

TIME AS NUMBER AND CALCULATING SOUL

(Aristotle's theory of time. The prototype of the ontological difference)

Vielleicht, daß man einige Jahrhunderte später urteilen wird, daß alles deutsche Philosophieren darin seine eigentliche Würde habe, ein schrittweise Wiedergewinnen des antiken Bodens zu sein, und daß jeder Anspruch auf „Originalität“ kleinlich und lächerlich klinge im Verhältnis zu jenem höheren Ansprüche der Deutschen, das Band, das zerrissen schien, neu gebunden zu haben, das Band mit den Griechen, dem bisher höchst gearteten Typus „Mensch.“

Nietzsche, *Der Wille zur Macht*, Aph. 419.¹

1. ENERGEIA AND ITS INTERNAL FORM

1.1. *The Definition of Movement*

Aristotle says:² “For time is just this — number of movement in respect of ‘before’ and ‘after’.”³

Time is inseparably connected with movement; it is, according to Aristotle, κινήσεως τι. Time is a definite formal moment of movement. In its turn movement is the main topic of Aristotle's physics. We have seen in the previous chapter that according to Parmenides “change,” as well as “time,” is a redundant, misplaced, and

¹ These words preface Heidegger's lectures on *Metaph.* Θ 1–3: *Von Wesen und Wirklichkeit der Kraft* (1931), published as vol. 35 of *Gesamtausgabe* (2. Aufl. Frankfurt a. M.: V. Klostermann, 1990).

² As a general rule, citing Aristotle in English, I make use of the translations included in the two volumes of *The Complete Works of Aristotle. The Revised Oxford Translation*, ed. J. Barnes (Princeton NJ: Princeton Univ. Press, 1985). *Physics* is translated by R. P. Hardie and R. K. Gaye, *Metaphysics* and *Nicomachean Ethics* — by W. D. Ross, *On the Soul* — by J. A. Smith.

³ τὸ τοῦτο γὰρ ἐστὶν ὁ χρόνος, ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ ὕστερον. (*Phys.* IV 11, 219b1f.) We shall see later on that the expression refers to a definite relation — the “before-and-after-ness,” so to speak. Everywhere in my book I render Aristotle's κίνησις as ‘movement’ (Hardie and Gaye: “motion,” Ross: “movement”); κίνησις is a very broad concept in Aristotle, which includes not only locomotion, but alteration and increase/decrease as well.

ontologically void name: there is no room for time and change (movement) alongside (πάρεξ) of being. The *Physics* is actually nothing but an *ontological justification* of movement.

Aristotle gives a definition of movement, and is the first to do so.⁴ The two main versions of this definition are:

Phys. III 1, 201a10f.: ἡ τοῦ δυνάμει ὄντος ἐντελέχεια, ἥ τοιοῦτον, κίνησις ἐστίν...

The *entelecheia*⁵ of what is potentially, as such, is movement...

Metaph. XI 9, 1065b16: τὴν τοῦ δυνάμει ἥ τοιοῦτον ἐστὶν ἐνέργειαν λέγω κίνησιν

I call the *energeia* of [a being] in potentiality insofar as it is in potentiality, movement.⁶

This definition allows us to include motion within being, contrary to Parmenides' prohibition. Indeed, because potentiality is a genuine mode of being, as we shall see in section 3, change and motion are rightfully beings.

Aristotle's definition, paradoxical at first sight (indeed, its structural skeleton is: *the actuality of potentiality qua potentiality*), has been a constant object of attention for commentators since antiquity.⁷ Without discussing it in detail, I shall nonetheless indicate my understanding of it.

The definition speaks of the actuality of a *definite* possibility as, precisely, possibility. The *entelecheia* (or *energeia*) meant here carries out to perfection, makes actual, and constitutes a *definite* possibility *qua* this *definite* possibility, e.g., this piece of copper as a *possible* statue *and not* as a possible shield. In movement a certain tendency becomes manifest, and this presence of the meaning of a definite possibility must be connected to an *eidos* or form different from the form of copper *qua* copper as well as from the form of the finished statue. This quasi-form (I shall later explain why I choose such a cautious term), which forms the possible as possible, which al-

⁴ According to a testimony of Simplicius (397, 15) nobody before Aristotle attempted to give a definition of movement.

⁵ In what follows I leave this most important term of Aristotle's metaphysics without translation. The generally adopted rendering "actuality" does not allow it to be distinguished from ἐνέργεια. Of course, the two terms can be used as complete synonyms, but nevertheless the subtle differences in meaning are always retained. ἐντελέχεια signifies, according to the internal structure of the term (ἐν-τελῆς + ἔχειν), "being-at-the-goal," "completeness" or "perfection," and has nothing to do with *action* and *activity*. The common Latin translation of the term is "perfectio." In the *Revised Oxford Translation* the English equivalent for ἐντελέχεια is "fulfilment." However the same word is generally used as the translation of Husserl's *terminus technicus* *Erfüllung* (see chap. 5, sect. 2). The closed interrelation between ἐντελέχεια (ἐνέργεια) and *Erfüllung* will be discussed further on in connection with my "phenomenological interpretation" of Aristotle and "Aristotelian interpretation" of Husserl (cf. chap. 5; 7).

⁶ Ross: "I call the actuality of the potential as such, movement." I either leave Aristotle's term ἐνέργεια untranslated or render it as "actuality."

⁷ On various ways to interpret the Aristotelian definition of movement in the most important historical commentaries cf. F. Brentano, *Von der mannigfachen Bedeutung des Seienden nach Aristoteles* (Freiburg im Breisgau: Herder'sche Verlagshandlung, 1862), Kap. IV, § 2. See also another excellent work taking into account the most important contemporary studies: R. Brague, *Aristote et la question du monde. Essais sur le contexte cosmologique et anthropologique de l'ontologie* (Paris: PUF, 1988), ch. IX, § 58.

lows the possible to have the meaning (λόγος) of the possible, is movement;⁸ this quasi-*eidos* allows the statue-of-Hermes-in-possibility to be *present* during casting as distinguished from the shield-in-possibility.

Thus movement constitutes the possible (the potential) as a *definite* possibility (potentiality). Yet how must we understand the way of being of this definiteness? Aristotle says: as *energeia* or *entelecheia*. And if we want to avoid a vicious circle in the definition, *energeia* cannot be interpreted here as the *energeia of movement* (ἐνέργεια κατὰ κίνησιν). The clue to solving the problem is given by the fact that the noun δύναμις (*possibility, force, ability, power*), as well as the noun ἐνέργεια, are used equivocally.

The following passage from *Metaph.* IX 6 is extremely important,⁹ because here we find a fundamental distinction between the two main meanings of ἐνέργεια:

Not all [entities] are said to be actual (ἐνέργεια) in the same way (univocally), they are called so only by analogy: as A is in B or relates to B, so also C is in D or relates to D. In one sense actuality (ἐνέργεια) relates to potentiality (δύναμις) as movement to the ability [to move], in another sense as substance to some sort of matter. (1048b6–9)

Thus the equivocality specified in this passage is not accidental homonymy: although, strictly speaking, there is no general term in Aristotle's language designating the two meanings of *energeia* just mentioned, because there is no common genus in relation to which they could be considered as species, these meanings are connected by the unity of analogy. Aristotle says (cf. *Metaph.* IX 6, 1048a36ff.) that the meaning of δύναμις and ἐνέργεια, like the meaning of τὸ ὄν or τὸ ἔν, is "one" only in the sense of analogy, κατ' ἀναλογίαν, and we must be content not to demand a definition (given by *genus* and *differentia*) but to grasp the analogy and see the nature of the underlying anonymous universal unity (which is not and cannot be in this case a common genus) by studying the instances of it. In one sense *energeia* is activity, actuality of change, and in relation to such *energeia* δύναμις is ability as the source or "principle" of change.¹⁰ In the second sense *energeia* is fulfilment, perfection of *eidos*, of the form of the thing embodied in matter;¹¹ and in relation to such *energeia* δύναμις is matter as something indeterminate (and therefore not present),

⁸ Cf. Brentano, *op. cit.*, p. 58: "Die κίνησις ist die Aktualität des Potenziellen als solchen, [...] d.h. sie ist die Aktualität (ἐνέργεια), die ein in Möglichkeit Seiendes (τοῦ δυνάμει ὄντος) zu dem macht, was es ist (ἢ τοιούτων ἔστιν), nämlich zu diesem in Möglichkeit Seienden, oder mit anderen Worten, die ein Mögliches als Mögliches (ein im Zustande der Möglichkeit Befindliches als in diesem Zustande befindlich) konstituiert oder formiert."

⁹ In what follows we *retell*, not actually *translate* it.

¹⁰ It is defined as "the principle of change or transition, which lies in something other or in the thing itself insofar as it can be considered something other" (1046a11), – for example, when a physician treats himself for an illness, being at the same time his own patient.

¹¹ *Metaph.* 1048a30–33: "Actuality means the presence of a thing (ἔστι δὲ ἐνέργεια τὸ ὑπάρχειν τὸ πρᾶγμα) not in a way which we express by 'potentially,' we say that potentially, for instance, a statue of Hermes is in the block of wood and the half-line is in the whole, because it might be separated out, and even a man who is not contemplating [truth] we call a man of science if he is capable of contemplating." (Ross' translation is slightly modified.) ὑπάρχειν means among other things "to be already there," "to be available." Heidegger's "vorhanden-sein" is a very fitting translation of this Greek verb.

subject to determination, capable of embodying the form and so allowing it to be present within the *compositum*. Only what has been formed can be present, and that is why *energeia* in the second sense is almost synonymous with *eidos* and *presence* as such. *Energeia* means that the thing is present or available: τὸ ὑπάρχειν τὸ πρᾶγμα (1048a30f.). And it is only in this sense that *energeia* becomes synonymous with *entelecheia*, for the completeness or fulfilment of the form is the *goal* of all coming into being, and *entelecheia* signifies “being-at-the-goal.” Matter is the indefinite possibility of attaining the goal, that is to say, to be determined by the form and to embody it completely.

1.2. *The Concept of Energeia*

After distinguishing the two meanings of *energeia*, we can speak of *energeia* in *contradistinction* to movement. The way Aristotle posits and articulates this distinction deserves most serious attention. I am here referring to the famous fragment of *Metaph.* IX 6, 1048b18–35.¹² The text is very much corrupted, and the author’s manner extremely laconic and hasty;¹³ that is why the efforts of the editors to understand the passage in question and to render it understandable resulted in a multitude of variants. In what follows I cite the passage in my own translation (the comments in brackets inserted in the text seem to be inevitable, for they make the meaning I intend to convey manifest). I accept the reading suggested by R. Bague¹⁴ and, in general features, follow his interpretation of the fragment. Ross’ translation makes the text mute in some nuances,¹⁵ which are of crucial importance for the further development of my interpretation of Aristotle’s concept of *energeia*.

Since of the actions (πράξεις) which have a limit none is an end in itself, but they all belong among the means aiming at an end [other than themselves],— e. g., losing weight [by means of a prescribed treatment] is, indeed, of this sort in relation to the aim of weight to be lost,— and since the things involved in the process¹⁶ of making somebody lose weight are in movement in this way that the result itself for the sake of which the movement takes place is not yet readily present, this is not an action proper or at least not a perfect one: for it is not an end in itself. *But in a [proper or perfect] action the end must already be present, and [still the action must remain] an action.*¹⁷

¹² The history of transmission of this fragment is outlined in R. Bague, *Aristote et la question du monde*, pp. 454–456. The author calls it “un aérolithe aristotélicien.”

¹³ W. Jaeger in his edition of the *Metaphysics* (10th impression, Oxford 1989, p. 184) remarks in connection with this fragment: “oratio est admodum dura et obscura.”

¹⁴ R. Bague, *op. cit.*, pp. 456–461.

¹⁵ A cogent argument against Ross’ reading can be found in Bague, *ibid.*

¹⁶ Ross considers αὐτὰ in 1048b20 as referring to “the parts of the body themselves when one is reducing their bulk” (cf. *Aristotle’s Metaphysics. A Revised Text with Introduction and Commentary by W.D. Ross*. Oxford: Clarendon Press, 1988, vol. II, p. 253), while Bague believes that here the “means aiming at and end” (τὰ περὶ τὸ τέλος in line 19) are meant. Since this matter is of no importance for my further analysis I choose a “neutral” way to interpret αὐτὰ as “the things involved in the process.”

¹⁷ In ll. 1048b22f. I accept the correction proposed by R. Bague, who reads: ἀλλ’ ἐκείνη (ἐκείνη codd.) ἐνυπάρχει τὸ τέλος καὶ ἡ πρᾶξις. Here ἐκείνη refers to πρᾶξις τελεία. Thus, the sentence says that the following two features belong to the perfect action simultaneously (are at once inherent in it):

Thus, somebody is seeing and at the same time has already seen, is understanding and has understood, and also is grasping mentally and has already grasped. But it is not true that at the same time somebody is learning and has learnt, or is being cured and has been cured. At the same time somebody is living well and, indeed, has already achieved a good life, is experiencing happiness and is already happy. If not, the activity would have had sometime to cease, just as the process of losing weight ceases [when the goal is achieved]; yet this is not what takes place but, on the contrary, somebody is both living and already alive. Of these activities, then, we must call the one set *movements*, and the other — *energeiai*. For every movement is incomplete: losing weight, learning, walking, building; these are movements, and incomplete. For it is not true that at the same time somebody is walking and has already walked or is building and has already built, or is coming to be and has come to be — in a word, it is not true that something is being moved and has already completed its movement: these are distinct [states of affairs]. But simultaneously somebody has seen and is seeing the same thing,¹⁸ and is grasping mentally and has already grasped. The latter sort [of actions], then, I call *energeia*, and the one mentioned earlier, movement.

From this difficult text we can gather at least the following: Aristotle divides activities or actions in the broadest sense into perfect, completed (πράξις τελεία) and imperfect, incomplete, intermediate (ἀτελής).

The incomplete or imperfect actions must be called movements, and the completed ones, *energeiai*.

The latter are characterized by the end being inherent in them. In this case it is impossible to distinguish the action from that for the sake of which the action is per-

a certain state of affairs which has come to be as the result of the action and its end (this meaning is expressed by Greek perfect tense) and, on the other hand, the continuing activity (expressed by the present tense). Bague's translation of the passage 1048b18–23 goes as follows: "Puisque, parmi les actions, aucune de celles dont il y a une limite n'est une fin, mais qu'elles relèvent des (moyens) qui concernent ce but — par exemple, par rapport au fait de faire maigrir, la cure d'amaigrissement est justement cela —, et puisque ces moyens, chaque fois que l'on fait maigrir, sont en mouvement de façon telle qu'ils ne sont pas en eux-même les résultats en vue de quoi le mouvement (se produit), ces (moyens) ne sont pas une action, ou en tout cas pas une action parfaite. En effet (cette action) n'est pas une fin; en revanche, en celle-là (sc. dans cette action parfaite) est inhérente la fin et (du coup) l'action (qui y mène)." (*Op. cit.*, p. 458 f.)

¹⁸ I follow Jaeger's reading and excise καὶ κινεῖ καὶ κέκινηκεν (1048b33). Ross preserves these words and considers ἕτερον in l. 32 and τὸ αὐτό (ll. 33 f.) as forming an opposition; hence his rendering of the passage: "...it is a different thing that is being moved and that has been moved and that is moving and has moved; but it is the same thing that at the same time has seen and is seeing, or is thinking and has thought." Ross' summary of this fragment reads as follows: "It is not the case that a thing at the same time is being moved and has been moved; that which has been moved is different from that which is being moved, and that which has moved from that which is moving." (*Aristotle's Metaphysics. A revised Text with Introduction and Commentary*, p. 254.) This latter interpretation seems to be doubtful for two reasons. First, because Aristotle himself states *ex professo* that one always can say correctly that something is moving and has already moved αὐτὸ γὰρ ἅμα κινεῖ καὶ κέκινηκεν (*Phys.* VII 5, 249b29f.). Second, because it seems to be obvious that τὸ αὐτό in ll. 33f. is not the subject but a direct object as in *Soph. El.* 178a9ff: ἄρ' ἐνδέχεται τὸ αὐτὸ ἅμα ποιεῖν τε καὶ πεποιηκέναι; οὐ. ἀλλὰ μὴν ὅραν γέ τι ἅμα καὶ ἑωρακέναι τὸ αὐτὸ καὶ κατὰ ταῦτ' ἐνδέχεται. Bague translates: "Est-il possible de faire et d'avoir fait en même temps la même chose? Non. Il est pourtant possible de voir et d'avoir vu la même chose sous le même rapport" (*op. cit.*, pp. 461f.). The opposition Aristotle intends to articulate in *Metaph.* 1048b18–35 is the opposition between two kinds of actions with different internal structures: it is not true that a thing at the same time is being moved and has completed its movement — here Greek *praesens* and Greek *perfectum* express two distinct meanings; but it is true that at the same time someone is seeing and has seen the same thing in the same aspect, and it is true, of course, that someone or something is moving a thing and (thus) has set the thing in motion (*praesens* = *perfectum*).

The Ontology of Time

Being and Time in the Philosophies of Aristotle, Husserl
and Heidegger

Chernyakov, A.

2002, X, 230 p., Hardcover

ISBN: 978-1-4020-0682-1