CHAPTER 4

Animal Motion

Logos in On the Soul

We are trying to understand *logos* as it appears in the *Categories* in the phrase “*logos* of being” as standard, and then in *On Interpretation* as an intrinsic relation between potentiality and actuality. In chapter 3, we saw how *inorganic* nature exhibits the inherence of *logos* as a “form according to *logos*,” and how *organic* nature does so in nutrition and reproduction, a process of holding together formerly exclusive elements by “limit” and “*logos*.” Besides “standard,” a second meaning of *logos* turned out to be operative in the context of organic nature: “ratio.” Yet, this second meaning also seems to refer to the fundamental meaning of *logos*: a relation holding on to its terms in such a way that it neither collapses them nor leaves them indifferent to one another. Thus, the overarching sense of *logos* can be compared to what Aristotle calls a “stretching out [*oregesthai*] toward the eternal and the divine” (*DA* II, 4, 415a23–415b2). Neither inorganic nor organic nature simply exist—the former is “stretched” between its potentiality and actuality, the latter is “tended” between the developed state of the parts it is constituted from, and the functions they are developed for. The stretch of fire away from the center of the universe, the reproductive urge to integrate form into the material of another body, or the nutritive impulse to integrate material into a being’s own form are facets of the same desire.

But there is more. Not all natural motion involves the integration of matter. Some natural beings interact with beings without imposing their own forms onto others’ bodies. These beings are receptive not only to others’ material, but also to their form. Although, unlike fire, plants integrate bodies with contrary natural impulses, they are also limited to nutrition and reproduction. As such, they are precisely impermeable to any form other than their own, since the complete destruction of others’ forms is precisely the mark of successful nutrition and reproduction. This chapter of the book then deals with more than natural motion and the motion of living beings. It deals with specifically *animal* motion: sensation and locomotion.
The nutritive power must by necessity be in all that grow and decay. But sensation is not necessarily in all that live. For those whose body is simple do not have touch, nor can those that are not receptive to the forms without the material. (DA III, 12, 434a26–30)

In section 1 of this chapter, “Sensation,” we shall present the “paradox” of sensation, show that its solution depends on the distinction between affection, alteration, and completion, and conclude that, for Aristotle, sensation cannot be explained without considering it as a specific kind of logos, namely a “ratio” or a “proportion” between the state of the sense organ and the state of the sensible (DA III, 2, 426a8, 426a28ff.; De Sensu 7, 448a9–13). Section 2, “Locomotion,” will introduce distant perception and locomotion as “syllogisms” necessarily joining the premise of the receptive part of the soul and that of the desiring part without letting one premise cancel out the other. In section 3, this discussion of the “practical” syllogism shall exemplify another use of logos as “ratio,” while also gesturing toward the “unpractical” syllogisms that are the hallmark of our next chapter: human action.

1. Sensation

What can we learn from animals? The elemental and the inorganic exert a certain charm on us: the height of mountains, the constancy of stars, the roar of the ocean, even the look of a campfire or a snowflake may seem to us as models to covet, and as inspirations of the sublime. Everybody now and then admires the solidity of rocks, the immensity of icebergs, the raw power of storms, or the transparency of still water. Inorganic nature aside, plants also contribute to this fantasy with the fertility or size of trees, the tickle of grass, and the blossoming of flowers: a peaceful life confined to nutrition and reproduction alone.

Nevertheless, we are more likely to indulge in this nostalgia while contemplating a view from a balcony in safe remove, or while looking at a landscape by Turner or Caspar Friedrich in a quiet museum, than while steering a ship in a storm. This nostalgia for the elemental and the vegetative seems to reflect an aspiration for opaqueness and determination, excluding hesitation and necessary care. Hence all these elemental or vegetal fantasies remain aspirations. To epitomize nutrition and reproduction for a human being is and always remains an endless task to fulfill, an abstraction, a pleasant imagination, a negative plan of not having to do things that is fulfilled, perhaps, only in death.²

Insofar as elemental and vegetal fantasies express a denial of aspects of human life beyond nutrition and reproduction, our investigation of animality
may be expected to conceptualize how nutrition and reproduction are only “parts” of our soul as conceived by Aristotle. When Aristotle invites us not to refrain from studying the most humble animals, quoting Heraclitus who, warming up at the stove, calls his guests to “come in, be brave, for there are gods even here,” perhaps this exhortation is made less against human contempt for “lowly” animals than against our unwillingness to leave elemental and vegetal fantasies for the hesitations, cares, and toils of all animal life. It is from animals, perhaps, that we may learn the life of sensation and motility.

**The “Paradox” of Sensation**

With sensation, we enter the animal world. “Although plants live, they do not have sensation, and the animal is distinguished from that which is not animal by sensation” (*De Sensu* 1, 436b11–12). Yet sensation seems to immediately resist any conceptualization that starts from a distinction between subject and object.

Let us first open up what may be called, following Merleau-Ponty, the “paradox” of sensation. The experience of sensation requires both distance and penetration. I am the one over here sensing objects, and yet sensation seems to take place over there. For Aristotle, sensation is a kind of motion, namely a change with respect to quality, and thus seems much more remote and superficial than nutrition and reproduction. So, on the one hand, sensation seems to be even weaker than a qualitative change proper because the sentient is not really changed by its object, but rather seems to gather a faint and fleeting echo of it. Yet, on the other hand, Aristotle also defines sensation first as a kind of “alteration,” a kind of becoming other (DA II, 5, 416b35). So much so that it is with sensation that the animal soul becomes open to the world, instead of simply imposing itself upon it. In this spirit, Aristotle famously says: “In a way the soul is all beings” (*DA* III, 8, 431b21–22). Thus, while it seemed superficial and distant before, now sensation appears to be a penetration and access into the world incomparably deeper than reproduction, and a receptivity incomparably wider than digestion.

Aristotle begins his discussion of this paradox in *On the Soul* (II, 5, 416b35–417a1) with an implicit reference to a discussion of “affection” in *On Generation and Corruption*, which puts the paradox of sensation in the form of a dilemma borrowed by his predecessors: is like affected by like, or unlike by unlike? According to Aristotle, the two views form a false opposition: “the cause of their opposition is that, while one must watch [thetaresai] a whole, they happened to say a part” (*GC* I, 7, 323b3–19).

What is this comprehensive view that solves the paradox of sensation, that abolishes the apparent opposition between activity and passivity, between
a “subjective” perspective on sensation and an “objective” one? What is the middle way that was excluded or overlooked by Aristotle’s predecessors on both sides of the discussion?

According to his typical strategy of dialectical synthesis of his predecessors’ views by sorting out the multivocity of words, Aristotle states: “It is necessary that the agent and the patient be somehow the same, and somehow different and unlike one another” (GC I, 7, 324a3–5). On the one hand, a being cannot be affected by a being that is altogether similar and indistinct from it, since the same being would also be constantly affected by itself and there would be no distinction away from which the affection would happen to begin with. But, on the other hand, a being cannot be affected by a being altogether different from it, since then there would be no common ground upon which it could be affected by the other.

Aristotle attempts to solve the dilemma by stating that “it is necessary that the agent and the patient be similar and same in kind, but unlike and contrary in form” (GC I, 7, 323b32–34). So, this body can affect another body, and this color can affect another color. Thus, if sensation is an affection, it will happen between two beings similar on an overall level, and dissimilar on a relatively lower level.

But is sensation an affection to begin with? How does this idea of affection apply specifically to sensation, if at all? Concerning one horn of the dilemma, the identity of agent and patient in sensation would imply the self-affection of both on their own. This identity would destroy the active character of the agent as well as the passive character of the patient. Thus, if earth is perceived by earth, why doesn’t the “earth” in my palm always sense the “earth” in my fingers, wrist, and knuckles? Assuming that my body is constituted from a finite number of elements, why doesn’t one part of my body sense my other parts? Why don’t I constantly feel that my blood is wet and warm, that my heart is elastic? Why don’t I distinctly feel my inner organs, the curves of my brain, and my veins? If I did feel my organs in the same way and to the same extent that I feel external objects, the distinction of external and internal would be abolished and my body would lose its integrity.

This loss of bodily integrity is not just a hypothetical scenario. Sometimes I do feel my own eyes or my own liver. But this happens precisely when I am feeling bad. A liver is sick when it is an object of sensation. Ache is self-affection. And disease is literally dis-ease: the diseased senses are unable to not feel themselves, they fall short of the ease, the relative potentiality, and the readiness that characterize the ensouled body as we saw in chapter 3. A healthy living body is a body whose parts are both developed and open. One can here see how Aristotle’s conception of sensation is already both
exemplifying his “definition” of the soul and sketching out an opposition to the nostalgia for the elemental we mentioned in the beginning of this chapter. For to feel well is to be altogether ready for and open to the world, to be perfectly “ec-static.” To feel well is not to feel well, but to feel well. More explicitly, to feel well is not to jealously hold on to an inner state of well-being. To feel well is to do well the work of feeling the world.  

So one horn of the dilemma, the horn of “like being affected by like,” cannot be the whole story of sensation. As to the other horn of the dilemma, that “unlike is affected by unlike,” Aristotle claims that sensation cannot be simply a transition from a state into its contrary under the influence of that contrary, because strictly and merely contrary things cannot get into contact to begin with. If they did, sensation would be mere transformation, the sensing animal would become its object, and it would be eaten and digested by its object, and there would be no sensation proper, but either nutrition or reproduction.  

Negatively, then, sensation is neither a mere reversal of properties, nor a transmission of matter. Sensation must allow for a difference between the agent and the patient, but also for the possibility for the sentient to somehow hold onto the sensible. In this sense, just like the fundamental meaning of logos, the “paradox” of sensation is that it must hold on to the integrity both of the sentient and the sensible without letting one take over or remain indifferent to the other.

The Example of Fire
What distinguishes sensation from any kind of affection then? How is feeling warmth different from merely becoming warm, seeing from reflecting light, or hearing from reverberating? How are animals touched such that it is irreducible to the way inanimate objects or plants are? In response to this question, Aristotle makes what looks like a trivial remark: “That which can sense is not actually at work, but only potentially” (DA II, 5, 417a7–8; emphasis ours).  

Follows the example of fire: “So it is like the combustible which does not burn by itself without something setting fire to it; for otherwise it would burn itself and would not need any fire in actuality” (DA II, 5, 417a8–10). Although Aristotle’s recourse to potentiality and his example help us clarify what sensation cannot be by avoiding the dilemma’s first horn, they do not help us understand what sensation is positively. What is the difference between the power of the eye for sight and the potentiality of a combustible to burn? The structure of assimilation can be applied to any change or affection, and although it helps Aristotle criticize and synthesize his predecessors’
views, it does not tell us what sensation is. Thus, the fire example is helpful
in understanding the specific way the agent and the patient are related in a
change, but it does not shed light on the specific form this relation takes in
sensation. The combustible is affected by fire, its potential is actualized by
fire, it becomes fire, but it does not feel the fire.

The Example of Knowledge
And yet the concept of potentiality is central. In the rest of his analysis of
sensation, Aristotle simply refines the kind of potentiality at stake. Just as the
growth of plants was distinguished from the growth of fire by its developed
organic character, that is, its being a *first* actuality, sensation is distinguished
from change or affection in general by its being a *first* actuality, a developed
power. An animal’s power of sensation is a result of a prior development just
as a plant’s power of nutrition was. Thus, the key to understanding sensation
is found back in the definition of the soul.

But since we speak of perceiving in two ways (we say for that which
hears and sees potentially that it hears and sees—even if it happens
to be asleep—as well as for that which is actually so), so sensation
would be said in two ways: on the one hand as in potentiality, and
on the other as in actuality. (*DA* II, 5, 417a10–14)

When Aristotle offers his positive account of sensation, he no longer uses
the example of the inorganic growth of fire. He rather takes up the exam-
ple of knowing and distinguishes three stages divided by two transitions:
(a) a human being has a *potentiality* to know, just by belonging to a genus
that has the potentiality to know (*DA* II, 5, 417a23–25); (b) a human being
may have a *first actuality* for knowing by having acquired some knowledge
(say the knowledge of grammar) and is in position to contemplate or use
this knowledge (*DA* II, 5, 417a25–28); (c) a human being may then actually
contemplate or use her knowledge in a state of *second actuality* (*DA* II, 5,
417a29–30).

Having distinguished these three stages, let us turn to the two transitions
between the first and second, and between the second and the third. The tran-
sition from potentiality to first actuality is a process of “changes by means of
learning and frequent change from contrary conditions” (*DA* II, 5, 417a31–
33). In the case of sensation, this process is that of the development of the
sense organs themselves. But the transition from first to second actuality is
not a change: it is a transition from this inoperative possession of sensation or
grammar to being operational, being at work, being actual (DA II, 5, 417a33-b2). The second transition is not a change as the first one is. The first is a reversal, such as the transition from not-fire to fire, the wall’s color turning from dark to bright, the turn of illiteracy into literacy, becoming other by no longer being itself. But the second transition, Aristotle says, “is rather the actual being’s preserving [sôtêria, literally the “saving”] the potential being” (DA II, 5, 417b3–5).9 A hand on a warm radiator touches it precisely in so far as it has already integrated the elements into a settled equilibrium so that it can then accomplish the second transition: it can now refrain from merely turning from cold to warm.10 A dog hearing a bell hears it precisely in so far as it is not merely moved by the vibrations in his ear and does not simply reflect or transmit them as vibrations, however sophisticated this process may be.11

Sensation is “paradoxical” or riddlesome in at least two respects. First, sensation defies the false dilemma of either remaining the same or becoming other. A warm hand is different from a cold hand, but an actually feeling hand is not different in the same sense from a hand that is not actually feeling. Secondly, sensation defies the false dilemma between activity and passivity. Unlike inorganic bodies standing apart from one another in their natural places or moving in contrary directions toward them, and unlike plants striving to replenish their form by perfectly destroying other forms, animals are ready to become that which is unlike them, without ceasing to be what they are. They are not only ecstatically tended between their actual being and their inherent standard, they not only hold the contrary tendencies of the elements within their organism together under their own form, but they preserve themselves by being altered.

Another Wax Example
So is sensation between like and like, or between unlike and unlike? The solution of the “paradox” of sensation must take into account this second transition, the transition from the developed sense organ (first actuality) to its fully operational state (second actuality). “The sentient is potentially like what the sense object is in actuality. Thus, it is affected while being unlike, but, once affected, it is like its object” (DA II, 5, 418a3–6). An account of sensation must indeed allow for the distinction between potentiality and actuality, but, most crucially, for a concept of first actuality as distinct from both potentiality and second actuality. An account of sensation must acknowledge this level of preparedness, readiness, expectation, intermittence, sleep. An account of sensation must be able to distinguish between the mere lack of capacity and inoperativeness. Just as the growth of a plant was fundamentally different
from the growth of fire, sensation cannot be reduced to a mere actuality—sensation must allow for preparation as well as for performance.\textsuperscript{12}

In all the respects in which the inanimate is altered, the ensouled is also altered; but all inanimate beings are not altered in all the respects in which the ensouled are, for [the inanimate] are not altered with respect to sensations, and while that which is undergone is unnoticed \([lanthanei]\) by the latter, it does not go unnoticed \([ou lanthanei]\) by the former. (\textit{Ph.} VII, 2, 244b12–15)

The difference between the animal and the plant can be seen in that the former can \textit{fail} to perceive in a way the latter cannot. Sensation is a realm of the possibility of distinction and relation between \textit{lanthesthai} and \textit{ou lanthanesthai}—perhaps quite akin to the etymological sense of \textit{alêtheia}.

Again it is the sense of stretch that governs Aristotle’s account of life and animality: opposites are maintained as opposites without one being collapsed to the other. For the animal, to perceive is neither to massively remain what it is, nor to surrender to what it is not. It is in this sense that sensation is a quite special kind of becoming other: a becoming other without ceasing to be itself, a becoming other that is the preservation (\textit{sôteria}) and completion of what it is for an animal to be. As Aristotle says elsewhere, a house is not \textit{changed} when its roof is put on top of it (\textit{Ph.} VII, 3, 246a17–b3). The solution of the “paradox” of sensation lies in the definition of the soul, that is, in the concept of a \textit{first} actuality, in a sense of “stretch” that defines animality.

At the end of book II of \textit{On the Soul}, Aristotle recapitulates his previous account of various senses and media, and illustrates his conclusion by means of another familiar example:

But concerning sensation as a whole, one must grasp that sensation is that which is receptive to the forms of sensibles without their material, just as the wax receives the sign of a ring without the iron or the gold, and takes up the golden or bronze sign but not as gold or bronze; similarly sensation of each thing is also affected by that which has a color or a flavor or a sound, although not as that which is said of each . . . (\textit{DA} II, 12, 424a17–24)\textsuperscript{13}

Like the fire example, this famous wax example is no less problematic than suggestive, again because the impressed wax is no more sensitive to the impression than the combustible is to fire. Aristotle’s point seems to be that sensation is precisely irreducible to a transfer of matter, yet the example very
misleadingly suggests that sensation is an external impression of a shape. For, as “being” is said in many ways, the eye is stretched out toward sight in a fundamentally different way than a piece of wax is receptive to any shape. The piece of wax, in Descartes as well as here in Aristotle, is precisely not stretched toward this or that sign on a ring, and for this reason it is an inadequate example for nature and life. In Aristotelian terms, as we emphasized in chapter 1, wax is rather a substance produced by bees, and whose consistency is between that of earth and water: it yields like water, yet it stays put like earth. For this reason wax is precisely chosen by humans for inscribing letters or impressing signets. But the wax is not completed at all by being inscribed or impressed. In fact, just like the fire example, terms like “inscription” and “impression” are among the inorganic or elemental, and thus inadequate, metaphors used for natural or animal processes.

Just as the fire example helped us solve the dilemma of affection while remaining fundamentally inadequate for illustrating the whole phenomenon of sensation, here the wax example, while helpfully suggesting that the potentiality of the sentient is not any potentiality but a specific one, constitutes only another step toward a well-founded conception of sensation that explains it without reducing it. And yet there is one last concept in the account of sensation in On the Soul, followed by one last example.

Sensation as Logos
This last concept is logos. Aristotle continues: “. . . the sensation of each thing is also affected by that which has a color, flavor or sound, although not as that which is said of each of these, but as being such and such [hê toiondi] and according to logos” (DA II, 12, 424a25). This complex sentence makes a surprising or most counterintuitive claim: that we do not sense color, sound, smell, and so on. The sentient is not affected by a color as color or by a sound as sound. An animal neither senses color as the genus of white, red, and green, nor does it sense redness. It rather senses red “as being such and such,” that is, this red of something, a red that is subtended by pleasure and pain, in a word, something red. If the agent and the patient of sensation share the same genus, this means that animals sense things, and not neutral anonymous disinterested stimuli or abstracted notions. In other words, sensation is to get a reply to a prior expectancy, an answer to a prior question, namely the question of desire. Sensation is not of universals, it is of particulars. Sensation is not like deduction, but like induction. It is the universal that emerges out of repeated sensations.

But how is the sentient affected by the sensible according to logos? Aristotle continues:
The sense organ is first of all that in which such a potentiality is; thus in one way they [the organ and the potentiality] are the same, in another way they are different; for that which senses would be a magnitude, but indeed neither the being of the sensitive nor sensation are magnitudes, but rather some logos and a potentiality of [that which senses]. (*DA* II, 12, 424a25–28)

A sense organ is necessarily extended, because necessarily composite as we saw while discussing organicity in chapter 3; but what makes it a sense organ is “some logos,” which is not extended. This logos is the configuration of the sense organ, the relationship between extended things, and “hence it is clear why excesses in the sensibles sometimes destroy the sense organs; for if the motion of the sense organ is too strong, the logos (which is sensation) is destroyed” (*DA* II, 12, 424a29–32). If the sense organ exists according to logos, and if the power of sensation is precisely this logos, sensation requires that the sense organ hold on to a certain equilibrium between contrary qualities. It is the logos that preserves the sense organ: while feeling warmth, it also holds on to its prior equilibrium.\(^\text{16}\) Logos once again names a limit of inclusivity—which, once violated, entails the destruction of that of which it is a logos.

Thus sensation must involve something like a minimal act of “remembering” or “comparing,” a maintained equilibrium, since too strong a stimulus makes the animal “forget” its prior condition and simply yield to the new one. It is the holding together of both states that explains why sensation is logos. An eye is fundamentally incomparable to fire, to a piece of wax, and even to a final product of the animal’s growth: the physiological development of the eye has indeed a logos of growth, but this is only a transition from potentiality to the first actuality, it is a reversal (*metabolê*): food “forgets” what it was to be for itself, food is transformed; but this perspective misses the “transition” from the first actuality to full (second) actuality: the sense organ is made ready—not for yet another transformation, but for a performance.

The last example of Aristotle’s account of sensation is a lyre:

[Excess destroys the logos that characterizes sensation] just as the symphônia and tone of a lyre is destroyed when the strings are struck hard. And [it is also clear] why plants do not sense although they have one part of the soul and are affected to a certain extent by tangibles—for they become warm and cold. The reason is that they have no mean [*mesotêta*], neither any such principle such as to be receptive to the forms of sensibles, but rather are affected with the material. (*DA* II, 12, 424a32–424b3)
This example can support our recurrent use of the idea of stretch, crucial to *logos*, as well as our quotation of Heraclitus’s fragment 51 at the very beginning of this book: “They do not understand how that which is disrupted has the same *logos* as itself: a back-stretched harmony as in the bow and the lyre.” But how does the lyre or the bow illustrate the first actuality, which is crucial for solving the “paradox” of sensation? The strings of lyres and bows are indeed stretched, and this stretch is determined neither by the string itself nor by its being attached to one extremity. The stretch is a function of the nature of the string and of the relatively fixed distance between its extremities. While objects seem to us to be massive or subtle, hard or soft, hot or cold, wet or dry, the lyre and the bow are good examples of objects irreducible to opaque materiality. And this idea of harmony being a result of opposition was indeed not alien to Aristotle’s contemporaries, since the relational character of harmony was a great source of inspiration for the Pythagoreans as well as for Plato. Both Heraclitus and Aristotle seem to develop this intuition: *logos* as ratio is not an independent value on its own, but a relation between two numbers which can be instantiated indefinitely by other things. *Logos* as a note is not only *this* note played on *this* string of *this* lyre, but a result that can be attained, mutatis mutandis, on other strings of other lyres or even other instruments such that it is possible to play them together. Finally, *logos* as sensation is a relation between the sense organ and the sense object such that one may sense the same heat as long as the ratio between the heat of the organ and that of the object remains the same. Sensation is of that which is “hotter” than my hand, “stronger” than the air in my ear, “sweeter” than the state of my mouth. Sensation is not relativistic, but fundamentally relative or relational, that is, differential. *Logos* as sensation must preserve different terms, not only in their self-sameness, but also in their difference from one another.

Developed organs are already stretched between contraries: this sense of *logos* is familiar to us from our discussion of growth in chapter 3. But, here in our discussion of sensation, this stretch is no longer an end for sense organs: they also stretch out to the world for being completed. And this is what is new here. For animals, being in the world is reception as much as confrontation or assimilation. This certainly does not mean that sensation is added on to nutrition and reproduction. It simply means that nutrition and reproduction for animals are sensitive nutrition and sensitive reproduction. From the point of view of growth, plants are indeed internally differentiated: they have organs; but from the perspective of sensation, they are indifferent, since they simply *become* hot or cold. They do not exhibit the sense of stretch embodied in sensation: they do not possess a range, a mean (*mesotêta*), in which they
hold themselves and the forms of their object. That is why every stimulus is “excessive” for plants such that none really is, whereas “sensation is a logos, but excess hurts or destroys” (DA III, 2, 426b7–8). Sensation always implies compositeness, and this compositeness always implies the plurality of elements held together within the body of the animal. Yet what is specific to sensation is also the plurality of its objects: “Touch is like a mean of all tangibles, and its sense organ is receptive not only of all the differences of earth [diaphorai gê], but also of hot and cold and all other tangibles” (DA III, 13, 435a22–24). With sensation, we are dealing with a phenomenon that is no longer reducible to a form of integration, but one that constitutes a mutual contact with the world. The immense fabric of all the physical-mechanical interactions in the universe is subtended here and there by oases of sensation: “in a way the soul is all beings” (DA III, 8, 431b21–22). Having sensation by definition, this is what animals are: “in a way” all beings. And they are “saved” by being “in a way” all beings.

To conclude then, sensation is a logos in its second sense, “ratio,” but in an even more subtle way than that of growth and reproduction. For sensation as logos no longer holds on to the formerly exclusive elements within its own form, it rather holds on to the state of the sense organ and the state of its object.18 Whereas the awareness of difference was a sign of a failure in the assimilation process of nutrition and reproduction, every successful sensation is necessarily awareness of difference. Sensation is discrimination or krisis:

To sense is some kind of being affected such that that which an object makes like itself is such already potentially. This is why we sense not what is as hot, cold, hard or soft as ourselves, but what is more so; thus, sensation is like a mean between contraries of sensation. For this reason the mean distinguishes [krinei] the sensibles. (DA II, 5, 418a14–16)19

Our elemental and vegetal fantasies are disrupted by this krisis that only animals are capable of.

So animal life is marked by sensation, and all sensation is not mere intake, but discrimination (krisis). However, we humans are somehow capable of denying our power of discrimination entailed by our animality. This sheds light on a very famous passage in the Metaphysics, IV, where Aristotle claims that a skeptic who objects to the principle of non-contradiction thereby claims to become “similar to a plant” (Metaph. IV, 4, 1006a15). I think Aristotle here is not sarcastic, but serious. For if the essential character of animal life is sensation, and if all sensation is distinction or discrimination (krisis),
then the objector who rejects the principle of non-contradiction thereby refuses to propose anything whatsoever, to engage himself to one meaning at the exclusion of its opposite, and thus to distinguish affirmation from negation, pursuit from flight. According to Aristotle, by refusing the principle of non-contradiction, the skeptic is in fact gesturing toward vegetal and inorganic fantasies, mimicking a vegetative, anesthetic state, and claiming to disengage himself from commitment which lies, as we saw, at the heart of animal life.  

2. Locomotion

After nutrition, reproduction, and sensation, the last kind of natural motion is locomotion. Our analysis of it shall bring to conclusion the inquiry into the ways in which natural motion exhibits “logos of being” as an inherent standard. We shall see that an ox exhibits what it is for it to be, its inherent standard of being, by means of locomotion as much as by its reproduction, nutrition, and sensation. Yet Aristotle analyzes animal locomotion also as a logos, but in the sense of a “proportioning,” a “rationing,” or a “syllogism.” This shall set up the stage for the specifically human senses of logos as “reason” and “speech” in chapters 5 and 6.

Distant Perception

Natural beings have an inherent source of motion and rest. Among natural beings, organic bodies further integrate the material of contrary bodies into their own form in reproduction and nutrition. And finally, among organic bodies, animals are receptive to the forms of bodies without their material in sensation. For Aristotle, however, some animals do more than receive the form of contiguous bodies (which happens with touch, and its subspecies taste); they receive form through something else by means of smell, vision, and/or hearing (DA III, 12, 434b15–16).

Here we are on a higher level of complexity. The animal is not only holding together the logos of its sense organ and the logos of its object without letting one yield to the other, it is also doing so while holding the medium as medium. Not only is the animal holding together and yet distinguishing the material and form of a contiguous object, it is holding together and yet distinguishing the material object from the medium. For, although Aristotle’s concept of the medium of sensation is quite complicated, this much is clear: as long as the medium itself is sensed, it is no longer a medium. The animal not only perceives an object, but perceives it through something else. Then if an animal is capable of distant perception, it should somehow read the object off
of the medium. Instructive in this respect is Aristotle’s account of memory, since just as distant perception is the sensation of an object but also of its distance, “whenever both the motion of the thing and that of time happen at the same time, then [the animal] is at work with respect to its memory” (On Memory and Recollection 2, 452b23–24).

Just as the animal feels the warmth of water without simply becoming warm, in distant perception the animal must hear the bell beyond the vibrating air that carries the sound and strikes the ear. But as distinct from contiguous sensation, in distant perception the animal senses and holds its real object (“the bell”) not only as distinct from itself, but also as beyond itself, apart and away from itself, at a distance, separated by the medium which is next to it. By using the medium as a medium, by sensing something through something else precisely as something else, the animal gains a sense of the over there. To follow Aristotle who explicitly compares distant perception and memory:

All internal [objects of sensation] are smaller, and as it were analogous to the external ones. Perhaps just as another [being] takes something in itself analogically with forms [in sensation], something similar happens with distances. (On Memory and Recollection 2, 452b15–17)

For an animal that has only immediate touch and taste, it may seem that beings are revealed as something else. Only for an animal having sight, hearing, and/or smell may beings be revealed as elsewhere. A similar argument can be made with respect to memory: for an animal to have a sense of now in distinction from then, it must be able to sense something without collapsing the time elapsed, without excluding the middle.

As memory requires a “sensation” of time, distant perception indeed requires a sensation of distance:

It is necessary to become acquainted with magnitude and motion by means of that by which one is also aware of time, so it is clear that the image is an affection of the common perceiving power. Thus it is clear that the acquaintance of these is by means of the primary power of perception. (On Memory and Recollection 1, 450a9–13)

Aristotle defends at length that there is a primary perceiving power for common attributes and even claims that there is a “sensation of time” (DA III, 1, 2; III, 10, 433b8). These sensations present the form of krisis, mesotês, or logos, but in a more complex way than would contiguous perception. For the form
sensed here must be held together and distinguished by a spatial or temporal
distance. Aristotle explicitly compares recollection to a “syllogism”:

Recollecting is like a kind of syllogism; for one who recollects
reasons out \([\text{syllogizetai}]\) that one saw or heard or had some such
experience before, and this is a sort of inquiry. And by nature this
belongs only to those beings that are capable of deliberation, since
deliberating is also a certain sort of syllogism. (On Memory and Rec-
ollection 1, 453a10–14)

Deliberation, search, memory, and distant sensation all seem to exhibit the
same structure: a holding together of something actual (a goal, an object
sought for, a present sensation, or a past sensation) together with an aware-
ness of the medium (the way to reach the goal, the very absence of the object
sought for, spatial or temporal distance). Thus, the animal capable of memory
and distant perception is no longer merely a sensitive living being, but an
animal capable of explicit proportioning.

**Animal Locomotion**

Distant perception as access to *here* and *there* most crucially brings locomotion
into play (DA III, 12, 434a34–434b9; 434b25–30). When we talk about sight
or hearing, we are necessarily dealing with bodies that can move. This is not
as straightforward as it may at first seem to be, since we mostly conceive of
sensation as apart from locomotion, taking place in the eyes, the ears, or in the
head. Apart from touch, sensation is for us humans an almost cerebral activity
taking place at the upper extreme of the body, whereas for Aristotle the seat
of sensation is in the center of the body, in the heart.\(^{24}\) Further, the relation
between sensation and locomotion is somewhat loose for us. Having potenti-
alities with *logos*, as shown in chapter 2, we humans seem to think that indeed
sensation and locomotion *may* go together, but it is not immediately clear why
they would *implicate* one another. Here we may see why they would: distant
perception requires the use of a medium, which itself requires a comparison
or proportioning, an awareness of the *elsewhere* beyond the medium. But for a
moving animal, the *elsewhere* is nothing but a potential *here* that would actually
become *here* by pursuit or pull, and the *here* is a potential *elsewhere* that would
become *elsewhere* by flight or push (DA III, 10, 433b26; MA 10, 703a19–20).

But why would an animal pursue or flee something contiguous or distant?
Because “that which has sensation also has pleasure and pain, and the pleas-
ant and painful, and that which has these has appetite; for appetite is desire
for the pleasant” (DA II, 3, 414b4–7).\(^{25}\) That sensation and locomotion are
subtended by desire should not surprise us, first because, as we quoted in chapter 3, “all things desire [the eternal and the divine], and do everything they do by nature for the sake of it” (DA II, 4, 415b1–3). Thus just as we should primarily think of sensation not as a mental process but as fundamentally bodily, not as simply representational but as fundamentally moving, similarly we must conceive of animal locomotion as fundamentally interested. One can see in each step of our argumentation (embodiment, motility, desire) a factor that is abstracted in Descartes’s wax example: for him, just as depth in space and time is not an integral part of sensation, the sensation of the wax is precisely a disinterested activity that does not move the subject—which ends up being nothing but the mind.26

For Aristotle, sensation and locomotion are not only subtended by desire like all faculties, in fact they are joined or articulated by it. For, abstracted from appetite, sensation does not entail locomotion in the form of imagination: “Imagination too, whenever it moves, does not move without appetite” (DA III, 10, 433a20–21). Nor does it move in the form of knowledge: “As a whole we see that the human being that has the healing art does not heal, so that there is something else that governs the making according to knowledge, but it is not knowledge itself” (DA III, 9, 433a3–6). Nor does it move as nous: “Now, nous does not appear to move without appetite” (DA III, 10, 433a23–24). Neither the sensation nor the imagination of a fact, nor the knowledge of a fact and its cause go any further than stating a fact or cause: “this is such and such,” “this is water,” “this is this big,” “the moon is eclipsed because of the interference of the earth” . . . None of these have any moving force or practical implication without desire or interest, a way out of the animal returning to it. Hence, involvements with disinterested facts are abstractions within the context of the interested beings animals are.

In short, Aristotle analyzes locomotion as distant perception fused and fueled with desire. For him, the cause of locomotion is thus both universal desire and some form of receptivity to particulars, be it perception, thinking, or imagination (DA III, 10, 433a10–13).27

The “Practical Syllogism”28

We are not abusing the terms “premise,” “rationing,” or “proportioning” here, since Aristotle analyzes locomotion as if it were the result of a reasoning, a certain relating of two terms without prioritizing one over the other, a certain logismos (DA III, 10, 433a14–15). What kind of logismos are we dealing with?

Any predication like “this is such and such a thing,” “this is such and such an action,” or even “I am such and such” is in itself insufficient for explaining animal locomotion without desire.29 Aristotle construes locomotion as a
result of a *logismos* that takes the form of an inner “speaking” (*legein*) between appetite and sensation: “My appetite says [*legei*] ‘I must drink’; ‘this is drink’ says sensation or imagination or intellect, and one immediately drinks” (*MA* 7, 701a32–33; *DA* III, 11, 434a17–22). More emphatically, Aristotle’s conceptual reconstruction of locomotion in *On the Soul* takes the form of what is later to be known as the “practical syllogism”:

(1) If such a human being must do such and such a thing, (the universal);
(2) and if this is such and such a thing and I am such a human being, (the particular);
(3) then I must do this. (*DA* III, 11, 434a18–20)

But, in *On the Soul*, Aristotle offers this *logismos* in parentheses, and does not dwell on its character as a syllogism or even as a *logismos*. Such a parallelism between the scientific and the practical syllogisms, however, is explicit in *On the Movement of Animals*. And there it is followed by a wealth of examples. Aristotle’s major question is as follows:

But how is it that *nous* sometimes acts sometimes not, sometimes moves and sometimes does not? What happens seems parallel to the thinking-through [*dianoêsis*] and making a *syllogismos* about the immovable. But there the end is the thing contemplated (for when one thinks two premises, one thinks and puts together the conclusion), but here out of the two premises comes to be a conclusion which is an action. (*MA* 7, 701a7–13)

First example: Whenever one thinks that all humans must walk (the universal), and that he himself is a human being (the particular), then he immediately (*euthus*) walks (*MA* 7, 701a13–19).

Aristotle’s second example is of the stopping: whenever one thinks that no human must walk (the universal), and that he himself is a human being (the particular), then he immediately (*euthus*) stops.

The third example is taken from art and therefore the minor is no longer the agent, but the object envisaged (*NE* VI, 4, 1140b3–5): [Whenever one thinks] “I ought to produce some good” (the universal), [and that] “a house is a good” (the particular), then he immediately (*euthus*) produces a house.

Aristotle’s fourth example conjoins two syllogisms: [Whenever one thinks] “I need some covering” (the universal), [and that] “a coat is a covering” (the particular), then [one thinks] “I need a coat”; [Whenever one thinks] “I must make what I need” (the universal), [and that] “I need a coat”
(the particular), then “I must make a coat.” Aristotle thus suggests that these syllogisms can be concatenated at length so as to compose more and more complex sets of locomotion involving more and more sophisticated and extended spatiotemporal patterns. The minor premises of all the above syllogisms exemplify ways in which locomotion entails the use of the “common perceptive power” in the forms of distant perception, memory, imagination, a sensation of time, and the use of a medium as a medium. The various combinations of the minor premises provided by this “set” of powers give rise to diverse kinds of animal locomotion such as migration, hunt, escape, search, and so on, all reducible to pushing and pulling, or fleeing and pursuing.\(^{31}\)

Despite Aristotle’s wording and examples, what is at stake here is not an intellectual conception of animal motion, but rather a reminder that the disjunction between sensation and desire is derivative of their necessary cooperation in locomotion. For now, what is emphasized is the immediacy between universal desire and the perception of particulars. This immediacy is expressed in the recurrent adverb “\textit{euthus}” in the conclusions of the syllogisms. In short, coupled with desire, all sensation involves pushing and pulling, and all distant perception involves flight or pursuit.

A Middle Term
The middle term of the practical syllogism in animal locomotion is precisely the relevance of the object sensed or imagined to desire: “This is it!” Since sensation does not by itself provide a universal,\(^{32}\) the minor premise is bound to be particular, and that is why animal locomotion is particular as opposed to the “universal” locomotion of the elements.

It is the middle term that answers Aristotle’s initial question: “How is it that \textit{nous} sometimes acts and sometimes does not, sometimes moves and sometimes does not?” (\textit{MA} 7, 701a6–8). For, disregarding the fact that all sensation is particular, the lack of action or motion can be inferred from the results of the \textit{Prior Analytics}, I, 24. If, as Aristotle says there, in every syllogism at least one premise must be affirmative, and if no two affirmative premises result in a negative conclusion, then all negative conclusions must have one, and only one, negative premise. If the major premise is negative then the “syllogism” takes a form comparable to a Cesare. If the minor is negative then it takes the form of a Camestres. In both cases, the conclusion is negative, therefore there is no action or motion, because either the universal premise of desire or the particular premise of sensation is negative.

As can be seen, we are not totally against the comparison between the “practical syllogism” and the \textit{syllogismos} in the strict sense, precisely because Aristotle is not against it. This being said, we should indeed emphasize that
this comparison is heuristic, and should not be taken literally to envisage animal locomotion as a result of cognitive faculties. In fact, Aristotle too is aware of this misunderstanding and emphasizes the “immediate” character of the conclusion by repeating the adverb “euthus.” The comparison, if taken as a comparison, is instructive not only in terms of animal locomotion, but also in the context of syllogismos in the strict sense. A comparison already excludes mere difference, but also the identity of the terms compared, and thereby informs both. In the following section, we will dwell on the very difference between the “syllogism” that results in animal locomotion and the syllogismos in the strict sense it assumes in the Prior Analytics. Most specifically we shall see how the premises in syllogismoi involve a level of generality that all “practical syllogism” necessarily lacks, and which faculties come into play beyond memory, habit, desire, perception, and even beyond distant perception and experience. For the time being, we see that mediated sensation (distant perception or memory or imagination) spills into an immediate locomotion by means of the particularity introduced by the middle term in conjunction with the universal premise of desire.

We saw that, according to Aristotle, sensation is logos in the sense of a ratio that holds on to its constituents without letting one yield to the other. Here we see that a similar proportioning is at work, although in the more complex form of a syllogism: Aristotle insistently uses syllogismos, syleges-thai, and logizesthai for the “argument” abstracted from locomotion. And in fact what explains animal locomotion is neither the universal premise of desire (common to all nature, as we have seen in chapter 3), nor a disinterested perception (which we have yet to see in chapters 5 and 6), but precisely a middle term, a particular provided by receptivity, that “matches” desire and receptivity, holds them together without letting one yield or remain different to the other.

Put negatively, rocks simply fall, that is, tend toward the center of the universe regardless of where they are. Fire is pulled outward regardless of whether it is in Alexandria or Athens, in daytime or at night, in winter or in summer. It is in this sense that elements move “universally,” without regard for particularity. Animal locomotion, on the other hand, holds this “universal” impulse together with particulars perceived, remembered, imagined, or anticipated. Unlike the burning of fire or the falling of rocks, a bird in flight attends to the difference of heat, season, hour, wind, or humidity that its perception “tells.” An animal never falls as an animal; as capable of discrimination, an animal lays down here, but “here” in a strong sense, in the sense of “this place rather than that other,” and “now” in a strong sense reminiscent of the sense of kairos.
Hence both sensation and locomotion are instances of *logos* in the sense of “ratio.” But, in the context of locomotion, Aristotle often uses verbs like *legein*, *eipein*, and *phanai* for the way the premises are supplied. And he uses the word *logos* itself for the premises. Perhaps the animal soul prefigures an environment of *logos* neither in the sense of “standard” nor “ratio” but in the sense of “speech.” This prefiguration of *logos* as speech in animal locomotion should not be exaggerated, but neither underestimated nor ruled out: *logos* and *legein* in animal locomotion are precisely that which will link our ongoing survey of the word to the human world in chapters 5 and 6. In the animal world, universal desire is no longer neatly matched with, and fulfilled by, motion. Desire needs to engage all sorts of powers of receptivity for particulars: it must move in a certain way through a certain medium toward a certain object, and hence it must minimally “listen” to what perception or imagination have to say.

**Beyond Locomotion**

This necessary particularity of the sensed object negatively sheds light on the theoretical, apodictic, or scientific syllogism. The latter will involve not simply sensation nor even memory and habit, but the emergence of an *eidos* (“this kind of thing”) out of particular experiences, thereby making possible *syllogismos* in the strict sense, and experience in a wider sense that we must clarify:

> While, then, other [animals] live by impressions and memories, they have a small share in experience; on the other hand, the human race also lives by art and reasonings [*logismoi*]. In humans, experience comes out of memory, for many memories of the same thing bring to completion [*apotelousin*] a potentiality for one experience . . . But art comes to be whenever out of many conceptions [*ennoêmatôn*] from experience arises one universal judgment [*katholou hypolêpsis*] about similar things. For, to have a judgment that this thing was beneficial to Callias when he was sick with this disease, and to Socrates, and one by one in this way to many people, belongs to experience. But the judgment that it was beneficial to all such and such people marked out as being of one form [*eidos*], when they were sick with this disease (such as sluggish or irritable people when they were feverish with heat), belongs to art. (*Metaph. I, 1, 980b26–981a13*)

Just as sensation involves a kind of form and a certain *logos*, and then, when coupled with universal desire, forms a certain syllogism, this famous passage
also suggests that human phenomena entail a yet different kind of form and *logos.* Animal locomotion differs from mere desire and sensation in that it forms a syllogism by means of a middle term that provides the relevance of sensation to desire; but animal locomotion also differs from art, *logismos,* and scientific syllogism because it lacks the emergence of a form beyond perceptions, memories, imaginations, and habituation. This is the “small share in experience” they are confined to. As can be seen from the quotation above, this “form” accessible to human agents falls between the particular and the universal such that the particular sensation is no longer simply subsumed under the universal premise of desire.

This explains exactly why, in the examples of the practical syllogism, Aristotle insistently uses the structure: “whenever *x,* then immediately *y.*” As involving distant sensation and the sensation of time, animal locomotion is predicated on temporal relations: *this,* then immediately (*euthus*) *that* . . . . One can understand the limits of these relations since, taken exclusively, these relations are precisely conducive to the *post hoc ergo propter hoc* fallacy. Think of the impossibility of understanding a lunar eclipse by means of merely temporal relations of succession. Sensation may well provide perfect information concerning the dark portion of the Moon and the rays of sunlight, but it cannot account for the role of the middle term, the interference of the Earth itself.

Then not all relations are spatial or temporal and not all *logismoi* take the form: “whenever *x,* then immediately *y.*” According to the rest of the quotation from the *Metaphysics* above, it is the possession of *logos,* this time in its specifically human form, that gives humans access to causal relationships of “if *x,* then *y,*” and this, not immediately (*euthus*), but according to a deliberation over conflicting interpretations of the relevance of the object sensed or imagined: “Is heat good in *this* particular situation?,” “Is marble good for *this* particular statue to be erected for *this* particular purpose?,” “Is defying an enemy good in the context of *this* particular front of a battle in *this* particular political context?,” “Is it better to not give back my friend’s weapon to him, *now that he has gone mad*?” Human action is irreducible to animal locomotion in that it not only searches by means of sensation and indeed subordinated locomotions, but also interprets the sensible from the get-go and searches by interpreting.

Human *logos* is certainly not a superpower at all, it does not guarantee *any* success in practical affairs. If *logos* is a key, it locks as many doors as it opens. With human beings, the practical syllogism will result in action (*praxis*) instead of mere locomotion (*phora*). It will become “practical” in the literal sense, but it will also prove to be unimaginably impractical. This is the topic of the next chapter.
3. Recapitulation and Reorientation

In chapter 1, we started out with an investigation of the sense of *logos* as “standard” in the *Categories*, and, in chapter 2, we concluded that its inherence is to be found in *inherently* motivated motions, that is, natural motions: nutrition, reproduction, sensation, and locomotion. These four exhibit this inherence by differing, respectively, from mere increase of bulk, from mere coming to be, from mere alteration, and from mere change of place. We have tried to show how a second sense of *logos*, namely a certain kind of “ratio,” explains nutrition and reproduction in chapter 3, and sensation and locomotion here in chapter 4. Thus, nutrition “rations” or “proportions” in the sense that it consists of holding on to formerly exclusive elements according to its own *logos* within the living being’s body. Reproduction does the same thing this time inside the body of another. As to sensation, it “rations” or “proportions” in the sense that it requires that the state of organ and that of the object be both held together and discriminated in their relative differences. Finally, locomotion “rations” or “proportions” universal desire with the particulars of the sensible world. It uses “middle terms” that ration, proportion, match, or correlate receptivity with desire. By means of sensation and locomotion, animal life exhibits that which our elemental and vegetative fantasies may attempt to repress: care, the sense of something *making a difference*, the responsiveness of the soul to all things. For “in a way the soul is all beings” (*DA* III, 8, 431b21–22).

Thus, within our discussion of *logos* as “standard” or “essence” or “form,” we have seen another sense of *logos* at work: *logos* as “ratio.” Note that “standard” and “ratio” both refer to the fundamental meaning of *logos*: whether between “being” and “what it is for the being to be,” or between potentiality and actuality, between contrary elements, contrary states, between particular sensibles and the universal premise of desire, these uses of *logos* refer to a preservation of difference as difference, that is, a relating of terms without one term yielding to or remaining indifferent to the other.

And what about the other two senses of *logos*: “reason” and “speech”? The last chapters of this book, chapters 5 and 6, are devoted to these two meanings respectively. As we have seen in *On Interpretation*, motion is “the actuality of a potentiality as such” (*Ph.* III, 1, 201a11–12, 200b27–28), but some potentialities differ from others as potentialities with *logos*. (*On Int.* 9, 13; *Metaph.* IX, 2, 5). We shall see that the beings that have these potentialities with *logos* are “slow deliberators” because their desire is problematic. For instance, they can wish for impossible things; they are “sophisticated communicators” because they communicate more than they experience, have experienced, or
may experience firsthand. They are “great hesitators” because they are not only sensitive bodies in *krisis*, they also move according to the interpretation they had, have, or may have, regarding their sensations.

Hence these motions are more strictly called actions, *praxeis*. And indeed these beings are humans. Now it is time to investigate how humans exhibit their “*logos* of being” literally in action. Now it is time to approach the human, and to start to understand better the way in which “the human being alone among animals has *logos*” (*Pol. I, 1, 1253a10–11*). As we shall see, this is best done, not by immediately singling out *logos* as “reason” and “speech,” but by understanding how human *logos* holds on to desire and thought without letting one take over the other term, how humans are a source—“either thought infused with desire or desire fused with thinking” (*NE VI, 2, 1139a36–1139b7*).