Aristotle's Theory of Thought

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A. Thought and body

Thought (νοῦς) for Aristotle is 'that whereby the soul thinks and judges.' This identity, however, 'is not actually any real thing before thinking' (ἐνεργείᾳ τῶν ὄντων πρὶν νοεῖν) and, thus, cannot reasonably be regarded as blended with the body and cannot acquire any quality or have any organ. (So., [1] Γ, 4, 429a22-27) In fact, Aristotle defines thought more with a capability: 'That which is capable of receiving the object of thought, i.e. the substance, is thought.' (Met., Λ, 1072b22-23) Thought is not blended with and, thus, is separable from body. (So., Γ, 4, 429b4-5) This separability, however, belongs only to the active thought. (So., Γ, 5, 430a17-19)

B. Nature of thought

'Since everything is a possible object of thought,' Aristotle believes, as Anaxagoras believed before him, in order to know things, mind 'must be pure from all admixtures.' The reason for this being that 'the co-presence of what is alien to its nature is a hindrance and a block.' Therefore, thought 'can have no nature of its own other than that of having a certain capacity.' (So., Γ, 4, 429a18-22)

[1] Abbreviations used in this paper:

Met.	*Metaphysics*
OI.	*On Interpretation*
So.	*On the Soul*

C. Thought elements

A thought element, i.e. an element/object in thought or a concept (νόημα) has the following features:

1. Every thought element or concept (νόημα) is single (ἓν). This singularity is not restricted to substances because the concept of any other thing is single as well. (Met., A, 990b22-27)
2. Concepts (νόηματα) of thought are either simple or complex. Simple concepts do not involve truth or falsity but complex ones do. Aristotle speaks of 'thoughts without co-positing and positing away' (ἄνευ συνθέσεως καὶ διαίρέσεως νοήματι) to which nouns and verbs are similar. (OI., I, 1, 16a13-14) In OI., I, 1, 16a9-11 Aristotle does not use the words simple or complex but his assertion implies them: 'As there are in the mind thoughts (νόημα) which do not involve truth or falsity, and also those which must be either true or false, so it is in speech.'
3. The copula-is has no corresponding concept in thought: 'For neither are 'to be' and 'not to be' the participle 'being' significant of any fact, unless something is added; for they do not themselves indicate anything, but imply a copulation, of which we cannot form a conception apart from the things coupled.' (OI., I, 3, 16b22-25)

D. Thought and its objects

To understand Aristotle's theory of thought, we have two differentiations, one between objects of thought and one in thought itself. Everything that might be posited in front of our thought and be thought as a possible object of thought we call *object I* (to distinguish it from what we call object II). Therefore, everything in the world is an object I of thought. These objects are in the sensible forms, viz. both the abstract objects and all the states and affections of sensible things. (So., Γ, 8, 432a3-6) These objects might be either composite, containing matter and form, or simple and matterless. When they are thought, we will have them in thought but not necessarily as they are in the world, i.e. as object I, but as something else, which we call *object II*. This is supposed to make the difference between object I and

object II clear: object I is in the world and object II is its corresponding object in our thought. These two kinds of objects are neither necessarily the same nor necessarily different. Objects I are of two kinds: matterful and matterless. Whereas a matterful object I is necessarily different from its corresponding object II (So., Γ, 4, 430a6-9), a matterless object I is not different from its corresponding object II. (So., Γ, 4, 430a2-5; Met., Λ, 1075a3-4) Object II must thus be understood as the form of object I: 'The thinking part of the soul must therefore be, while impassible, capable of receiving the form of an object; that is, must be potentially identical in character with its object without being the object.' (So., Γ, 4, 429a13-16)

Thought has no nature by its own and is all potentiality before thinking. (cf. So., Γ, 4, 429b6-10) Let's call this the *first potentiality* of thought. This potentiality is the potentiality of a *tabula rasa*: 'Thought is in a sense potentially whatever is thinkable, though actually it is nothing until it has thought? What it thinks must be in it just as characters may be said to be on a writing-table on which as yet nothing actually stands written: this is exactly what happens with thought.' (So., Γ, 4, 429b29-430a2) Thought is then all dependent on its objects. By thinking on objects I, objects II are formed in thought. Now thought is nothing but its objects II which are necessarily matterless objects (Met., Λ, 1075a5-7): 'In every case the thought which is actively thinking is the objects which it thinks.' (So., Γ, 7, 431b16-17) Thought is the same as its objects II and in the case of matterless objects I, it is the same as its objects I. (Met., Λ, 1075a3-5) This thought is actual compared to its first potentiality: while it was all potentiality in its first potentiality, it now contains some objects II and is then actual. It seems we must interpret Aristotle based on this sense of actuality when he calls a thought possessing object as active: 'For that which is capable of receiving the objects of thought, i.e. the substance, is thought. And it is active when it possesses this object.' (Met., Λ, 1072b22-23) This thought, however, is called passive thought due to a *second potentiality*: 'When thought has become each thing in the way in which a man who actually knows is said to do so (this happens when he is now able to exercise the power on his own initiatives). Its condition is still one of potentiality, but in a

different sense from the potentiality which preceded the acquisition of knowledge by learning or discovery; and thought is then able to think of itself.' (So., Γ, 4, 429b6-10) It is this thought in its second potentiality that Aristotle calls passive thought distinguishing it from *active thought*: 'And in fact thought … is what it is by virtue of becoming all things, while there is another which what it is by virtue of making all things: this is a sort of positive state like light; for in a sense light makes potential colors into actual colors.' (So., Γ, 5, 530a14-17)

These two thoughts have a relationship like the relationship between matter and productive cause: 'Since in every class of things, as in nature as a whole, we find two factors involved, a matter which is potentially all the particulars included in the class, a cause which is productive in the sense that it makes them all (the latter standing to the former, as e.g. an art to its material), these elements must likewise be found within the soul.' (So., Γ, 5, 430a10-14)

To understand Aristotle's sense of active thought we must consider his theory of thinking.

E. Thinking and thought

Aristotle does not regard thinking (νοεῖν) as a bodily process. (So., Γ, 3, 427a21-28 and b6-8) It is, however, a way of being affected and moved (So., A, 5, 410a25-26) and is the movement of thought. He assimilates thought to a circle and thinking to the revolution of a circle: 'We must identify the circle referred to with thought: for it is thought whose movement is thinking, and it is the circle whose movement is revolution, so that if thinking is a movement of revolution, the circle which has this characteristic movement must be thought.' (So., A, 3, 402a17-21) Aristotle does not, however, take thought as the source of movement besides appetite because it would entail some common character between thought and appetite. (So., Γ, 10, 433a20-22)

If thought be like a circle, thinking would be like the revolution of this circle. To understand this, it might be better to observe also Aristotle's other assimilation: thinking and thought

as a serial of number: ‘Thought is one and continuous in the sense in which the process of thinking is so, and thinking is identical with thoughts-these have a serial unity like that of number, not a unity like that of a magnitude.’ (So., A, 3, 407a6-9) We have so far a circle of numbers and a process of revolution of the circle of numbers, the former as thought and the latter as thinking. This image is not, nonetheless, a perfect image until we add a third item, that is ‘thinking as coming to rest after doing a process’: ‘Thinking has more resemblance to a coming to rest or arrest (ἡρεμήσει τινὶ καὶ ἐπιστάσει) than to a movement. (Note: Aristotle argues in *Physics* (Z, 3) that ‘The original acquisition of knowledge is not a becoming or an alteration; for the term ‘knowing’ or ‘understanding’ imply that the intellect has reached a state of rest and comes to a standstill.’) (So., A, 3, 407a32-33) Thinking is in fact the process of resting after discrimination and cognition of one thing as perceiving is such: ‘Thinking and understanding are regarded as akin to a form of perceiving: for in the one as well as the other the soul discriminates and is cognizant (κρίνει καὶ γνωρίζει) of one of the beings.’ (So., Γ, 3, 427a19-21) Thus, thinking is accomplished when something is determined and is known. (cf. So., Γ, 4, 429a18-20)

If we put these three items of i) revolution of a circle, ii) unity like a serial of numbers and iii) resting at the determination of an object together, we might be able to articulate what could be Aristotle’s model of thinking. In this model, thinking is a process of moving through the objects of thought as through numbers until it reaches to an object, a number, as its favorite and rests after its discrimination and determination. A thinking of thought has already been done but we are in a point on the circle where we can initiate our revolution in a new thinking by continuing the revolution in the circle again through objects of thought as numbers. In fact, objects of thought are not arranged in an infinite series of numbers but a circle of numbers; we circulate in a series of finite numbers again and again without going out of the circle. It is this thinking that is the active part of thought.

It is evident that in this thinking, thought thinks itself (Met., Λ, 1074b33-35) not only because thought is nothing but its objects II but also because thinking is the revolution of circle and circle is thought; or it is the enumerating process of a serial of numbers and this

serial is thought: ‘Thought thinks itself by sharing the objects of thought.’ (αὑτον δὲ νοεῖ ὁ νοῦς κατὰ μετάληψιν τοῦ νοητοῦ). (Met., Λ, 1072b20-21) What Aristotle says immediately after this sentence makes us add something to our model. He says: ‘For having contacted and having thought, an object of thought is generated so that thought and object of thought [become] the same (νοητὸς γὰρ γίγνεται θιγγάνων καὶ νοῶν, ὥστε ταὐτὸν νοῦς καὶ νοητόν).’ (Met., Λ, 1072b21-22) What this sentence says is that when the revolution happens in the circle (as an enumeration of numbers) and an object of thought determines (as a number is determined), this thinking itself becomes a new object of thought and is posited as a number at the end of the serial. Suppose for example that our serial number in a certain thinking is ‘1, 2, 3, 4, 5, 6.’ Our thinking enumerates from 1 to 6 and stops at 6 as where the thinking is determined. Now this thinking itself becomes an object of thought, say 7, in which all the serial number ‘1, 2, 3, 4, 5, 6’ is preserved. Therefore, each thinking through objects of thought always generates a new object of thought. This object is nothing but that very thinking, that very revolution of the circle of thought and that very enumeration of numbers of the serial. There is a text, however, that I am not sure about its relation with the model we projected: Met., Λ, 1074b38-1075a3: ουδε γαρ ταθτο ... η νοησις.

‘Thought is itself thinkable in exactly the same way as its objects are.’ (So., Γ, 4, 430a2-3) Now if ‘what is thinkable is in kind one and the same,’ there will be only two alternatives about the nature of thought: ‘either thought will belong to everything, or it will contain some element common to it with all other realities which make them all thinkable.’ (So., Γ, 4, 429b26-29) These alternatives reject Anaxagorian thesis based on which thought is of different kind from everything and has nothing in common with them. Aristotle regards thinking as kind of interaction which entails ‘a precedent community of nature between the factors.’ (So., Γ, 4, 429b22-26)

F. Thought and co-positing or positing away

Aristotle asks the question 'How it happens that we think things together or apart?' (πῶς δὲ τὸ ἅμα ἢ τὸ χωρὶς νοεῖν συμβαίνει ἄλλος λόγος) (Met., E, 1027b23-24)

The following are the features of co-positing (σύνθεσίς / συμπλοκή) and positing away (διαίρεσις) in their relation with thought in Aristotle's works:

1. 'The co-positing and positing away are in the thought (διανοίᾳ) and not in the things (πράγμασι).' (Met., E, 1027b29-32)
2. Co-positing of subjects of thought makes them as a unity (ὥσπερ ἓν). (So., Γ, 6, 430a26-b1) Aristotle says: 'by "together" and "apart" I mean thinking them so that there is no succession in the thought but they become a unity.' (Met., E, 1027b24-25)
3. Although co-positings and positing aways of objects of thought can be equal to some assertions and denials of something concerning something in language, not all of them are so. There are some co-positings and positing aways in thought whose assertion in language are not in the form of assertions or denials. The thinking of the definition is an example of this. (So., Γ, 6, 430b26-31)
4. Truth and falsity are applicable only to the co-positings and positing aways of thought and, thereby, to the affirmations and denials. Thus, not only are not things in the world subject of truth and falsity, but also the simple objects of thought are free of them. (Met., E, 1027b25-28) In fact, the cause of the sense of being true or false, Aristotle asserts, is 'some affection of the thought' (Met., E, 1027b33-1028a2), which is indeed a co-positing. (Met., K, 1065a21-24; cf. Met., Γ, 1012a4-5)
5. 'All the objects of understanding or reason are either affirmed or denied by understanding.' (Met., Γ, 1012a2-4)
6. 'Thought is found only where there is discourse of reason.' (So, Γ, 3, 427b8-14)

G. Correspondence of thinking and time

1. A quantitatively undivided object is thought in a quantitatively undivided time. Now if thinking of each part of the object is possible, we can divide the time of thinking as well and allocate each part of the time to its corresponding part of thinking. (So, Γ, 6, 430b10-14)
2. What is 'qualitatvely simple is thought of in a simple time and by a simple act of the soul.' (So, Γ, 6, 430b14-15)
3. 'That which thought thinks of and the time in which it thinks are in this case [i.e. in the case of a line] divisible only incidentally and not as such' and the reason of this is that there is something indivisible that gives unity to every continuum whether temporal or spatial. (So, Γ, 6, 430b16-20)

H. Thought and image

About the relation of thought and image the following are asserted in Aristotle's works:

1. Images (φαντάσματα) serve to thought '*as*' contents of perception: as if they were sensibles so that in its assertions and denials, thought pursues images. This is the reason that thought 'never think without an image.' Aristotle explains this by the example of pupil: 'The process is like that in which the air modifies the pupil in this or that way and the pupil transmits the modification to some third thing (and similarly in hearing), while the ultimate point of arrival is one, a single mean, with different manners of being.' (So, Γ, 7, 431a14-20)
2. Thought 'thinks the forms in the images sometimes by means of images or thoughts which are within the soul, just as if it were seeing, it calculates and deliberates what is to come by reference to what is present.' (So, Γ, 431b2-5)
3. Any awareness is necessarily an awareness along with an image: 'When the mind is actually aware of anything, it is necessarily aware of it along with an image; for images are like sensuous contents in that they contain no matter.' (So, Γ, 8, 432a7-10)

4. Neither our imaginations nor our other thoughts are images, though they necessarily involve them. (So, Γ, 8, 432a10-14)

I. Other features of thought

1. Contrary to sensitive faculty, 'thinking about an object that is highly thinkable renders it more and not less thinkable.' Aristotle explains this difference of thinking and sense perception by not depending of the former and depending of the latter upon body.' (So, Γ, 4, 429a29-b5)
2. The forms of artworks are in the soul. (Met., Z, 1032a32-b2)
3. The formulae of things that have passed from our perception remain in the soul unchanged but there will no longer be either definition or demonstration. (Met., Z, 1040a2-5)
4. Thought is the form of forms as hand is the tool of tools. (So, Γ, 8, 432a1-3)

J. Powers of thought

The following are features of powers of thought:

1. Imagination is different from either perceiving, forming opinion or discursive thinking. While imagination is both voluntary and free from truth and falsity, in perceiving and forming opinions we are not free and in discursive thinking we are bound to truth and falsity. (So, Γ, 3, 427b14-21) Moreover, imagination is free from feeling while perception is not. (So, Γ, 3, 427b21-24)
2. Imagination is not found without sensation. (So, Γ, 3, 427b15-16)
3. Judgment is not found without imagination. (So, Γ, 3, 427b16-17)
4. There are different kinds of judgment: knowledge, opinion, understanding and their opposites. (So, Γ, 3, 427b24-26)
5. 'Thinking is different from perceiving and is held to be in part imagination, in part judgment (ὑπόληψις). (So, Γ, 3, 427b27-29)

6. ‘Imagination cannot be opinion plus sensation, or opinion mediated by sensation, or a blend of opinion and sensation.’ (So, Γ, 3, 428a23-)
7. Since we cannot have an opinion without having belief (πίστις) in what we opine, opinion must involve belief. (So, Γ, 3, 428a20-21)
8. Every opinion is accompanied by itself, belief by conviction (πεπεῖσθαι), and conviction by reason (λόγος). (So, Γ, 3, 428a21-23)
9. Practical thought is the thought that calculates and means to an end and is different from theoretical thought in the character of its end. (So, Γ, 10, 432a14-15) It is regarded, besides appetite, as a source of movement (So, Γ, 10, 432a17-18) though Aristotle finally concludes that only appetite can be a source of movement.