the agent immediately actually gets a house built; houses are not built in a single action. The simple present-tense assertion here, “he builds a house,” is schematically expressed, as for Aristotle’s purposes it needs to be. It means that he starts building; the present tense is inceptive here and in (2b). (On the schematic character of the examples in this passage, see my discussion below.)

21 Here many mss read ιμάτιον ποιήσων instead of the better attested ιμάτιον ποιεῖ: “I ought to make a cloak,” instead of “he makes” one. The better attested reading also makes much better sense of Aristotle’s theory, as I will explain. Whoever first made the “correction,” and those who followed suit, thereby showed that they did not properly understand Aristotle’s theory.
first step. If there is to be a cloak, this is necessary first, and if this, that, and straightaway he does that action.

(3) So, that the action is the conclusion is clear. And the premises in cases of making things come to be by two means, both through the good and through the possible. (701a16-25)

Here again we get two examples; again they are schematic, and again that is both appropriate and helpful—despite the consequent apparent weirdness of the reasoning, as Aristotle expresses it. In interpreting the examples we should bear in mind the two-part

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22 The Greek here is αἱ προτάσεις αἱ ποιητικαί. I tentatively take the adjective (“in cases of making things”) to indicate not “practical” premises in general, as opposed to ones in theoretical arguments (that alternative is how the same adjective, modifying the same noun, seems clearly to be intended at NE VII, 1147a28), but ones found in connection, in particular, with actions of making. The similar terminology in the NE VII passage might incline us to take it in the same way here as there, but we are not required to do so, simply because of the parallel. The two surrounding contexts differ: here, we have just been talking specifically about actions of making things (ποιεῖν), so it is natural to take ποιητικαί προτάσεις as ones leading to actions that are makings. On that understanding Aristotle says here only about examples of complex action aimed at producing some external end that their two premises are respectively one “of the good” and one “of the possible.” As to practical syllogisms for simple actions, it is already clear from segment I that the first premises there are “of the good.” (At 701a14-15 in segment I Aristotle formulates the first premises of his two examples using language of what people “ought” to do; but that that is equivalent to an assertion of something as good to do is made explicit below, in segment III at a27, where Aristotle reformulates the first premise in his first example as “taking a walk is good for a human.”) The issue concerns only whether Aristotle means to say here that the other premise, the second one, in all cases, and not only with acts of “production,” are classifiable as “of the possible.” It does seem rather awkward to think, e.g., of simple acts such as starting off on a walk as depending upon a thought about moving as one then does as a way of walking off, or (in Aristotle’s examples) of being a human as one way of implementing a premise of the good saying that all human beings ought to go off on a walk. This is however a minor point. The point to notice is that Aristotle’s text in II (3) allows either interpretation, though perhaps it even favors the more restricted one. If it does favor the restricted interpretation, that could seem important if one thinks, as some interpreters do, that many actions, for example ones in which a practical virtue is expressed, don’t have second premises at all plausibly analyzed as “of the possible”: in the thought “just action is a good, this (a particular act of repaying a debt) is a just action,” it might seem odd to classify the second clause as expressing a possible way of doing something just. But I do not insist on that; perhaps Aristotle means to claim his two types of premises as applying to all cases of practical reasoning, not just to actions in making something.

23 Here I translate Primavesi’s conjecture of δυεῖν ὁδὸν at a24, but with little confidence. The alternative, found in most mss and accepted by most editors, would yield “two kinds.” The difference of reading makes no significance difference for interpretation.
conclusion (3) that Aristotle wants us to draw from considering them (it is marked formally with the ὅτι µὲν ὦν in a22): namely, (i) in all cases of completed practical reasoning the conclusion reached really is an action (as he has already asserted in segment I, discussed above), and (ii) the two premises thought together in the syllogism which completes the reasoning are one “through the good” and the other “through the possible.” The crucial point to grasp for now is that Aristotle wants, via the examples, to show us something about the structure of the thought that directly and immediately causes action, as I have already explained. He wants to tell us about what is in the agent’s mind, implicitly or explicitly as they act—what they have in mind that causes the movements they make in acting. He is not giving a mini-history of the course of thought that some person might go through in selecting and planning out an action, or series of actions. He is not discussing a deliberative process, but, presupposing and leaving that aside, solely the thought the agent holds in mind which immediately causes the (beginning of) the action, by initiating some alterations in the relevant parts of their body that then lead to the movement in place of the limbs for locomotion. If we bear that intention in mind, the examples, as described, become less weird-looking, as I will explain.

If we look closely at the two examples—of making a house and making a cloak—we should remark an important difference between how Aristotle describes them. In each case he is explicit, and emphasizes, in order to establish point (i) above, that the conclusion of some syllogism in the given case is an action: in the first the agent “straightaway begins to make a house” (a17), in the second the agent “begins to make a cloak” (a19). However, in the second, but not the first, Aristotle adds a schematic description of how the agent starts the process: seeing that in order to make a cloak one has to start by (say) cutting a bolt of suitable cloth with the scissors on the work-
table, so as to cut the proper amount of cloth, “straightaway he does that action” (a22), viz. starts cutting. There can be no doubt that no house-builder begins making a house, even less than a clothing-maker begins making a cloak, except by identifying some more particular kind of thing to do, corresponding to cutting some quantity of cloth. And even that is not enough: even if you know the specific action to start the process with, you can’t get started except in the presence of the relevant materials and implements, and, moreover, without watching what one is doing and bearing in mind how to do what you intend to do as you get started. Aristotle indicates with his demonstrative “this” (τόδε, a22), in describing the clothing-maker’s work, pointing at or otherwise indicating something present and available to the agent, the agent needs to be thinking, in setting to work, “this needs to be worked upon in this way” where these demonstratives indicate the content of acts of perception or thought the agent is to perform as he starts to work.

We must recognize, then, that Aristotle’s presentation of his first example, of the house-builder, is truncated. It merely sets out the crucial essential fact that Aristotle wants to establish about makings: that the actions that constitute them are immediately caused in each case by two-premise syllogistic acts of assertive thought, in which one premise is “through the good” and one “through the possible.” It is only when we come to his second example, of the clothing-maker, that we can understand fully what he intends to say about the way thought is the immediate cause of the house-builder’s action.

When, therefore, in his too brief first example, segment II (1), Aristotle sets the reasoning out as “I ought to make a good, a house is a good,” and then gives an unspecified action done, in beginning to make a house, as what straightaway follows, we have
to bear in mind that further thought (in specifying and identifying a here-and-now specific action to take) has to intervene before the beginning of the making can get underway. In mentioning these two premises (at a16-17) Aristotle is making explicit that the first premise is a premise “through the good.” The second premise presents the agent’s thought about which good they are going to make—a house. We can imagine a person (someone who possesses the skill of house-building) who is about to begin work on a house. They have decided on that already, for reasons that are none of our business at the moment (those are contained in some deliberation, supporting and explaining that decision): as I said, Aristotle is not giving us here the course of thought that led the agent to do the action that begins the making of a house. He is only telling us about the structure of the thought that immediately causes action, once it is already decided what action to do—in this example, to build a house. Aristotle’s point is that, in now turning their thought to the task of making a house, they are thinking of the house as a good that they are to produce. That is the structure of the thought that directs the action. Among the many possible goods to make, the agent has settled on a house (the, or one of the, good products that they are skilled in making). Hence the premise “a house is a good.” Thus the second premise is aptly classified, in Aristotle’s conclusion at a24-5, as one “through the possible.”

We can readily see from this example, as Aristotle intends, both that here the conclusion is an action, and that the two premises in the thought that immediately causes the action are one in which a good, an unspecified one, is envisaged as the ultimate outcome (“I ought to make a good”), and another in which the particular good to be produced is selected as one possibility for achieving that outcome (“a house is a good”). The agent actively holds in their mind as assertions that they are making, presumably
implicitly rather than in so many words: I have decided to make a good, viz. a house.

They know everything about doing that, including the first step to take. So they immediately begin acting, as a conclusion from the thought consisting in the two premises (I ought to make a good; a house is a good) held together as one assertion in their mind.

This example of the house is, however, as I have said, meant to illustrate merely the essential fact about such makings, that the first step in executing them is caused immediately by a two-premise thought of the agent to do the here-and-now act (in this cease) of beginning to make a house. In fact what Aristotle has described in setting his example out is just the decision, a προαίρεσις, to make a good thing, namely a house. That is only the first premise (a premise “of the good”) of the actual practical syllogism that leads to the action reported in “straightaway he makes a house,” which records the conclusion. The inceptive present tense here, at a17, clearly implies that what the agent actually does straightaway is to take some first step, a first step in and of making a house; a second premise is needed (one “through the possible”), in which this decision is connected to doing something in particular here and now. In segment I, with its examples of going off on a walk, no first step is involved: you just start walking, or just stay where you are, when you have asserted to yourself the two premises. Everyone knows, without further thought, how to walk off or to stay put, and the means for doing it are always present to them in their consciousness: they don’t need to do anything further to make the means present to themselves, as the house-builder does before he can get go-

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24 Hence it does not matter that the conclusion, to do whatever one does do first in making a house, does not follow with logical validity from these two premises. The two premises express the bare decision to make a house—a decision one could express with “I ought to make a house.” What is in valid syllogistic form, as we see below in II (2b-c), is the argument “I ought to make a house, this is making a house (i.e. the first step of doing so), so [action immediately follows].” For discussion of how this action is related to the thought “I ought to do this,” see below.
ing. Thinking “every human ought to take a walk, and one is oneself a human,” one immediately knows that this, moving their legs in the right way, is walking, so “one walks off right away.” Hence, in the segment I cases the two premises Aristotle specifies really are the two premises that by thinking them assertively the agent immediately acts. But in the house-builder’s case the decision to make a house (the first premise) needs to be supplemented with a second one. So far, then, in setting his example out in segment II (1), Aristotle has ignored that need: he has spoken, in parallel to the walker, of “I ought to make a good, a house is a good” as the two premises leading to the action. They would be the two premises if the agent could act without further thought (as with the walker). But in fact they are not. A premise concerning a more specific, and here-and-now thing to do, has to be added.

Aristotle turns to that supplementation in II (2), with its new example, a clothing-maker. So, Aristotle begins: (2a) “I need clothing, and a cloak is clothing: I need a cloak.” Note that, though the thought expressed here is syllogistic in form, the conclusion proposed (“I need a cloak”) is manifestly not an action. Aristotle is very clear that it is not; in setting out this example, he withholds referring to any action as the conclusion of a syllogism until the next step (2b). So this first syllogistic argument is not an example of what in the literature on Aristotle we call the “practical syllogism”: whatever else a practical syllogism may be, it is understood to be a thought whose conclusion is claimed to be (the doing of) an action. Here, we can imagine a skilled clothing-maker who likes to spend the day with just the ancient equivalent of undergarments on, and does so in the summer and as often as possible in other times of the year (this is Greece, after all). But it’s a cold day today. He or she realizes that they need to put some clothing on; a cloak is the most suitable clothing, but they don’t happen to have
one handy. So, recognizing their need for a cloak, they decide to get one and put it on. Moreover, this is an artisan skilled in making clothes, who knows how to make cloaks; he or she makes them all the time. So this person decides to make one for themselves. This is the equivalent of the decision of my house-builder to make a house. Because this person needs a cloak, knows how to make one, and has the tools and materials ready to hand, they decide to make one right away.25

Deciding to make yourself a cloak is one thing, and doing it another. So, in II (2b) Aristotle turns from the clothing-maker’s decision to make a cloak, in (2a), to their action of making one. Here we do get a “practical syllogism,” however peculiar looking it may be—but at least it is syllogistically valid. I take the thought being expressed in the premises (“What I need I ought to make, I need a cloak”)—note that the second premise links this practical syllogism to the syllogistic argument in (2a) by repeating its conclusion—to be the following. What I have decided to do (on the ground, as always in decisions for Aristotle, that it is something good for me to do), I ought to do—viz., I ought to make a cloak. But, exactly as before, with the house-builder, Aristotle states the conclusion as an action (not as the bare thought “I ought to make a cloak”)—this time,

25 Aristotle’s formulation of this decision in the language “What I need I ought to make, I need a cloak,” followed by the decision to make one right away, might seem odd. But he is not considering “what I need I ought to make, I need a cloak” as recording one need among others, which one might grant one ought to satisfy some time or other, but not necessarily just now. We should bear in mind, first, that what I need is, for Aristotle what is good for me to get or have, and, for him, a decision (προαίρεσις) to do something is a decision to do it on the ground that it is good for oneself to do it. Also, in the context in which this example arises Aristotle is discussing the relation of thought to action, where the action is undertaken right away and on the basis of it. So it is presupposed that this reasoning is being considered as leading to immediate action. In this context, it is not strange that the reasoning is intended to formulate a decision on the agent’s part to make a cloak and put it on, right now. At any rate, this interpretation does seem the best way to make good sense of what Aristotle writes, and I suggest that we should understand it in that way.
an action of cloak making: “he begins to make a cloak.” Now, however, Aristotle goes on to sketch, in (2c), the structure of the further thought, omitted in the house-building example, in addition to the bare “I ought to make a cloak,” that the agent must hold in mind in implementing their decision: “He acts beginning with a first step. If there is to be a cloak, this is necessary first, and if this, that, and straightaway he does that action.”

For example, perhaps: if there is to be a cloak, the front and back parts of the cloth have to be sewn together to form a single garment, a cloak; if that is to be done, the pieces of cloth have to be cut, each with a matching semi-circle to make the neck opening; if that is to be, a bolt of suitable cloth needs to be cut on the worktable with the scissors. And that, cutting cloth on the table, is the first step (no prior ones are needed), because the worker sees the cloth and the scissors before him and knows how to move his limbs in the relevant actions. As a skilled clothing-maker, the artisan already knows all this; they do not need to stop and figure any of it out. But they do need to bring it all to mind and hold it actively there (whether explicitly or, probably, on-
ly implicitly), so that they can cut the cloth as needed. In fact, they have to cut the cloth with the idea, held actively in mind, of following in reverse order the series of actions referred to in this complex thought. They do not do an action merely of cutting the cloth in a particular way: actions are done “for the sake of something” (ch. 6, 700b16), and this action is one of and for making a cloak. The cloak, or making one, is that for the sake of which that, viz. cutting the cloth, is done. So, in fact, this whole complex of thought is what, on Aristotle’s account, causes this reasoned first step in the action. However, the immediate cause is the two-syllogism thought, “I ought to begin making a cloak; this (cutting this in this way) is beginning making a cloak.” The first premise records their decision to make a cloak; the second both specifies the sort of action to do in beginning that making and identifies by perception and memory a specific instance of that kind of action.

Here two principal comments are in order. First, I noted above that Aristotle gives the conclusion of the cloak maker’s practical syllogism in two forms: first as “he makes a cloak,” and then as “I ought to make a cloak,” while immediately adding that “I ought to make a cloak” is an action. But surely “I ought to make a cloak,” which clearly does follow logically from the two premises (“I ought to make what I need, I need a cloak”) is a thought-content, not an action? And surely the action of making (initiated by the movements of the body caused by holding that thought content assertively in mind) is a further, second thing, and should not be identified with the movements constituting it? We must recall however that, as explained above, “I ought to make a cloak” is to be understood here not as the recognition of a cloak as something, among no doubt lots of others, that I ought to make or do when opportunity arises, or unless something more pressing outranks it among my “oughts.” It is the expression of a deci-
sion to make a cloak, **now**: the practical syllogism concluding that “It is necessary to do that” links that decision to a fully particular, here-and-now action to do on that decision. So although one can still distinguish a decision (a mental act) to do something now from whatever results from it (psychologically or physically), this result, the movements of the body that initiate the action of making a cloak by doing whatever you do immediately in carrying it out, cannot in fact be separated from the thought content that is the decision. As I pointed out above, when the clothing-maker acts on the practical syllogism to do **this**, he or she cuts the cloth for the sake of making a cloak; they have fully in mind that what they are doing (those movements of their body) are intended to be, and are, making a cloak, i.e. the first step in making one, to be followed by the other steps indicated at a21-2. In the presence of the practical syllogism, as Aristotle indicates is the case in the lines (a18-20) where he identifies the decision with the action, the thought of making a cloak (as what one ought to do now) does not cause the action from any distance of time or causation; it is an aspect of those movements as the particular action that they are. It causes them, but as the mental aspect of the very thing that it causes. That in fact is why Aristotle insists so strikingly in this first part of DMA 7 that the conclusion of a practical syllogism is an action, and that it is one done immediately or straightaway. Thus the thought content (“I ought to make a cloak”) is on Aristotle’s view (and quite reasonably so) the action immediately taken in beginning to make one—i.e., it is an inseparable aspect of that action, while, of course, also causing it.

Secondly, the practical syllogism that Aristotle claims has the cloak maker’s action as its conclusion is no part of any deliberation that the agent conducts, at the moment, or has conducted in the past and now calls to mind. It is a final step of thought in which that deliberation (i.e., the decision to which it leads) is carried into effect, into
immediate action. The cloak maker thinks: I am to make a cloak, *this* (indicating in thought the bolt of cloth, the scissors and the actions to be performed) is (the first step of) making a cloak—and at once they begin cutting, holding actively in mind their plan for making a cloak, and acting all the while on that plan. The practical syllogism represents the thought that, for human agents when they act on reasons concerning what is good for them to do, links deliberation and decision-making to acting, and it is required if action is to be possible: a decision is never enough. You have to know how get started, and the practical syllogism records the thought in which you recognize how to do that, then and there, in the circumstances in which you see and otherwise know yourself to be situated, namely, by doing some thing, *this*, deictically thought of as the thing to do. 

Thus the thought involved in what I have called complex actions, ones involving several steps of distinct kinds of action, can be seen to follow exactly the same pattern that Aristotle set out in segment I of his text, with the illustrations of the simple actions of walking and staying put. Again we see that there are two premises, and again we see that the conclusion drawn immediately, and by a necessity of the rational nature from firmly asserting them together as a unity, is an action—in these cases, an action that is both a making and an acting. But in these complex cases, the conclusion is only the beginning step, the first action of a series needed to complete the overall action of making the product; whereas, as we have seen, in simple cases one acts without the need for such further thought. Action, in all cases, begins from a thought to *do* something one can immediately do, here and now, a thought which itself immediately starts the action itself.

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4. Thought, together with desire, as the cause of action

In the extremely difficult final segment of this part of chapter 7 Aristotle offers an explicit, complete account of the psychological processes that issue in animal self-locomotion. Here, for the first time in this chapter of the De Motu, Aristotle is explicit about how the framework he has explained and defended in segments I and II for the case of human reasoned action, on a decision, applies not only to rational agents when acting on reasons of the good that they are holding in mind as they act, but also to other types of actions of humans (ones not done on decisions) and of the rest of the animal kingdom.

Aristotle makes clear his wish to apply this framework also to other animals when at a34, in stating the final conclusion of his discussion in this part of chapter 7, he explicitly mentions animals in general (τὰ ζῷα) and says he has now explained their starting into action, when they do. Hence, as we begin to consider segment III, we must recall that, as Aristotle has explained at 6, 700b19-20, in his discussion of animal self-locomotion as combining thought with desire, we are to understand “thought” (νοῦς) in a capacious way, one that allows us to speak of the “thought” even of non-rational animals. In the account that he has offered in segments I and II in terms of thinking and concluding and putting things together in thought, we are to allow perceptions and “appearances” (that is, representational states of consciousness in general, whether ones of memory, or more imaginative or projective cases of being appeared to) to “take the place,” as he puts it at 700b20, of acts of thought, conceived narrowly (as in the case

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28 See n. 13 above.
of reasoned actions), in order to apply his general framework to the case of non-rational animal action and self-movement from place to place.  

Segment III

(1) But just as sometimes when people ask questions [in making an argument in a dialectical discussion], so here too thought does not stop at all to ponder (σκοπεῖν) the second premise, when it is evident; for example, if taking a walk is good for a human, it does not spend any further time [pondering] over one’s being a human. (2) For that reason, in fact, all the actions we do (πράτομεν) without reasoning them out (μὴ λογιοδίμενοι), we do quickly. (3a) For

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29 Aristotle says similarly in De Anima III 10, 433a10 that one can position being appeared to as a sort of, or something like, thinking (νόησις), when it comes to explaining actions.

30 Translators usually translate τὴν ἑτέραν πρότασιν τὴν δήλην (a25-6) rather wood-enly as “the second premise, the evident one”—as if the second premise in dialectical arguments were always something obvious. (Only Farquharson in his admittedly heavily paraphrastic Oxford Aristotle translation translates as I do—and he is “corrected” by Barnes in the revised Oxford translation, to make him join the herd.) In fact Aristotle’s comparison with dialectic explicitly concerns an exceptional case (cf. ἐνοι), where a second premise is evident: most of the time, he implies correctly, it will not be. By contrast, in the case of practical reasoning the particular, deictically indicated action concluded to must always be something obvious to the agent: having concluded to do that action, the agent must straightaway do it (or begin to do it), and that would be impossible if it weren’t evident to them, then and there, what to do. This is so both in the simple cases of walking or staying put appealed to in section (1) of segment I and in the complex cases of segment II. In the simple case, the thought “every human ought to walk off, and I am a human” causes the action straightaway, because everyone knows perfectly well already how to start off walking, and that leaps automatically to one’s mind when, without spending any time thinking one is a human, but taking that evident fact for granted (as, normally, one always does), one thinks that every human ought to take a walk (in one’s current circumstances). The complex cases are more complex. If my clothing-maker is to start acting at once, upon thinking “I ought to make a cloak” (i.e., “I ought to make a cloak”) they have to know already how to make a cloak. Hence, the thought about steps of acting and about which is the first step to take—the thought that this action of cutting this cloth, deictically indicated, is now to be done—has to leap immediately to mind, when they think those two premises and take perceptual notice of their circumstances. With a layman who thinks the thought “I ought to make a cloak” it is not evident how to do that; but for the clothing-maker the premise “I need a cloak (as something I ought to make)” does indicate an obvious action. Such an agent doesn’t spend any time thinking about making a cloak. Similarly for the house-builder.

31 Out of deference, I follow Primavesi here in reading οὐκέτι (found in his β family of mss), instead of οὐκ with the mss of his family α: “not … any further” instead of just “not.” However, I see no good paleographic reason to prefer either reading over the other, and perhaps the simpler “not” is what Aristotle wrote. The sense hardly differs.
whenever one is actively using, in relation to an end, either the power of perception or the power of being appeared to or the power of thought, straightaway one does (ποιεῖ)\(^{32}\) that which one is desiring. (3b) The active desiring comes in to take the place of questioning or thinking. I ought to drink, appetite says; this is a thing to drink, perception or appearance or thought says; one drinks straightaway.

(4) So then, that is the way that animals get started when they move themselves and act. The cause closest [to the start of the doing/action]\(^{33}\) is desire, but desire comes into being either through perception or through appearance or thinking. And of the [animals] that are desiring to act, some desire through appetite or spirited desire, others through desire or wish,\(^{34}\) and in some cases they [merely] do [something] [ποιεῖσιν] but in others they act [πράττουσιν]. (701a25-b1)

Let me begin with an interpretative summary and paraphrase of the first of these two paragraphs, (1) through (3b) in my numbering.

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\(^{32}\) Here I take the verb ποιεῖν to indicate an action, whether one of making or not. Anticipating his shift in (3b) to discussing non-rational actions, Aristotle wishes to include in what he says here actions of non-human animals: in a strict Aristotelian usage, only human beings πράττειν; other animals ποιεῖν. Aristotle uses this word below (701a 37-b1; see my comments pp. 43-5) so as to refer explicitly to the voluntary doings solely of non-rational agents, reserving πράττειν there for the human case.

\(^{33}\) I take the ἐσχάτη αἰτία here in contrast with what is spoken of at 6, 700b23-4, as what πρῶτον κινεῖ animals. The outer object desired and thought about (in some appropriate way) is the cause farthest away in the series of causes of any action (=first), some desire is the nearest (=last) cause in that series. Thus the psychological cause, desire to do the here-and-now action, is the cause nearest to the action, but the first cause, the true beginning of the action, is the outer object both thought about and desired. See my discussion below.

\(^{34}\) At 701b1 “through desire or wish,” I translate the text, δι᾽ ὄρεξιν ἢ βουλήσιν, given by all the mss except those of Primavesi’s family β, which read διὰ προαίρεσιν ἢ βούλησιν, “through decision or wish.” There is equally good paleographic authority for either reading. I prefer this reading because it is the lectio difficilior. It is more likely that δι᾽ ὄρεξιν was “corrected” in the archetype of the β mss to διὰ προαίρεσιν than that it resulted from a “correction” in the other direction. As I remark below p. 38, δι᾽ ὄρεξιν ἢ βουλήσιν is an unusual and unexpected set of alternatives for Aristotle to propose here, and besides the scribe responsible for the erroneous “correction” had just read and copied a passage (700b18) where Aristotle had linked προαίρεσις with βουλήσις as alternatives, precisely as here if one reads Primavesi’s preferred text. (I join Primavesi in rejecting Nussbaum’s proposed deletion of ὄρεξιν ἢ from my preferred text: this text is perfectly in order with those words. See below p. 43-4. If with Nussbaum one read simply τὰ δὲ διὰ βουλήσιν one would make Aristotle say something even stranger, for him, than what he says without her deletion—indeed, for him, something quite unacceptable: he would say that human animals always act only from wish.)
Aristotle has just told us about a cloak maker who, having decided to make a cloak, has to call to mind a complex thought (stored in their memory) about how to do that; they also have to take into account (via perception and memory) their current circumstances, insofar as those are relevant to doing what is necessary for making a cloak (that is, for starting to cut the cloth in the right way). Aristotle now speaks, in (1), of an “evident” second premise in a practical syllogism, and compares it, and its treatment by the person doing the syllogistic thinking, with something that sometimes happens in dialectical question-and-answer discussions. Aristotle does indeed hold that in the case of the cloak maker the second premise of the syllogistic thought that causes their immediate action is evident to them: it is evident to them that, in their current circumstances and surroundings, this is how to get started with making a cloak. But because of the added complexity consisting in the series of steps to be taken in making a cloak, Aristotle now returns, in referring to taking a walk under circumstances when thinking every human ought to take one (a27), to his examples of simple action in segment I. There, his points about the obviousness of the second premise and the agent’s lack of need to stop to ponder the second premise (that is, to ponder exactly what they are to do), upon thinking the two premises, are, in fact, evident and valid: if you decide to raise your arm, it is, normally anyhow, already perfectly evident to you how to do that (to raise your arm, do this), and it leaps at once to mind how to do it. No pondering takes place. But to see that these points also apply in the case of complex actions requires some consideration (see below.)

Aristotle has said in segment I that the explanation of such an action includes two mental assertions combined into a single thought: “Every human ought to walk when

35 See n. 30 above.
in my current circumstances,” and “I am a human.” He now points out that if it is evident to you, as it must normally always be to any human being, that you are a human being, you do not ponder what to do in light of affirming to yourself that every human being ought to set off walking now: one immediately thinks, or bears in mind or hears at once, that this applies to yourself, a human. So (as he has said at a14) one straightaway walks off. It is important to see that this does not mean that the agent doesn’t at that moment actively think (however inexplicitly) that they are a human being (but skips that out); according to what Aristotle has said in segment I (1) about this action, the agent does. And has to think that actively, even if not overtly and in words: he says, “whenever one thinks (νοήσῃ) ... that one is a human being ... .” What they don’t do is only to ponder, or look into, whether, or that, they are human, before thinking and holding in mind that they are. Aristotle says that, in cases like these of “quick” action—action that we do as soon as we think to do it—we do not “reason them out” (μὴ λογισάµενοι, a28). We do think right off, as something entirely evident to us, and hold in our mind while acting, that we are human; we merely don’t reason out that we are.\footnote{In discussion of this passage I have heard people unthinkingly and ridiculously (however emphatically) say that Aristotle holds in cases of “quick” action that the agent does not even think (actively) what corresponds in the given case to this example’s “that they are human.” Aristotle certainly does not say that, as I have just pointed out; indeed, he says just the opposite at 701a13-14, in describing a quick action. He says that the agent doesn’t reason it out (μὴ λογισάµενοι), but does think they are human and holds that in mind. If Aristotle did mean that the agent doesn’t so much as bear in mind the thought that they are human, why do they take the injunction that every human is to walk now as having anything to do with them, with what they are to do? No. The agent does not skip out the second premise because it is evident; rather, its truth is obvious, hence asserted without further thought than the thought that it is true.}

Aristotle’s comparison with someone taking part as questioner in a dialectical discussion confirms this. The questioner skips out asking the answerer to assent to the second premise, if it is obvious to everyone. Aristotle gives an example in the \textit{Rhetoric} (I
(We must bear in mind that every ancient Greek knew that victors in the Olympic games were awarded a crown.) The questioner asks: “Dorieus won a victory at Olympia, right?” The respondent says yes. “So he got a crown?” Yes, the respondent admits. When agreeing to accept the conclusion that Dorieus got a crown, the respondent has to think to themselves, before or in responding, that the prize at the Olympics is a crown: that is, they have to actively think that evident second premise and hold it in mind, even if they have not been asked it by the questioner. If the respondent did not call that evident fact to mind, they could not reasonably accept the conclusion and would not be doing their proper part in a dialectical exchange if they did. You are not supposed to accept a conclusion that you have not been presented with reasons for accepting. So this comparison very obviously supports Aristotle’s point about action, in cases where the second premise is evident to the agent. As I have said, in such circumstances that premise springs immediately to the agent’s mind, through perception, memory, or thought, as soon as they affirm in thought that some (type of) simple action is to be done.

With what sorts of actions, then, is Aristotle contrasting such “quick” ones? These are, evidently, ones in which some reasoning out of what to do might in fact be required, after one has decided to do some kind of thing, for example, “I need a cloak.” Not everyone who might decide that knows how to make one, and it may well not be obvious at all to them how to proceed. They have to stop and consider how to go about making a cloak. Our cloak maker, of course, is not among such people. He or she, having made the decision to get a cloak goes right ahead and thinks “what I need I ought to make” and, calling to mind their knowledge of how to make a cloak, they immediately and “quickly” set to work. In short, these “slow” actions are cases where the initial de-
liberation that leads one to conclude to do some sort of complex action must be followed by some additional deliberation before action can begin. When the action does take place, it will do so, as always, via a practical syllogism, in which some instance of "this is doing that, i.e. beginning to do that" is the second premise—one that, to the agent, is evident at that moment. Until something obvious to the agent to do is reached, deliberation cannot lead to action: it can reach a decision, a προορισμός, to do something (even something quite specific, e.g. open a bank account at a certain bank), a decision reached, perhaps, after deliberation, in this example, while standing in the very bank. But action can follow only if that decision is linked to action via the thought (for instance) "here is the counter for Bank Account Opening, i.e. the place to go to open a bank account at this bank." If, bizarrely, in case of an apparently simple action, or one that for most people would be a simple one, an agent has to stop and ponder how to do it—how to set off walking, for example, or how get to the counter from where they are standing—then, for them, that is no simple action at all, but a complex one, and it is not yet obvious to them what now to do to start acting. They have to reason that out, to ponder that.

And now we can see why Aristotle reasonably shifted as he began III (1) to discuss simple actions like walking off, leaving aside the complex ones discussed immediately before in segment II. The very complexity of complex actions opens the door for the first step of action in their case to be subject, not to immediate and quick implementation, but rather to an intervening process of further deliberation, before a quick action can be taken. Nonetheless, as we can see from what I have just said, in the case of complex actions too, it will be a quick action that is taken, whenever action actually is
begun. Only with a quick action, taken on a practical syllogism’s second premise that is evident to the agent, can an action ever be taken.

So far, everything seems clear enough. However, about this process Aristotle immediately, but obscurely, adds (3b): “The active desiring comes in to take the place of questioning or thinking.” There two main issues here to be decided. First, what “desiring” is Aristotle referring to? And what does he mean by its being “active?” Second, what thinking does he mean it takes the place of when active? The first question is easier to decide: Aristotle has concluded the previous sentence, “... straightaway one does that which one is desiring,” so Aristotle must be referring to that desire. But what desire is that—that is, a desire for what? Is it for the action the agent is said to do straightaway? Or for the end that Aristotle refers to in the first part of that sentence, when he says the agent is “actively using (ἐνεργήσῃ), in relation to an end, either ...?” The second question, about the thinking substituted for, is acutely difficult, as we will see; but we can work out what seem satisfactory resolutions of both issues by turning directly to the new example of an action, an animal’s taking a drink moved by thirst, that Aristotle immediately introduces to illustrate what he has just said about active desiring substituting for thinking.

Aristotle writes (701a32-33): “I ought to drink, appetite says; this is a thing to drink, perception or appearance or thought says; one drinks straightaway.” In what im-

37 In fact Aristotle holds that in the action case, the one he is interested in, it is, specifically, some thinking that the desiring substitutes for: he mentions questioning here, as an alternative, simply to indicate that in the dialectical case, too, with which he has compared practical thinking in segment III (1), a question gets omitted when the second premise is evident. Aristotle presumably doesn’t mean that some desire substitutes for the questioning, or in fact that anything at all does: there, one just grasps the obviousness of the premise, and its relevance, and immediately mentally passes to thinking its content assertively, but implicitly. In what follows I focus on the action case, and drop the dialectical one from consideration. It has already done the work for which Aristotle introduced it.
mediately precedes (ὁρέγεται a 30, ὀρέξους a 31) we got, for the very first time anywhere in chapter 7, an explicit reference to desire (ὀρέξις). Here, Aristotle illustrates with a prime case of an ὀρέξις, in fact one of the two forms of non-rational desire, appetite, or non-rational desire for pleasure. So, surely, the active desiring envisaged that he says replaces some thinking is a non-rational desire. (I return to this point below.) For this desire to be active, then, is for the agent to be actively experiencing the pull of non-rational desire at the moment in question; in the example, this is thirst for drink (i.e. a desire for a suitable fluid to get into the body so as to replenish it), or for the pleasure given by the inflow of that fluid. So, again surely, it is a desire for the end of the action of drinking that, as Aristotle says, ensues immediately when the agent is “actively using (ἐνεργήσῃ), in relation to an end, either the power of perception or the power of being appeared to or the power of thought.” Thirst is for the sake of drink. (Thus we have our answers to my first question above.)

But what thinking does active non-rational desiring take the place of? This is a puzzle, because Aristotle explicitly gives as the second premise of the syllogism in thinking which the agent acts, “this is a thing to drink, perception or appearance or thought says.” The thought whose place is taken by the appetite in generating the action of drinking therefore cannot be either the thought (νόησις), here referred to, in the wider usage we already been made familiar with, which includes perception and the various forms of being appeared to as modes of thinking; nor can it be the thought (νοῦς) in the narrower usage that Aristotle here refers to as a third form of thinking in that broad usage and says is active. In fact, so far in segment III there has been no reference at all, using any word from the root νο-, to any other act of thought than this excluded one, where thought is considered as just one possible way, alongside perception or some
form of being appeared to, in which the link from appetite (or from any other way of desiring an end) to immediate action can be forged. What thinking, then, does appetite substitute for?

As we have seen, Aristotle is turning in III (3b) from considering fully reasoned actions to ones done on non-rational desire. And in his previous examples thought (νοῦς, νόησις) has been spoken of as providing, on its own, both the first premise (via a decision to do something of some general kind) and the second (via the third form of thinking just referred to, as one of three links available, along with perception and being appeared to, for connecting the motivation recorded in the first premise to the action then performed). When the agent walks off, or stays put, or begins making a house, or begins making a cloak, the first premise is supplied from thought (νόησις) about a good to be achieved: every human ought to walk, no human ought to walk, I ought to make a good, I need a cloak—backed by a deliberative course of reasoning leading to the decisions so recorded (decisions to do or make a good). But here, namely in non-rational actions, the place of such thinking is, in fact, taken by the appetite. Instead of a decision (προαιρέσις) to do some sort of action (perhaps a making, perhaps a simple act, of walking or staying put), we have an appetite (an ὀρέξις) for experiencing an inflow of water, or for the resultant pleasure. The appetite takes the place here of that specific thought in those other cases, that is in cases of reasoned action, which forms the first premise: the decision to do something because it is good to do. Here, the first premise, “I ought to drink” is provided instead by a non-rational desire: as Aristotle puts it “I ought to drink, says appetite.” The second premise, in both cases, is also provided by νόησις: in the reasoned examples Aristotle has considered (walking off, staying put, making a house or a cloak) it is either (as the cloak maker example makes clear) a fully
thought-out plan or (in walking and staying put) an immediate report of perception and appearance and/or knowledge of how to do the action. In drinking on appetite, the second premise is provided by νόησις in the broad sense which includes perception and appearance as well as thought in the narrow sense. It is only the thought in the first premise that appetite substitutes for.

I conclude, then, that the thought that Aristotle says non-rational desire takes the place of when a non-rational action is done is the thought in the decision which, for Aristotle, motivates reasoned actions. Appetite or another non-rational desire motivates a non-rational action, instead of decision, which motivates reasoned actions.

To conclude my discussion of segment III (3b) I want to make five brief final comments. First, notice that for Aristotle even a desire such as thirst has, as the desire that it is, a thought-component. It is not a bare physical discomfort that, as it happens, can normally be removed by the intake of water or another suitable fluid into the body’s tissues. It is already, as the desire that it is, aimed at drinking water. This is clear from the fact, noted just above, that Aristotle says of the first premise “I ought to drink” that this is something that appetite says to the agent. Thus in having such an appetite one is thinking a first premise: such thinking should be assimilated (though Aristotle does not do so explicitly here in De Motu 7) to the “thoughts” in the broader sense he specifies all animals and not just human beings can have (viz. they have perceptions and appearances of memory and imagination). Even non-rational animals in experiencing non-rational desires have thoughts according to that usage: non-rational desiring is to be added to Aristotle’s list of things that are νοησεις in the broad sense.

Second, one should notice that the action of drinking illustrates, not an action that begins a making (as in what immediately precedes), but in fact what I have called a
simple action. All one needs in order to start off for drink when affirming, through experiencing thirst, that one is to drink, is no more than perception of one’s surroundings; this is exactly like going off to walk after deciding it is good to do so. Both walking off and drinking are things one can and must know how, and be able in one’s perceived circumstances, to do, if action is to immediately follow a decision or desire to do them.

Third, and this must be intentional, Aristotle’s new illustration concerns an action that is done both by rational and also, indeed quite a few times each day, by non-rational animals. There may be, indeed there are, differences, as to the nature of the desire involved in some cases when rational animals drink when thirsty, from cases when a non-rational animal is the agent. In the human case, the action is sometimes decided on (προαιρετόν), as well as desired by thirst. I return to this issue below, in my comments on III (4) of our text, and in section 5.) But here Aristotle is leaving aside those differences, and giving a general account that applies to both sorts of case.

Fourth, in presenting his example of drinking from thirst, Aristotle refers for the first time in his explanation of how thinking causes animal self-locomotion from place to place, to a causal role for desire (in this case, an appetitive desire). Aristotle’s initial, preliminary statement in chapter 6 of how animal self-movement occurs (700b17 ff.) says that what produces such movement are thought (whether thinking proper or perceiving or being appeared to) and desire (whether wish or spirited desire or appetite), or else a decision (itself a combination of thought and desire). For Aristotle, the first cause, as I said above (n. 33), is some outer object both desired and thought of; the last inner, psychological cause is a desire and a thought both directed to that outer object. So in offering here an act of taking a drink as an illustration, Aristotle is at last explicitly
bringing into his detailed account a causal role for desire, alongside the role for thought that he has so far been concerned exclusively with.

Fifth, as a comparison of segments I, II and III (1)-(2)-(3a)-(3b) with the passage just quoted from 700b17 makes clear, in chapter 7 through (3b) Aristotle uses the term ὀρεξίς in a different way from the way it is used in chapter 6. In chapter 6, Aristotle counts as forms of ὀρεξίς appetite (ἐπιθυμία), spirit (θυμός) and wish (βούλησις), and includes decision (προαίρεσις) too, inasmuch as it partly derives from βούλησις. That is, he counts both non-rational and rational sources of motivation as desires, ὀρέξεις. This division of desire into three—two non-rational and one rational form—is Aristotle’s standard official classification, found in many places in his ethical, political and psychological works.38 Up to this point in chapter 7, however, Aristotle speaks in terms of a different classification, one according to which ὀρεξίς is restricted to the two non-rational forms; wish as well as decision get counted as functions not of “desire” but of reason. This usage also, which has a good rationale of its own (I will come back to that below), is found in several places in Aristotle besides here (see n. 42 below): in fact, as I argue below, on the correct textual reading, we find it again just below, at 701b1. The result is that up to this point in chapter 7 Aristotle counts, as we have seen, reasoned actions, done on decision, not as deriving from desire at all, but only from thought; the form of thought that motivates actions (προαίρεσις, via its partial derivation from βούλησις) is contrasted with “desire,” i.e. non-rational desire, as what motivates in all non-reasoned actions.

Let us now turn to III (4). There Aristotle tells us, in general and abstract terms, how animals start themselves on self-locomotion (κινεῖσθαι) and on action (πράττειν):

38 It is found also at Magna Moralia 1187b37, De An. 414b2, 433a23 and 25, and EE 1223a26, among other places.
it is “like that” (οὐτως, a33)—like in the case of drinking as just described. Note the careful choice of words here: “action” applies only to actions of humans, “self-locomotion” to both humans’ actions and non-rational animals’ “doings.” Aristotle needs to mention both, since the account he is about to give is intended to apply to both cases—though differently, as we have seen. He then spells out for us the respective roles of desire and thought in this starting on self-locomotion or, in particular, on action. He says: “The cause closest [to the start of the doing/action] is desire (ὀρεξις), but desire comes into being either through perception or through appearance or thinking.” What desire is he talking about here? Clearly, this desire cannot be the one referred to just above, at a30-31, that is, the appetite that takes the place of thinking, in the case of taking a drink. That is not the cause nearest, in any series of causes of the action, to its actual start. We know from what Aristotle has already said that the further thought, e.g., that this is something to drink, is required, if there is to be an action of drinking. This thought would certainly be a nearer cause to the action than the general desire to drink. But in fact, in order for action to take place, there must be a specific desire to drink this, the thing indicated in the second premise and deictically held in mind; this is the nearest cause to the start of the action.39 Furthermore, in this sentence, Aristotle says that this desire, though it is the closest cause to the start of the action, is itself brought into being by some sort of thought (whether perception, appearance, or thought strictly and narrowly speaking). So he is saying, in his summary of the psychological causes of animal actions, that the equivalent in all other cases of the desire to drink this is the closest cause to the start of the action in question, while it itself is

39 Thus the desire Aristotle is speaking of here is the second of the two desires I drew attention to in discussing the occurrences of ὀρέξεσθαι and ὀρέξις at 701a30-31 above (p. 34).
brought into being by an act of thinking corresponding to the thinking contained in seeing the drink (or remembering or conceiving it in thought); while, in turn, as we have seen above, that thinking is preceded by an initial, general desire—one for drink (a non-rational appetite), in this example.

What, then, are the equivalent desires (ὀρέξεις) to do this in Aristotle’s other examples, all of which, as noted, are fully reasoned actions, in which the agent acts for reasons concerning something good that they can do or (begin to) produce immediately? The general motivation in those cases, instead of being a non-rational desire (an ὀρέξις, in the usage of the word that restricts its application to non-rational desires), is a decision (προαίρεσις), i.e. a form of wish (βουλήσις). It is a decision to walk now, or a decision to make a good (viz. a house) or a decision to make what one needs (viz. a cloak). It is for this that, in the case of actions like taking a drink from thirst, the appetite substitutes. The ὀρέξις, then, issues in the action (one of walking off, or starting making a house or a cloak) is caused in the same way in these cases as with the act of drinking: in all cases, this desire “comes into being either through perception or through appearance or thinking.” So whereas in cases of reasoned action the general desire is a προαίρεσις, not an ὀρέξις, Aristotle seems to be saying, the resultant desire to do this is to be classed as an ὀρέξις. (I return to this curious result below.)

Aristotle’s final account of the causation of animal self-locomotion posits, then, in every case, as the immediate and direct cause of the self-locomotion, a specific desire of the animal to do something that it knows how to and can do straightaway, and that it focuses its attention upon in desiring that action: it desires this.\(^{40}\) This desire is the di-

\(^{40}\) In Aristotle’s main examples, the animal desires this drink or this act of drinking, or the clothes-maker desires this cutting of the bolt of cloth. In the latter case, where the immediate action is part of a complex action, the act done is done ultimately for the sake
rect and immediate cause of the changes and movements within the animal body that
issue in the locomotive movements of its relevant limbs: from this desire the movements
follow causally with no intervening step.\(^{41}\) On the other hand, that desire itself has a
short causal history: it is itself immediately generated by a perception or appearance or
specific act of thinking concerning this action as something to be done. In Aristotle’s
final example, the final thought (“this is something to drink”) is thought together in a
single combined thought with a major premise that formulates a general desire to drink
something, of which this last desire is a specification.

With this analysis before us, we can see that in presenting his theory here Aristot-
le uses the term “desire” (ὀρέξις) according to each of the patterns I’ve drawn atten-
tion to above: a two-part one, where “desires” are all of them non-rational ones, and a
three-part one where the rational motivating force, βουλήσις or wish, also gets counted
as a “desire.” The three-part usage is implied when Aristotle speaks of the nearest
cause of action in cases both of non-rationally motivated and rationally motivated ac-
tions—the desire to do this—as a “desire” (ὀρέξις). Since the general motivation in rea-
soned actions is a decision to do something of some general kind, when the added step
of thought, via perception or appearance of thought narrowly conceived, connects that
decision to the here-and-now action, the resulting desire, though counted here as an
ὀρέξις, must nonetheless be of the same rational type, i.e. something whose motivation-
al force belongs, in Aristotle’s tri-partite analysis, to βουλήσις or wish. In the other

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\(^{41}\) That is to say, the animal does that straightaway, unless something prevents, because
that final specific desire (with its thought-content) does not require any further causal
factor to be added or to intervene: it moves the body directly.
case, the one that Aristotle sets out in 701a33-36, saying that animals are started into self-locomotion or action “like this,” the desire to do the deictically indicated action is one of appetite, an ὀρεξις according to both the tri-partite and the bipartite usages.

In fact, in concluding this first part of chapter 7, that is, in the last sentence of III (4), Aristotle takes note explicitly of these two basic ways of desiring, rational and non-rational. In my translation: “And of the [animals] that are desiring to act, some desire through appetite or spirited desire, others through desire or wish, and in some cases they [merely] do [something] [ποιοῦσιν] but in others they act [πράττουσιν].” This is a complex, but I think carefully constructed, sentence. In the first clause Aristotle draws attention to the fact that when animals are actively desiring to act, that is, when they are experiencing a final, specific, desire to do something they can do straightaway, “some desire through appetite or spirit”: these are non-rational animals. They have a desire that is either an appetite for pleasure (such as thirst) or a spirited desire (such as anger or irritation)—or in fact, possibly, both. Thus, whenever a non-rational animal acts, the nearest psychological cause of its starting into movement is an appetite or a spirited desire—the desires that Aristotle counts as non-rational.

By contrast, when human beings (“others [desire] through desire or wish”) are actively desiring to act, they experience either simply a desire (i.e. a non-rational one, as just indicated in the mention of appetite and spirit in the previous line) or a wish (that is, a rational desire, a desire belonging not to non-rational impulse of a bodily sort, but to reason itself). Here we see the same intermixture of Aristotle’s bipartite and his tripartite usages of the term ὀρεξις or wish that I drew attention to above. In beginning the sentence with τῶν ὀρεγομένων (“Of the [animals] that are desiring”) he employs the tripartite usage, as indeed he must if he is to speak both of non-rational animals and ra-
tional ones: he needs here to have a single term that will cover the motivation from which any and every animal does things, whether those are actions in the narrow sense or not. But in specifying, in 701b1, which desires rational animals act “through” he has to distinguish the cases when such an animal acts through non-rational desire, just as non-rational animals do, and those where it acts through rational desire: hence we read, with very many manuscripts and in the text I have translated, that they act δι’ ὀρεξίν ἤ βούλησιν (“through desire or wish”). In fact, one can easily see how Aristotle should propose a contrast between wish and desire here: even though wish is one sort of desire (one sort of “reaching out” for some object), as a rational and intelligent sort of reaching it differs fundamentally from the felt impulse of reaching out that pulls the agent willy-nilly, which other animals feel and always act from: they are only ever moved by appetite (or spirit), whereas rational animals sometimes in a very strong sense move themselves. So Aristotle can reasonably contrast wish (though it too is a reaching out, an ὀρεξίς) with ὀρεξίς: here, as also sometimes elsewhere in Aristotle, ὀρεξίς is being conceived, as is indicated in my previous remarks about non-rational animals, as a felt pull or push toward action, based in passively received bodily states of feeling, rather than a self-generated movement of the mind.

In the second clause of the sentence (“... and in some cases they [i.e., animals] [merely] do [something] but in others they act”), I take Aristotle to do two further things at once. First, among human beings, some of what they do are simple actions of

42 The restricted use of the word ὀρεξίς to refer exclusively to non-rational desire is less common than the tripartite one in Aristotle’s works, it is found, besides here and at 701a30-31 discussed above, at EE II 8, 1224a27: non-human animals “live by desire,” τῇ ὀρὲξείᾳ ζῇ, not by reason (λόγος), he says there. See also DA III 9, 433a6-8, and Politics I 5, 1254b2-9 (I thank Hendrik Lorenz for these further references). One could notice also NE I 13, 1102b30. (This bipartite usage has been noticed also by R. Loening, Die Zurechnungslehre des Aristoteles, Jena 1903, 36 n. 4; R.D. Hicks, Aristotle De Anima, Cambridge, Eng. 1907, ad 433a6, b3. I thank Klaus Corcilius for these references.)
their (πράττειν), others are makings (ποιεῖν): thus, he here picks up again, in conclusion, the distinction between these two cases reasoned action that has played such a large role in his discussion in segments I and II. But secondly, he takes notice of his own further distinction, not always adhered to, but worth noting in this context, between human agency (where there is always an action involved, either one where thought, strictly speaking, is employed, or where at any rate it could have been, since the agent is a rational animal), and animal agency where, because the animals are non-rational agents, we should strictly speak of them as always only doing things (ποιεῖν), not as acting. Animals always only ποιεῖν, humans sometimes ποιεῖν but always also πράττειν.

One final comment on Aristotle’s account of the causation of animals’ voluntary self-movements, presented in segment III. His general question, posed at the end of chapter 5 and pursued for the rest of the treatise (as noted above, section 1), is how the soul moves the body; more specifically, in chapters 6 and 7 he investigates how it moves them in actions or doings. He begins chapter 7 (segment I) by focusing on how thought alone moves them (with no reference to a separate role for desire). By the end of his discussion, in segment III, Aristotle has pointed to two different ways, in some or all cases of animal action, that thought plays a causal role. Thought in the broad sense plays one role in every doing, when it provides the link, via the second premise of a practical syllogism, between the general desire constituted by either a non-rational desire or the rational desire in the decision (recorded in the first premise) and the here-and-now action to be done. We saw in segment I that thought in the narrow sense plays a second

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43 See also NE VI, 4.
44 See, e.g., EE II 6, 1222b28-30, with 8, 1224a20-30, where Aristotle uses ποιεῖν as the substitute-word for an animal’s “actions” at a22.
role, specifically in actions done on decision, where reason exercises its own power to motivate action for reasons of the good to be achieved in so acting. I will say more in the following section about this role. But if we look back on Aristotle’s account in III (3a) and (3b) of how non-rational actions, such as taking a drink from thirst, are caused, we can see a third role as well. As I explained, Aristotle tells us that when a non-rational desire, such as (in his illustration) the appetite of thirst, but also anger or other manifestations of spirit, instead of reason, provides the major premise it does so by saying something to the agent: e.g., “I ought to drink.” For Aristotle even a non-rational desire has a thought component, and would not be able to move an animal to action if it did not: for him, a non-rational desire is not an undirected mere discomfort which an animal, in feeling it, is moved to get rid of. Even non-rational desires are to that extent rational.

Thus, we can say that, on Aristotle’s theory, thought plays a double role in making action possible, whether by non-rational animals or by human adults. It provides not merely the last connection from desire to action; likewise, the general desire (to have a drink, to make a cloak) that lies behind the fully particular desire (the desire to do this), in which this latter desire gets applied to the agent’s concrete circumstances, depends crucially for its capacity to motivate action on its thought component. The dog has to know (and hold in mind) that what it needs is drink, when its has the bodily feelings it experiences when it is thirsty, if it is to be motivated to take a drink by the way it feels. And a human agent acting on reasons concerning their good has first to think of something as good, so as to desire that as an end. Thus, for Aristotle it is an animal’s thought that connects its desire to an end (to an external ἀρχὴ κινήσεως), and that connects that end to a particular, here and now, this action for it to do in furtherance of that end. Even if the immediate psychological cause of action (its internal ἀρχὴ κινήσεως…
σεως) is desire, that desire itself is caused (insofar as it can motivate action) by the thought that recognizes this as an instance of what its general desire is for. Thought, while not the ἀρχή κινήσεως of animal self-locomotion, is the most fundamental causal factor in any and all animal self-locomotion, whether rational or non-rational. Thought, not desire, is the fundamental requirement for and causal factor in animal action.

5. De Motu vs. De Anima on thought and desire as causes of self-locomotion

Aristotle devotes a second discussion to the causes of animal self-locomotion in De Anima III. Near the end of chapter 10 of DA III, Aristotle refers in vague and general terms to the “organ” or bodily instrument that an animal uses, via its desires, in setting its body in voluntary movement. He remarks there (433b19-21) that the place to investigate that issue is among the studies that deal with the functions that are common to body and soul; in DA III 9-10 he has been discussing animal movement exclusively from the purely psychological point of view. This passage is generally taken to be a forward reference to the DMA (as a whole);45 and, indeed, in the brief preview statement about that “organ” that he goes on to append (b21-27), Aristotle does mention sockets and joints, in much the way that he does in great detail in the early chapters of DMA. Further discussions in DMA 8-11 return to issues concerning functions in animal self-movement that are common to soul and body: the role of the heart, and of the pneuma that is in it; the way that desires cause changes in the temperature in relevant regions of the heart and in surrounding tissues; and so on. So it seems very reasonable to think that at 433b19-21 Aristotle is in fact referring to DMA.

45 In DMA at 6, 700b5-6, Aristotle refers back to De Anima I’s questions about whether and in what way it can be correct to speak of the soul itself as undergoing movement; so we don’t find back reference merely to book III.
However, the roles of thought and desire in causing animal self-locomotion, as explained in *DMA* 6 and the first part of 7, concern the part played by the soul alone in “functions that are common to soul and body;” the bodily aspects are set aside for the moment. So in this part of the work we find Aristotle pursuing the same issues that he discusses in *DA* III 9-11, with the same exclusive focus on the soul. If we are right to regard *DMA* as a later work than *DA* III, we should wonder why Aristotle includes within it not just the discussions I’ve referred to of functions common to soul and body, regarded as bodily—in chapters 1 through 7. 701b1, 7.701b1 through 11—but another extended discussion just of the soul’s role as cause of self-locomotion. \(^{46}\) We should be prepared to find in it some significant addition or development, even perhaps some correction, of the *DA* account. In conclusion, then, I want to argue that indeed the *DMA* theory does add important points to the theory provided in *DA*—not that it contradicts it in any way, or alters the view there presented of the psychic causes of action (thought and desire), but that it clarifies and makes more detailed and explicit crucial aspects of the *DA* account that might be missed, or misunderstood. (Indeed, they have been widely missed or misunderstood in contemporary discussions of Aristotle’s theory of human action.)

In *DA* III 9-11, following the scheme announced in *DA* II 3 for the rest of the work, Aristotle frames his discussion by asking which of the soul’s constituent powers or capacities is the one to which we should trace back its role in the causation of animal self-locomotion. Earlier in the treatise, and in these chapters, he lists these capacities: the nutritional, the generative, the ones that control sleep and waking and breathing, the

\(^{46}\) Notice that in chapter 6, as elsewhere in *DMA*, Aristotle does not hesitate to shorten his discussion with simple back-references to theories developed in other works of his, when he wishes to adopt some analysis or claim, as relevant to his current enterprise. See 700b4-9, as well as 1, 698a1-11, and 10, 703a8-18. So why did he not do so in this case, simply by referring to *De Anima* for what we need to know about that?
perceptive, the reasoning or calculative, in general the intellective (νοῦς), and finally the desiderative (τὸ ὀρεκτικόν). He focuses on νοῦς and ὀρεξίς (see 433a9) as the two candidates to be considered seriously as the psychic source of movement. In discussing the first of these, as in DMA 6, he points out that it is only thinking in relation to an end, not all thinking, and so not thinking just as such, that could have any role in causing actions. Since he seeks some single capacity as the one in virtue of which the soul enables an animal to move itself (see 433a21-26), he concludes that, since this capacity cannot be νοῦς, and it also cannot be every and any ὀρεξίς (for self-controlled people do not act on appetites that they nonetheless experience, but instead follow reason, νοῦς) it must indeed be ὀρεξίς (433a31-b1), or τὸ ὀρεκτικόν (433b10-11); but this capacity has to be understood, as he has explained, as including as one of its aspects practical thinking (διάνοια πρακτική, 433a18), other aspects being the non-rational desires of appetite and spirit.

Aristotle’s focus in the DMA’s parallel account is quite noticeably not on powers of the soul. Aristotle once, but only once, in chapter 6, even speaks of τὸ ὀρεκτικόν as a power of the soul, 701a1, and -ικόν forms in speaking of the soul and what it does are strikingly absent from the whole work. In DMA he seems to prefer instead to speak directly of ὀρεξίς, desire, rather than the desiderative part or aspect of the soul. This may reflect dissatisfaction with the idea of a power of the soul consisting of such disparate parts—one, as he has pointed out in his DA discussion (432b4-7), belonging to reason, the other two being non-rational desires. Moreover, in DMA, Aristotle focuses upon the role of thought in action, thus in an important way reversing the emphasis in DA on desire, instead of thought, as what moves animals from place to place. In DMA he also takes account of desire, and its role, as we have seen; but his emphasis is upon
thought—even desire, he is at pains to point out (III (3b)), can contribute to the causation of action only if it “says” things to the agent, which the agent takes up in its thinking (whether that is thinking-by-being-appeared-to or thought more strictly and narrowly conceived). This shift in focus from DA to DMA seems to me significant: in the latter, we are told that a thought (in perception, or memory, or in thought narrowly speaking) of some specific thing (some this) that one can straightaway do, brings into existence the desire that starts the action off, even if that thought itself may come into being in explicit relation to an antecedent desire (a general one, such as a desire to drink). The role of thought is neglected in the DA account, and, when Aristotle there announces his conclusion, that the cause of action is the soul’s capacity of ὀρεξις, it seems actually downgraded. If so, DMA provides a corrective.

Whether corrective or not, the DMA account is a welcome, and fascinating, clarification that, as such, enriches Aristotle’s theory as presented in DA. In DA Aristotle does once (433b11-12) clearly state that, on his view, the ὀρεκτόν (the outer object of desire) moves the animal (without itself being in motion) simply by being thought of (νοηθῆναι, in the case of human reasoned action) or (in the case of non-rational action) by being represented in an appearance (φαντασθῆναι). So, according to the DA presentation of his theory, thought (in the wider and inclusive sense) is what gives rise to the desire that he has said is the psychological cause of action—just as we have seen

47 I have mentioned several times that in either case, for Aristotle, the first movement caused is a warming or cooling of the heart and the area around it. This is easily understood. It is intuitively acceptable to suppose that a thought that thinks with conviction of something as good to do warms you to do it, and likewise that thinking in the same way of something bad happening causes a chill around the heart. In non-rational actions not thought strictly and narrowly speaking, but the mere representation in perception or “appearance” of something as attractive in appetitive or spirited terms, on Aristotle’s theory, warms or chills the heart. The cases, in terms of cause and effect, are exactly the same.
in *DMA*. Here, one should note, Aristotle is speaking, in the case of reasoned action, of how an initial general desire to do some sort of good thing arises in the first place—by being thought of (τῷ νοηθήνα). But, a little earlier, he seems to speak, confusingly, at 433a17-21, of “practical thought” as operating in the case of reasoned human actions (in parallel with being appeared to for animals) only when that sort of desire (a desire for an outer object) is already in place: he implies that thought moves only by being brought into action by such a desire. In other words, in *DA* Aristotle seems, in his formal statement (at 433a17-21) about how thought is involved in action, to restrict practical thought’s role in the generation of action to the second of the two roles that we have seen he assigns it in *DMA*. The *DMA* presentation of his theory is explicit on this double role for thought; thought both fixes upon the general sort of thing to do (either through the thought-component of a non-rational desire or directly through thought about what is good to do), and upon the specific action to do in doing that sort of thing. So *DMA* is clear and explicit on a crucial point where *DA* is unclear and confusing.

There is one final clarification and enrichment to notice. I have drawn attention to the fact that in the opening two segments of *DMA* 7 Aristotle sets out entirely in terms of thought (νοεῖν) alone his basic account of how thought causes simple actions through a practical syllogism, and also its application to complex actions of making things. There is no mention whatsoever of ὀρεξίς in the chapter until 701a30, where Aristotle tells us about the psychological processes by which “quick” actions are caused, and in that connection explains how his basic account applies to other animal actions than adult fully reasoned ones. It is surely not coincidental that Aristotle only speaks of

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48 In this passage there is confusion in our mss at a18 and a21, some reading ὀρεκτόν where others read ὀρεκτικόν at each location. A correct understanding of Aristotle’s theory requires reading ὀρεκτικόν at a18 and ὀρεκτόν at a21.
ὄρεξις as something separate from and in addition to νοεῖν in the causation of action when he wishes to show how his general account, framed for the case of reasoned human actions, applies to other actions than those. Moreover, we have seen that, according to the best text at 701b1, the last line of our passage, he speaks of human beings as acting either from desire (ὄρεξις) or wish (βουλήσις), whereas other animals always act only from desire, that is, only from appetite or spirit. From reflection on these features of the text we can now see clearly that, on Aristotle’s understanding of the causation of action, and indeed on his theory of desire in general (where “desire” is understood as a general term covering appetite, spirit and wish), there is a crucial, but little observed, difference between non-rational desire and the rational desire, wish—a desire that belongs to reason itself. When an action is motivated by wish, it is motivated by reason itself; no additional factor, some separate desire, is active at all—as it necessarily is in the case of non-rational animal action. Just the thought that something is good is enough to motivate any animal that can have such a thought to act in order to get it. In segments I and II all the examples are of ones where a thought about the good (that is, a wish) is contained in the first premise; simply such a thought, when supplemented with perceptual or other representations of specific things to do so as to achieve that good, is sufficient of its own inherent power to generate an action (by focusing the wish upon the specific, here-and-now action brought to the agent’s mind by that means).

So, in fact, we now see that, on Aristotle’s theory, such a thought about the good just is a wish; that is why, though of course on his theory, as expounded both in DA and in DMA as well as elsewhere, a wish is a desire (that is, an ὀρεξίς, according to the tripartite usage of the term) and some desire is required for action, he does not

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49 Wish is often defined by Aristotle as desire, specifically, for good. See, most explicitly, Rhet. I 10, 1369a3.
mention any desire in discussing examples of fully reasoned actions in *DMA* segments I and II. Once you mention a thought in which something good is assertively recognized as good, there is nothing further to be mentioned as a desire component of the agent’s state of consciousness. By contrast, with non-rational animals and purely non-rational actions of human adults, such an additional component is required. When an animal’s body needs replenishment by food or drink, and this is indicated to the animal by the way it feels, it has to then go on to feel a desire for food or drink that has a thought component. It has to know that what, as the bodily discomfort indicates, it needs is drink or food, thought of in those terms, via a representation of food or drink as what is needed; but in this case that thought is caused in a passive way by the bodily feeling that itself becomes one aspect of the desire. Desire leads, thought follows as something separate, in the non-rational case, but thought leads (and is itself a desire) in the case of fully reasoned action.

Thus there is a fundamental difference between rational and non-rational desires, as desires, according to Aristotle. The difference concerns the ways, in the two cases, that the desire relates to the thought associated with it. Even appetites, as Aristotle’s comments on his example of taking a drink show, have to say something to an agent before they can have any effect. Both the general desire to have a drink, and the desire to drink this are associated with a thought: in the former case, the desire speaks to the agent, in the latter—the desire to drink this—the agent’s thought that “this is something to drink” calls the desire into existence. With appetites, desire and thought are separate and distinct psychological entities. In the case of wishes, Aristotle’s account in *DMA* clearly indicates, we are instead dealing with a single psychological entity, considered in two different aspects: the thought “Every human ought to walk, and I am a human,” or
equivalently “I, a human, ought to walk,” is both a thought and a desire. That thought, by itself, with no aid from any additional force, gets the agent moving. To think assertively that you ought to walk (now) is to be moved to act. Considered as something that moves you to act, we can call it a βουλήσις, a wish; but it is also simply a thought. There is one entity, with two “beings,” two things that it is: a thought, a desire. The psychological force at work in this case is not something separate from the thought; it is not even something located within the power of reason caused directly and simply by thinking the thought (assertively). The assertive thought that you ought to do some good action now (or an assertive thought that something is good) does not first cause a movement in reason toward acting, while that psychic movement then causes the action to begin. The thought itself, qua wish, immediately sets you directly into the start of the action. In cases of non-rational desire, by contrast, there is always, besides the thought, some separate movement that initiates the action. This movement may, perhaps, be caused to be at work by a thought, but it is separate from any power inherent in thought itself, simply as the locus of thought.  

I think that this special status of reason, in respect to desire and to self-locomotion, is connected to Aristotle’s (and Plato’s) claims for the natural authority of reason over appetite and spirit, and for the direction of a human life. For Aristotle, appetite and spirit can oppose and even overcome reason’s desires, but when they do overcome it, reason itself must show some defect in its own operations that makes this

50 This difference is why Aristotle ought to be wary (and is wary, I think, in DMA though not consistently in DA) of speaking of a distinct part or aspect of a human soul, a “desiderative” power, separate from other powers or aspects, including reason (λόγος). Though this is often misunderstood by commentators, Aristotle does not hold that it is a feature of the rational nature that when a rational creature thinks of something as good, then (in another part of the soul) there gets generated a psychic movement, namely a wish for that object. No: the thought all by itself is such a psychic movement.

51 For a succinct assertion of this authority, see DA III 11, 434a14-15.
defeat possible. When human beings do assert to themselves that they have decisive reasons to act in some way, then they do act that way—even if they can also act simply from appetite and spirit, while not thinking they have adequate reasons to do what they do. They can only act simply from appetite or spirit (that is, when not endorsed by reason) in cases where they are not asserting to themselves that there are adequate reasons not to do that action, or to do something else instead. If there is a desiderative part of the human soul that has three coordinate sub-parts, wish, appetite and spirit, how could it be that desires of reason (wishes) always control action, if present and active, as Aristotle thinks they do? If instead reason, as authority for our lives, has thoughts that already are desires, then this becomes easily intelligible. But that is another story, and it would be out of place to take it up here; it concerns, among other places in Aristotle’s works, his account of ἀρασία in book VII of the Nicomachean Ethics.

In the DMA, then, I think Aristotle makes clearer and more explicit than in DA III 9-11 (and, I think, than anywhere else in his works) that on his view βουλήσις or wish is a desire, unlike appetite and spirited desire, that is not in any way separate from its thought-component. There is just one psychic entity in this case, which is both (in one aspect) a thought and (in another) a desire.

52 He clearly relies on this thesis in designing and executing his project in Nicomachean Ethics, which is fundamentally predicated on the idea that practical knowledge, achieved by philosophical reasoning such as we find in that work, motivates on its own, without necessary reliance on any other, non-rational, motivation. I have explained this in detail in "Political Community and the Highest Good" in J. Lennox and R. Bolton, eds, Being, Nature, and Life in Aristotle, Cambridge, Eng. 2010, 212-264. See also Cooper, Pursuits of Wisdom, Princeton 2012, chapter 3. The DMA provides, in a clear and decisive form, the psychological and physical analysis Aristotle needs, and relies on, in his late ethical and political views found in NE and Politics.

53 The main lines of my interpretation of Aristotle’s account of how thought moves animals in self-locomotion were worked out in collaboration with Princeton colleagues and
graduate students when we spent most of academic year 2007-08 reading and discussing the DMA in our weekly reading group. I thank particularly Hendrik Lorenz for his contributions to our discussions and to the formation of my own views. This final version is much revised after discussion at the Symposium, which was lengthy and probing; I received written comments from Klaus Corcilius on an interim version circulated after the Symposium, which led to clarification and strengthening of my argument at several points, for which I thank him. I am grateful also to Michel Crubellier, who sent me his paper, which I had not known about, “Le ‘syllogisme pratique’, ou Comment la pensée meut le corps” in A. Laks and M. Rashed, eds, Aristote et le mouvement des animaux, Lille 2004, 9-26. Corcilius’ and Crubellier’s approaches to my part of DMA 7 differ from mine in many respects, but I have made no attempt explicitly to confront any of their views that differ or conflict with the ones I arrived at from my own study, or to record points of agreement with their or others’ published views. I hope my account can stand on its own, presented and explained, as I have done here, in positive terms and always with close attention to exactly what Aristotle says, and does not say, in this and related texts.