CHAPTER TWO

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 Anspruche 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, κινησεως 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


³ τοῦτο γὰρ ἔστιν ὁ χρόνος, ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ ἦσπερον. (Phys. IV 11, 219b1f.) We shall see later on that the expression refers to a definite relation — the “before-and-afterness,” 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.

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ontologically void name: there is no room for time and change (movement) along-
side (πάρηξ) 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. The two main
versions of this definition are:

*Phys.* III 1, 201a10f: ἡ τοῦ δυνάμει ὀντος ἐντελέχεια, ἡ τοιοῦτον, κίνησις ἐστιν...
The entelecheia of what is potentially, as such, is movement...

*Metaph.* XI 9, 1065b16: τὴν τοῦ δυνάμει ἡ τοιοῦτον ἐστιν ἐνέργειαν λέγω κίνησιν
I call the energeia of [a being] in potentiality insofar as it is in potentiality, movement.

This definition allows us to include motion within being, contrary to Parme-
nides’ 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. Without discussing it in detail, I shall nonethe-
less indicate my understanding of it.

The definition speaks of the actuality of a *definite* possibility as, precisely, pos-
sibility. The entelecheia (or energeia) meant here carries out to perfection, makes ac-
tual, 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 ten-
dency 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 caution term), which forms the possible as possible, which al-

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4 According to a testimony of Simplicius (397, 15) nobody before Aristotle attempted to give a de-
nition 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-τελες + ἔχειν), “being-at-the-goal,” “completeness” or “perfection,” and has nothing to do with action and ac-
tivity. 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 trans-
lation 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 “pheno-
menological 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 histori-
cal 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.
allows the possible to have the meaning (λόγος) of the possible, is movement; 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, 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 ὅν or τὸ ἐν, 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. In the second sense energeia is fulfilment, perfection of eidos, of the form of the thing embodied in matter, and in relation to such energeia δύναμις is matter as something indeterminate (and therefore not present).

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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 δύναμεi ὑντος) zu dem macht, was es ist (ἡ τουτοῦ ἐστιν), nämlich zu diesem in Möglichkeit Seienden, oder mit anderen Worten, die ein Möglicher 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 (ἐστὶ δὲ ἐνέργεια τὸ ὑπάρχειν τὸ πράγμα) 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. Brague14 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

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12 The history of transmission of this fragment is outlined in R. Brague, *Aristote et la question du monde*, pp. 454–456. The author calls it “un aérolithe aristotélicien.”
15 A cogent argument against Ross’ reading can be found in Brague, *ibid.*
16 Ross considers αὐτὸ 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 Brague believes that here the “means aiming at and end” (τὰ πέρι 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 αὐτὸ as “the things involved in the process.”
17 In l. 1048b22f. I accept the correction proposed by R. Brague, who reads: ἕκειν (ἕκειν codd.) ἐνυπάρχει τὸ τέλος καὶ ἡ πράξεις. Here ἕκειν refers to πράξεις τελεῖα. 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, 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 (πράξεις τελείως) and imperfect, incomplete, intermediate (ἀτελής).

The imperfect 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-

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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). Brague’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-mêmes 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 (y même).” (Op. cit., p. 458 f.)

I follow Jaeger’s reading and excise καὶ κινεῖ καὶ κεκίνηκεν (1048b33). Ross preserves these words and considers έτερον in l. 32 and τὸ αὐτὸ (l. 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 been 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 Metaphysic. 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 (ἐν γὰρ ἤμα κινεῖ καὶ κεκίνηκεν (Phys. VII 5, 249b29f.). Second, because it seems to be obvious that τὸ αὐτὸ in l. 33f. is not the subject but a direct object as in Soph. El. 178a9ff: ἃρ’ ἐνέχεται τὸ αὐτὸ ἄμα ποίην τε καὶ πεποιηκέναι; οὗτός μὴν ὅρων γε τι ἄμα καὶ ἔστεκεν τῷ αὐτῷ καὶ κατὰ ταύτῳ ἐνέχεται. Brague 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 meme chose sous le même rapport” (op. cit., pp. 461 f.). 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).
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