

³See, for example, KTP 95, 103, 110, 118, 119, 121, 122.

⁴Patricia Kitcher, "Kant's Real Self," *Self and Nature in Kant's Philosophy*, ed. A. W. Wood. (Ithaca: Cornell University Press, 1984) pp. 118. Hereafter, I will refer to this work as "KRS."

⁵See KTP 74, 77, 78, and 81.

⁶Immanuel Kant, *Critique of Pure Reason*, trans. N. Kemp Smith (New York: St. Martin's Press, 1965). I follow the standard "A/B" method of referring to the text. See B154: "Apperception and its synthetic unity is, indeed, very far from being identical with inner sense."

⁷Immanuel Kant, *Anthropology From A Pragmatic Point Of View*, trans. M. Gregor (The Hague: Martinus Nijhoff, 1974), §3, (p. 15n).

⁸Immanuel Kant, "Vom inneren Sinne," trans. Hoke Robinson, *International Philosophical Quarterly*, vol. 29 (September, 1989), p. 255, line 22ff.

⁹At B157-8n, Kant makes a similar point. Only here, he uses the language of the "determining" as opposed to the "determined."

¹⁰I shall develop the difference between these two in more detail in a later section. Note the active connotation of "thinking" and the passive connotation of "is known." Finally, in at least two places, Kant says that the 'I' of apperception and the 'I' of inner sense refer to one and the same "entity;" see B155-6 and *Anthropology*, §21, p. 22.

¹¹The terms that he employs are "*Actus*" and "*Handlung*" (B130) For examples of passages that make it clear that synthesis involves an act, see: B133 [three passages]; B137; B138-9; and B407.

¹²See B157n; B135; and B137-8.

¹³More precisely, he says that apperception determines my existence "as magnitude:" "Vom inneren Sinne," line 25. Kant also uses this language of "determining my existence" at B157n.

¹⁴See, "Vom inneren Sinne," p. 1, line 23; also see B157-8; B 157-8n; and B422n.

¹⁵The reason that I put the word *expression* in scare quotes is that Kant always seems to be at pains to avoid in speaking of the "I think" in ways that would give it some kind of ontological import. Kant equates "I think" with "I exist thinking" at B428.

¹⁶At B133, he states: "The thoroughgoing identity of the apperception of a manifold which is given in intuition contains a synthesis of representations, and is possible only through the consciousness of this synthesis."

¹⁷At B132, Kant uses the expression; ". . . it is that self-consciousness which, while generating the representation 'I think'"

¹⁸Kant, *Anthropology*, §7, p. 22.

¹⁹"For this unity of consciousness would be impossible if the mind in knowledge of the manifold could not become aware of the identity of the *function* whereby it synthetically combines it in one knowledge." (A108) [my emphasis]

Accordingly, Kant writes that:

"By 'function' I mean the unity of the act of bringing various representations [*Vorstellungen*] under one common representation [*Vorstellung*.]" (A68/B93)

²⁰KTP 127, 128.

²¹See B132: All the manifold of intuition has, therefore, a necessary relation to the 'I think' (a representation which must be capable of accompanying all other representations, and which in all consciousness is one and the same).

ARISTOTLE'S ANIMATIVE EPISTEMOLOGY

John Russon

I want to take up some of the most familiar texts in Aristotle, and I want to approach them in what I think is an Aristotelian fashion, but the conclusions I will reach are not, I think, the familiar ones. I will begin, in Section 1, with Aristotle's conception of *phusis*—of nature—and lead from here into a discussion of the nature of life, which will lead us to the themes of soul and body. I will find the principle of desire to be the core of *phusis*, and I will produce from this analysis a doctrine of self-moving wholes which actively organize relations of opposite bodies according to a desire for self-maintenance. I will then move, in Section 2, to Aristotle's discussion of *epagoge*—induction—in the last chapter of the *Posterior Analytics* and argue for the empirical and conceptual accuracy of his account of the development of cognitive capacities. I will conclude by showing how the logical relations which characterize a situation of knowing as described in the *Posterior Analytics* are precisely the relations which we will already have seen to characterize a situation of life in Section 1. This will allow us to draw the conclusion, in Section 3, that knowing is a kind of bringing to life of a situation and I will discuss the situation which best exemplifies this, and also how we should try to understand the significance of this. In general, I think that recent moves in philosophy have allowed us to appreciate for the first time the significance of Aristotle's philosophy, and this account of Aristotle's animative epistemology should tie in nicely with modern discussions about emergence, interpretation, and other themes. I begin, then, with the basic story of what there is in the world.

1. Metaphysics

What fundamentally is? For Aristotle the answer is "substances," that is, things which exist *on their own* and not on the basis of something else.¹ The coloredness of my shirt is not such a substance, but the plant is, for color is only something which comes along with something more fundamental—it is a property—whereas the plant has such properties, but is not itself such a property of something else.² Now even this category of independence still leaves us without enough of a description of what fundamentally and naturally is, however, for there are some "imposters" about. My shirt seems to fit the bill of being a substance, for it exists on its own, and it is a subject of properties while not being itself a property of some more fundamental subject. This shirt, however, though it exists by itself now, is not responsible for its own existence: it is a product of art, that is, some other being had to bring it into being. This, however, is not true of the plant: no one designed the plant, and no one executed its manufacture. The being of the plant is natural, that is, we really cannot look to anything outside of itself to account for it.³

So "what fundamentally is" are independent things, where the independence means separated, self-contained materiality, and, perhaps more im-

portant, self-responsibility, self-motion. A substance is what it is on its own account. The plant has its own characteristic route to travel, and its very existence is its activity of carrying itself along this path. Let us consider the identity of such naturally existing things.

It is the unified, self-maintaining *activity* which is the primary referent for the name of "substance": "the plant" is the *process* of material and formal changes which moves from being a seed to a seedling, to a leafy stem, to flowering, etc. We often falsely isolate the stage of leafy stem or of flowering and call this "the plant," but we mislead ourselves: we here isolate and treat as static what really only exists as a changing phase in a dynamic process, what really only exists in the context of being integrated into a whole history of living development.⁴ The plant is not just this late stage, but is this and all the other stages, and all of these precisely as subordinated to, and integrated into, the larger movement. The plant is a living body with a characteristic form of activity, and it is only as an organized, living whole that it has the identity it has. It is the enactment of its self-identity.

This unity of activity means that, in looking at the plant, we only accurately apprehend what we are looking at when we see it as integrated into the whole plant story. The isolated leafy stem is wrongly identified if it is treated as autonomous: it only is what it is insofar as it is the development of, and out of, earlier stages, and is on the way to the subsequent stages. This holism that holds *between* various stages in the plant life equally holds *within* any stage.

Unlike the shirt or any artificial substance, the plant is not a "composite" of some shape impressed on some material by some agent for some purpose. In the plant each of these roles—the form, the matter, the moving principle, the direction in which its developing—is identical with the others: the "form" of the plant is the way in which the constitutive elements—the "organs"—are organized; but the organs themselves are what they are only within this system of organization; equally this organization is governed by the overriding principle of its pursuit of self-identity, which is equally what defines where it is going. Each of these four roles—the four Aristotelian "causes"—can be translated into any other, for all are equally necessary logical dimensions which characterize one and the same identical reality, the natural substance itself.⁵ This is just holism again. The hand, to use the famous example, is only a hand so long as it is *my* hand, so long as it is a functioning part of the organic whole which is my body, and when it is severed, it becomes no longer what it was precisely at the moment when you no longer touch me in touching it.⁶ In the natural body *one and the same subject* is present throughout, and it is the simple genus of which all the organs are species. The natural substance, then, is a whole as an organized, active, self-moving totality, which can be identified either by the member organs which collectively constitute its totality, or by its organizing principle, which names the drive (*horme*) which defines its self-identity and is the source of the form its self-organization takes.⁷ But because it is a whole, and a whole as a activity of self-actualization, it is one and the same reality which is identified whether we focus on the logical role of *its* matter or of *its* form.

Now, to be a *living* substance, according to Aristotle, is to be able to die, that is, to not be the kind of thing which is automatically self-identical for ever. Life, then, happens when the organic body of such a self-moving whole is one which will decompose if the activity stops.⁸ A living body must be "built up," that is, it must be a whole which is a sophisticated organization of lesser unities. Consider an animal body. It is itself a unitary functioning totality only insofar as it has intrinsic differentiation, insofar as it has different organs—heart, lungs, liver, lymph system, etc. It, unlike an artificial shirt which is 100% cotton, cannot be impressed on uniform, indifferent matter, but must have the right members ready for it. Its organs, in other words, are themselves intrinsically sophisticated units, so the unity of the organic body is a unity built out of different organs which are themselves unities built out of different elements, and so on. We see this when we see a thing die, and very quickly the formerly self-identical body shows itself to now be just an aggregate, a composite, of a variety of different substances all going their own ways: this we call decay. Life, then, was precisely the act of *not* allowing these parts to assume their own autonomous identities; life is an act of integration which is equally the suppression of the *ultimacy* of the opposition of its constituent elements.⁹ The name Aristotle gives to the principle of holding together such a composite body is "*psuche*"—soul. Soul is the name of the formal principle which governs the integration of opposed elements into a single, functioning, self-maintaining totality, which must itself, of course, be thus built out of appropriately sophisticated and organized elements.¹⁰ Life—animation—then, is a self-enacting, self-maintaining identity which has as its necessary conditions a multiplicity of appropriately developed members. This account of an intrinsically differentiated unit is equally applicable to the relation of the substance to its environment.

Natural substances always exist in contexts within which, and by intercourse with which, they move themselves. Aristotle's simple physical elements, earth, air, fire and water, have as their driving principle a pursuit of a certain position *vis à vis* the others: "space" is only the organized totality of the elements, and all the *other* types provide for each type of element the coordinates in relation to which it defines its proper place, fire trying to be as far from earth as possible, and only in contact with air, water going between earth and air, and so on.¹¹ A plant holds itself together as a unit by feeding off the other which directly confronts it, and which is always threatening to take it over: the plant takes in minerals, water, CO₂, and heat, and it transforms this into its own material substance, yet equally it is these things which can destroy it, and precipitate the decay by which its substance turns back into simple minerals, water, etc. Thus the natural substance is a unity, as much by holding together and orchestrating *internal* members which are otherwise opposed as by holding together and orchestrating a relationship of itself as a unitary self to an *external* opponent, the opposition of which is integrated into nourishment.¹²

In life, then, there is a relation of unitary, organizing form to multiple, appropriately developed matter, both intrinsically and extrinsically. I want to conclude this section by briefly considering desire as the moving principle which is the basis of the formal identity, especially as regards the relation of the organism to its context.

We said that the unitary substance is really an activity, so I want to consider the logical structure of natural actions. According to Aristotle, such action has the logical structure of a syllogism, with the movement itself playing the role of conclusion to premises which are kinds of relations which must hold between subjects and objects.¹³

We have already seen that the organic unity of the living body is precisely achieved by its integrated pursuit of self-maintenance, and that this equally involves a constitutive relationship to its environment. We sum this up in seeing *desire*—a desire to achieve something for itself through another—as the key to this unity. An agent must be a desiring agent: it is a unified subject which is held together by its pursuit of a goal. This action is defined as a relation to an other, however, so for action to take place the agent must be such as can appropriately respond to another: it must be the kind of being which is capable of recognizing things in the world. It is when the desire for something is conjoined with the recognition that the something is present that action is essentially “precipitated.” These relations could be spelled out for fire and water, but I will focus on a situation in which they are more immediately obvious: animal action.

A dog is driven, for example, by hunger: this hunger thus defines the context within which things will count, for it, as meaningful. The dog equally confronts a situation in which potential food is present. When the dog *recognizes* the presence of food, then, (provided the drive of hunger really is what is running the dog), the action of transforming the potential food into actual food—eating—will happen. In this “practical syllogism” we have the generic form of the dynamic of a self-moving unit. We now have a complete account of animate existence: it is a situation which is an activity of a complex, organized body opposing itself to an other where this other is the *immediate* object of its desire and the desire is *ultimately* the desire of self-maintenance.¹⁴

I turn now to epistemology, where I will aim to prove what I hope will initially sound like a bizarre claim, namely, that *knowing* is such a natural substance.

2. Epistemology

Discussions about Aristotle's epistemology are always messy, because there are a large number of opaque texts in Aristotle, all of which seem relevant, but not all of which seem compatible (when, indeed, they are clear at all). There is the issue of the activity and passivity of *nous* in *De Anima* 3.4-5, the discussion of mind as uniting and dividing in the making of judgments in *De Anima* 3.6-7 and elsewhere, the discussion of the infallibility of sense, the discussion of common sensing, the discussion of common sensi-

bles, the discussion of imagination, the discussion of *epagoge* in *Posterior Analytics*, the remark that *nous* comes in from outside in *De Generatione Animalium*, and so on. I certainly will not tackle all these debates head on, but I will now develop what I think is a fairly novel reading of Aristotle's account of knowing for which the key is precisely the doctrine of nature and life as a self-moving act of self-maintaining self-unification which I outlined in Section 1. I think that this account can indeed be a basis for solving many of the traditional puzzles, especially those surrounding *nous* and *epagoge*, and I will focus on these themes directly in this section.

What is knowing like? What is the basic phenomenon of which we need to make sense? I think the best place in Aristotle to look for what he has in mind here is precisely the famous discussion of *epagoge* at the end of the *Posterior Analytics*, (and the parallel discussion at the beginning of *Metaphysics A*). The *Posterior Analytics* tells the story of the gradual development of more sophisticated cognition on the basis of lower forms. (We shall go on to see more exactly what this “on the basis of” and “more sophisticated” mean.) It is the story of how we move from sense awareness to actual understanding of the reality of a situation. The story is simple enough: sensing opens the doors, imagination holds it all together, and understanding recognizes how it all fits. These three steps are ordered, and it is the repeated functioning of the earlier which in each case allows the functioning of the later. Let me be a little more precise here.

I do not want to have to commit myself to what sensation—*aisthesis*—means here; I do want, however, to think about what is involved with imagination—*phantasia*.¹⁵ When I see any one of the people in a room, my seeing involves both a spatial and a temporal multiplicity: each of the people has many sensible features spread out in space, and my sensing of that person as the person that he or she is is a continuous temporal process in that I see one and the same person at now₁ and now₂ and now₃ and now₄. There is equally a multiplicity of dimensions of sense *per se* involved, (hearing, seeing, touching), and perceiving any one of the people *as that person*, that is, as a self-identical thing, involves some form of orchestrating this multiplicity. The first essential point here is simply a matter of describing what experience is really like: I experience single things, that is, I see a person as a person.¹⁶ Indeed, if I turn around right now, I cannot say what the sensible features are that make up the appearance of the things I formerly saw in front of me, but I can certainly honestly say I have seen those things: seeing the whole does not imply explicitly seeing the parts as discrete parts. The second point is the point about orchestration: even though my experience is explicitly of unique things, that experience does depend upon a great multiplicity of sensible information being held together even if this multiplicity of information is not explicitly recognized. To recognize the same person now and then—to recognize the substance as continuous—requires that one and the same subject be experiencing that person then and that person now, and that that subject, in recognizing the person now, recognizes this person as the same one as then

—a tacit comparison must be going on—and equally, seeing the person then, the subject must have already anticipated the possibility of a continuous perception of that person now—the experience of the person now and then is a continuous process of fulfilling expectations, or, in Aristotelian language, actualizing potential. Now I say a comparison, but I do not mean reflectively holding one sense moment up for view and comparing it with another: I mean, rather, that the experience itself must be an interdependent whole in order to experience the object as a whole. *We must be so constituted* as to be able to do such holding together—to not be a slave to the ever-changing flux of momentary perceptions—in order to ever *notice* wholes.¹⁷ This is the power of imagination. Aristotle's description is empirically accurate. And, note, the functioning of imagination is precisely made possible and necessary by the existence of a *multiplicity* of sense acts, which acts are in need of being integrated. And, flipping this around, for these sense acts *to be themselves possible* as the integrated and mutually related acts they turn out to be, they need imagination, that is, the earlier must be defined by a potency for future completion and the later by a potency to have been prepared for: sense experience is here a dynamic of preparation and completion, and this itself *cannot happen* outside the context of the functioning of imagination. Thus the very multiplicity of acts of sense which supply the "material conditions" which make possible the functioning of imagination are themselves only possible in the context of that unified functioning which gives the organized sensory experience its coherent form: the relation is one of interdependence, that is, it is an interdependent relation of precisely the sort that always characterized the Aristotelian whole we considered in Section 1.

Now imagination and sensation will give us continuous patches of blue, will give us red and not green, will give us now as opposed to then, but these two alone are not sufficient to give us things. Why? Because the grounds of the unity of a thing are not themselves sensible parts of a thing. To comprehend how various perceptible continuities are really the appearance of some single thing is not possible if I do not possess the concept of the thing. How would one ever recognize a junkyard if (i) one did not initially possess a concept of a place where old cars etc. are deposited, and (ii) if one did not operate with this concept as a kind of genus and then recognize the specific one as a species. Without the concept, all one could get is an un-unified aggregate of disparate things, and *not* the thing itself in its unity. I want to say that this is really true at all levels, namely, that the ability to identify perceptible continuities as the appearance of things requires that one function with a capacity of comprehending a totality *as* unified in terms of an immanent concept which can be produced to explain why the appearance appears as it does: we must be operating with something like a category of cause and effect, of something being forced to appear as it does, in order to recognize things in experience. It is precisely this concept of *necessity*—of the thing *having* to appear as it does—that allows us to *understand* why the continuities that our imaginative collecting of sense allows us to perceive are the appear-

ances of real unities.¹⁸ Here again we see that it is the repeated functioning of the lesser faculty that makes possible the greater, for what is involved is again a unifying of multiplicity, the recognition that a variety of perceptible unities fit together in a pattern, both in the sense of the pattern which is the appearance of the thing, and the broader pattern of the appearance of a whole situation which is divided up into what is this thing and what is not. (This last elaboration will become important in Section 3.) And again it is a situation of a reciprocal dependence of whole and parts, because all that is understood is the unity of the imagined continuities which form the parts, but it is only within the context of being recognized as things that *could* be integrated into a story of necessary connection that the parts can be parts, that they count as this one and not that, that they count as different species of a genus.

I have given a simple story of this chapter of the *Posterior Analytics*, and I have provided an account of cognitive dynamics to justify this story, especially as regards the essential feature of the unification of a multiplicity, and the related issues of holism. Now I want to describe what it is like to come to understanding, to show that an empirically honest description of our experience of understanding something very neatly maps on to Aristotle's account.

Most of the time we deal with things with an easy familiarity: there is no question for us of *establishing* what things are around us, for it seems obvious—there are people, chairs, tables, and so on. Now we have already considered how this very fact of there being things for us means that we must be already dealing with our sensory experience with powers of imagination and understanding, but these do not come up for us as issues: we have already learned whatever we need to learn here, and the recognition of things as things is now completely habitual (*a hexis*). But there are still situations in which we are called upon to draw upon these powers explicitly. In reading a novel, we are constantly working to hold it together and make sense of it; in learning a new language, we struggle to put the sounds together and to interpret them, and so on. A very good illustration of understanding at work is the study of philosophical texts, such as the study of Aristotle himself.

In reading over Aristotle, one constantly asks oneself, "what does this mean?" Various clues indicate that certain portions follow from others, that certain conclusions are reached, and so on, but it is often possible that one not see immediately what is involved. This becomes especially clear in teaching Aristotle: I, the teacher, think the text is clear, and I am doing my best to communicate this to the students, just as the text itself is precisely structured to lead the student to understand. We are both doing our best at trying to be understood, but our best efforts alone are not sufficient.¹⁹ Only gradually does the real meaning dawn on the students. What does it take for this to happen? A lot of repetition, and repetition of texts and discussions that are well chosen to encourage their being synthesized by the students. Finally it does happen; what is that experience like? "The penny drops," we say, that is, one experiences what is essentially a "*Gestalt shift*" and quite suddenly "you get it," and what were formerly disparate elements struggling to be

synthesized transform their appearance and work together as a whole. The reader works at her limit to understand the material, and the material is doing its best to be understood, but these two separate powers are not automatically sufficient to bring about understanding: the clearest text can be misunderstood, and the most intense effort at understanding can be frustrated. What one does is *prepare*, and *await synthesis*, that is, we wait for the act of understanding to essentially bring itself into being, and as it were “pull us up” to its level, (like in some ways to the way in which we prepare ourselves for sleep by doing our best to imitate sleep and awaiting its taking us over, although this latter is a move away from, rather than to, self-consciousness).²⁰ And notice what does happen when the understanding really emerges, when “it” happens: (i) one understands the object—here the text—as having *necessitated* this act, and as being the “causal” factor, and (ii) one also says “I understand,” acknowledging one’s own agency. Further, precisely since understanding the material has meant seeing its inherent rationality, (iii) the meaning of the text is no longer alien to who I, as the understander, as reasoner, am, that is, its point is now my point. Let me choose another illustration to make these last remarks clear.

When one learns how to drive, one is first brought to perform a number of driving operations, without really understanding why one does them. But when one really understands driving, one sees their necessity. One is then in a position to teach the operations to others, and the necessity that connects them is no longer simply that inherent to driving itself, but it is equally true that oneself as teacher knows and insists on the necessity: to understand is simultaneously to come to be able to teach the material and to identify one’s own self with the self of the understood material, so that answering to oneself-as-teacher is equivalent to answering to the object.²¹

So what is our knowledge like? We work at having a situation emerge in which our animation is the same as that which drives the object, and we work at this by preparing for the synthesis through repeated acts of becoming habituated to materials which should become functioning parts of the whole which is yet to be achieved. We approach this material with the question, “how can you be the necessary expression of an animating unity?” When the synthesis is achieved it is outside our immediate control, and in that sense it is like an alien acting upon us, but it is *we* who come to understand, so the alien equally redefines our selfhood, it “draws us up”; finally, in this happening, we see our act as having been necessitated by the object, and this move, which accounts for the unity of the experience, is equally the move which allows us to teach this to another.

3. The Metaphysics of Epistemology

We have the basic story of life and the basic story of knowing. I want now to show that these are essentially related such that living is already a kind of knowing and, more importantly, that knowing is the emergence of a new form of living.²² Let us go back to life, and see what were the essential logical features involved.

Life is essentially the uniting of a multiplicity of lesser units, which themselves stand towards each other in relations of opposition, into a single, collective functioning. It means taking a diverse and internally conflicting collection *as a totality*, first, and *as driving towards a common end*, second. The living being then, is the activity of a diverse totality to hold itself together *as moving itself towards fulfilment*.

It is precisely these basic elements which characterize the constitution of each form of awareness in *Posterior Analytics* as compared to its immediate lesser form. The higher involves first holding together a totality of lesser units, themselves diverse, and precisely what makes up this “material” for the higher awareness is *not just* the former *object*, but the whole former relation: what I *remember* as I hold together the *imagined* whole is a number of *acts of sensing*, and what I *understand* is *a number of imagined totalities*, that is, in each case the unit which is carried over into the new totality is the former object *as taken up* by the lesser form of awareness. Second, the higher knowing involves seeing the lesser units—the lesser acts of awareness—as orchestrated according to a common desire *to bring about their recognition as the unity they are now recognized as constituting*. Precisely the form our awareness takes at each level is to recognize the object *as having achieved its proper form*, that is, we see it *the way it is trying to be seen (to ti en einai)*. The way in which we normally experience objects is *as calling upon us to see them*. Aristotle notes that in both sensation and intellection we are essentially object-driven. This has always given sceptics ammunition but I think the sceptical concern has distracted us from noticing his point: regardless of whether we really see “things as they are in themselves,” we *experience things as having drawn us along, as making demands on us*.²³ And when we do effect a recognition, we effectively say, “oh that’s how it was really trying to be known all along.”

In terms of the logical relations involved, then, we see that each successive move in knowing involves a totalization and systematization of lesser “organs,” and that the principle of organization of the new experienced totality is in each case the desire of the organs themselves to become organized. The new experience is experience as the self-enactment of a situation’s own desire to be recognized.

Indeed, I think this is Aristotle’s real epistemology. Awareness involves a would-be object and a would-be subject each acting to prepare a situation in which the potentiality of each will bring itself to fulfilment in an actual recognition which will be simultaneously the actuality of the subject’s potential to know and the object’s potential to be known. The object is, indeed, not successfully cognized unless one can show why it was *necessary* to know the object in the fashion in which it is being known, and this means *the object itself demanded it*, that is, *it is the object’s own act* to be known. Through us, the object brings itself to cognition, and this is what it is trying to do: it is this desire which really explains its unity. It is only when we recognize ourselves as enacting the object’s desires that we really know it for what it *really* is. But when we see our own act as the object’s act, then knowing the object is no different than knowing ourselves. It is when we recognize this last move that

our cognition is complete, and we can say that a whole cognitive *situation*—*an activity*—has brought itself into being as an activity of self-maintenance as self-consciousness, precisely by holding together the otherwise opposed elements of subject and object into a single collective functioning.

Now we already saw that knowing is a sophisticated emerging of a relationship of living: equally living is a knowing, for it essentially involves, one might say, “interpreting” what a whole bunch of elements really are, and “proving” this by establishing their systematic functioning as a totality. This could be spelled out further, but this is enough to make the point that just as knowing is sophisticated living, living is primitive knowing. But we have just now seen that it is this consummate activity of coming to know one’s self *precisely in knowing the other*—finding our other as our self-expression—which is the most complete knowledge which lesser forms of awareness thus imitate.²⁴ This, I take it, would be the basis for justifying Aristotle’s remark in *Metaphysics* L that “self-thinking thought” is that which all physical substances can be said to imitate, and it is when they are themselves understood to be in pursuit of such self-cognition that they are understood in their reality, but that is the subject for another paper.²⁵

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Notes

1. *Categories* 5.3a8-9, *Metaphysics* 5.8.1017b23-26.

2. My interest is in Aristotle’s account of substance rather than in his account of the whole set of categories; consequently I have written in a way which does not distinguish *idion* and *sumbebekos*. For a fuller account of Aristotle’s treatment of essential and accidental properties, see *Topics* 1.4-9, *Posterior Analytics* 1.4, *Categories* 2.1a20, and *Metaphysics* 5.30.1025a14ff; see also Aristotle’s *Categories* and *De Interpretatione*, translated with notes and glossary by J. L. Ackrill, (Oxford, 1963), commentary on *Categories* 2.1a20 (pp 74-76). For a modern defense of Aristotle’s attempt to establish a non-arbitrary basis for establishing substantial identity and a distinction between essentiality and accidentality, see Kenneth Rankin, *The Recovery of the Soul: An Aristotelian Essay on Self-Fulfilment*, (McGill-Queen’s, 1991), especially Chapters 2, 3 and 10.

3. *Physics* 2.1.192b13-16 and *passim*.

4. See *De Partibus Animalium* 1.1.640b34-641a7, *Metaphysics* 7.16.1040b5-16.

5. *Physics* 2.3.194b16-195a26.

6. See note 4, above; cf. *Politics* 1.2.1253a20-27.

7. Collingwood has an excellent account of Aristotelian physics in *The Idea of Nature* (Oxford, 1960), Part I. For *horme*, see *Physics* 2.1.192b18, 14. A *horme* is an instinctual drive to behave according to some particular pattern or form, and it presupposes coordination with some capacity for behavioural discrimination of environmental conditions. In animals with sensation, the analogous principle is *orexis* which, in conjunction with *aisthesis* (the *dunamin sumphuton kritiken* of *Posterior Analytics* 2.19.99b35) or some analogous capacity for discrimination such as *phantasia* or *nous*, makes movement possible; see *De Motu Animalium* Chapters 6-8, *De Anima* 3.9.433a1-3.10.433b30, 3.7.431a10-14.

8. *De Anima* 2.1 412a11-16.

9. *De Anima* 2.1 *passim*, 2.2.414a19-27; cf. Heraclitus, DK 51.

10. *De Anima* 2.1-2

11. See *Physics* 4.1-4, 8, especially 4.1.208b1-26, 4.4.212a2-7, 4.8.216a23-26; note 4.1.208b19-20: “It is not every chance direction which is up, but where fire and what is light are carried,” (trans. R. P. Hardie and R. K. Gaye). On this notion that the *relative place* of an element, that is, how it is spatially situated *with respect to its others*, is intrinsic to its nature, see *De Caelo* 1.8.276a23-277a13; on the relative nature of the elements in general, see also *De Caelo* 3.3-5 and 4.3. See *De Caelo* 1.8 in general on space as the single organized totality of really existing bodies.

12. See *De Anima* 2.4 on nutrition; the general principle behind this is found in Aristotle’s account of change as requiring likeness in genus and unlikeness in species (*De Generatione et Corruptione* 1.7). An analogous intrinsic dependence on external as well as internal conditions is evident in all organisms. To *define* the organism is to isolate the essential and distinctive *form* of its organization of the totality of its (internal and external) material conditions (*Metaphysics* 7.4-6, *Posterior Analytics* 1.2, 4, 7, 10), so that an animal, for example, is a self-loco-mover, but the conditions requisite to *realize* this definition are both an *internal* joint which allows the animal body to oppose itself to itself *and* a (relatively to the animal) fixed *external* arena for motion (like the ground or the sea or the air): the definition of the animal *cannot be realized* without both these material conditions being met; (see *De Anima* 2.1, 3.10.433b13-27, *De Motu Animalium* 7.701b2-16.) In the biological writings, Aristotle often accounts for features of a organism in terms of how they allow it to function well in relation to the determinacies of its environment (as one would expect from his account of scientific method as focussing on formal and final causality in *Parts of Animals* 1.1, 5); see, for example, *Parts of Animals* 2.3.650a21-27 where the animal’s stomach is defined as the incorporation into a locomotive body of the earth from which the stationary plant feeds, 2.9.655b2-13 on the substance of beaks and horns as defined by their relation to the animal’s antagonists, 2.13.657a25-657b3 on the protective function of eyelids, 2.13.657b30-658a10 on the environmental conditions which determine the differences in the types of eyes possessed by fishes, insects and crustacea, and so on. (I have benefitted from discussions with Owen Goldin and David Morris on these points.)

13. *De Motu Animalium* 6.700b4-7.701b32, *De Anima* 3.10-11; cf. *Prior Analytics* 1.1.24b18-20, *Topics* 1.1.100a25-27.

14. Let me note two features before moving out of this discussion of life into the discussion of knowing. First, Aristotle calls the power behind the minor premise (the recognition) *phantasia*—imagination. Note what this must mean: imagination is the ability, as we say, to “imagine” what one encounters in different situations, that is, it is the ability to not treat what one senses as carrying its ultimate significance immediately on its face and to situate that sensibility within a context which will calculate its latent meaningfulness; (see note 15, below). Second, note that the major premise (desire) is what provides the context into which imagination puts sensory experience, and it is this, the principle for interpreting the significance of what is experienced, which is the real driving force here, which is the real compulsion in experience, (see notes 7 and 13, above).

15. See Seth Benardete, “Aristotle, *De Anima*, III.3-5,” *Review of Metaphysics* 28 (1975):611-622, especially pp 612-614, for an interpretation of *phantasia* in Aristotle which I take to be essentially the same as my own. Cf. Ken Turnbull, “Aristotle on Imagination: *De Anima* iii 3,” *Ancient Philosophy* 14 (1994): 319-334 for a provocative challenge to the construal of imagination as active.

16. See *De Anima* 1.5.409b24-410a2.

17. See *Posterior Analytics* 2.19.100a13-14. Many of these same points could be made in relation to the first half of Plato's *Theaetetus*.

18. *Posterior Analytics* 1.2.71b9-16. Aristotle's project in the *Posterior Analytics* is very well laid out in L. A. Kosman, "Understanding, Explanation, and Insight in Aristotle's *Posterior Analytics*," in *Exegesis and Argument*, (Assen, 1973), pp 374-392.

19. While my attribution of a kind of desire to the text is at this stage only a rhetorical device, we will directly go on to see that this attribution is in fact metaphysically sound.

20. Compare Charles H. Kahn's account of *nous* in "The Role of *Nous* in the Cognition of First Principles in *Posterior Analytics* II 19," in E. Berti (ed), *Aristotle on Science. The Posterior Analytics*, (Antenore, 1981), pp 385-414. I think that Kahn gives a good account of the need to build up a sufficiently developed cognitive situation to allow one to have access to *nous*, and he gives a good account of the autonomy of *nous*, although I ultimately think he offers a too dualized (Averroistic) interpretation, (especially pp 411-412).

21. See *De Anima* 3.4.429b5-9, and *Metaphysics* 1.1.981b7-10 on the identity of the knower and the known which exists as the capacity to teach. The general process of moving from habits to understanding is perhaps best exemplified by ethical development as described in *Nicomachean Ethics* 2.1-4. Myles Burnyeat, "Aristotle on Understanding Knowledge," in Berti (ed), *Aristotle on Science. The Posterior Analytics*, pp 97-139, is a helpful study of how Aristotle understands knowledge (especially Section V), and he has a very good account of the state the student must have reached in order to make the move to a demonstrative understanding which moves in the element of universality (pp 129-132); compare Kosman, "Understanding, Explanation, and Insight in Aristotle's *Posterior Analytics*," p. 386, and Seth Benardete, "On Wisdom and Philosophy: the First Two Chapters of Aristotle's *Metaphysics A*," *Review of Metaphysics*, 32 (1978):205-215, p. 207.

22. Compare Aaron Ben-Zeev, "Making Mental Properties More Natural," *Monist* 69. Franz Brentano, *Die Psychologie des Aristoteles* (Mainz, 1867), pp 115-128, offers, in contrast, a powerful interpretation of *De Anima* 3.4 which would hold *nous* to be fundamentally alien to the sphere of life. I have developed a fuller version of my argument in Section 2 of "Self-Consciousness and the Tradition in Aristotle's Psychology," *Laval Théologique et Philosophique*, (forthcoming).

23. One of the most interesting treatments of Aristotle and scepticism is Jonathan Barnes, "An Aristotelian Way with Scepticism," in Mohan Matthen (ed), *Aristotle Today*, (Academic Printing and Publishing, 1986), pp 51-76. Barnes (who treats Aristotle's epistemology as one which has never seriously recognized the possibility of epistemological scepticism) gives a very interesting interpretation of Aristotle's epistemology as "soteriological," (pp 56-57, 63), according to which, roughly, truth is behavioural success, but Barnes still maintains that Aristotle must be concerned with a conception of truth which is not shaped by human interest, and that Aristotle must (unjustifiedly) assume access to this truth is possible (p. 74). Burnyeat, whose views are closer to my own likewise presents Aristotle, (in "Aristotle on Understanding Knowledge"), as not having explicitly recognized the seriousness of the challenge posed by epistemological scepticism, but he treats Aristotle as having resources to deal with this nonetheless.

24. See Aryeh Kosman, "Divine Being and Divine Thinking in *Metaphysics Lambda*," in *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, J. Cleary (ed), Vol. 3, (University Press of America, 1988), pp 165-188, p. 184.

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