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What Makes a Thing What It Is? Aristotle and Hegel on Identity

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Abstract The notion of identity is investigated through Aristotle and Hegel as supporters of two different ontological conceptions: pluralism of substances and relational holism. Through Aristotle, I examine both the thesis according to which the identity of an object is constituted by its properties and the difficulties which this thesis encounters (e.g., those raised by Max Black). Aristotle easily defines the identity in species, in genus, and in number; some problems arise regarding the identity of individuals: for these, it is not enough to indicate the definition and the proper qualities, but matter is needed. Matter cannot, however, be a criterion for identifying duplicate objects: in this case, it plays at most the role of a "weak individuator." A weak individuator involves relations with other entities. The use of relations in determining the identity of an entity is extensively treated by Hegel, according to whom, in order to define the identity of an object a multiplicity of particular objects is required and, therefore, relations among entities. I conclude by proposing a notion of the object understood not as an independent, separate, and autonomous item, but as a portion of the world, which is given in a phenomenological context and identifies a dialectical context.

Keywords Aristotle · Hegel · Identity · Ontology · Pluralism · Holism

1. The concept of identity—along with other philosophical concepts like existence, object, and contradiction—may be (and has been) examined under different perspectives: logical, epistemological, and ontological. From a logical point of view, it is obvious that, if A is identical to B, then A and B are interchangeable: if Aristotle taught Alexander the Great, then the author of the *Analytics* also taught Alexander the Great, since Aristotle is (in the precise sense of identity) the author of the *Analytics*. Insofar as they denote the same object, the terms "Aristotle" and "the author of the *Analytics*" are interchangeable within a proposition. This seems to be clear and reasonable enough; yet

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no such straightforward answer is available for the ontological question: what makes a thing what it is, i.e., determines its identity? The *prima facie* answer is: the collection of its properties. Thus, if entities *A* and *B* possess the same properties, then *A* and *B* are identical, or rather, they are the very same thing: in order for two physical entities to be distinct, some difference has to exist between them.[1]

Several arguments have been set forth questioning the principle of the identity of indiscernibles. The argument proposed by Max Black is one of the best known. Suppose a fictional universe contains nothing but two perfectly identical spheres (that is, made of the same material, with the same size, temperature, color, etc.); in such a universe, the two spheres will be numerically distinct, but indiscernible (cf. Black 1952, p. 156). To this, it might be objected that assuming the spheres to be exactly identical and numerically different means begging the question: we set out with the denial of the principle of the identity of indiscernibles, in order to prove that such principle does not hold; were it not so, Black could not describe the spheres as qualitatively identical.[2] If, on the other hand, we take up the argument, we are immediately confronted with an epistemological issue: what allows us to distinguish things from each other, i.e., to identify them? Simon Saunders (2003, pp. 293–294) calls "weakly discernible" those objects which possess exactly the same properties, stand in the same relations with any other object and with each other, and yet entertain a non-reflexive relation such as "…is one mile apart from…": for example, a point *x* is at distance *l* from *y*, but not from itself. Black's spheres would be precisely a case of weakly discernible objects, instantiating a non-reflexive relation such as the one I have just mentioned; it is by virtue of this relation that we may say the spheres are two. The identification of either object would thus occur through a relation with the other one. Now, as pointed out by Bas van Fraassen and Isabelle Peschard (2008, p. 19), this is sufficient ground for claiming that different entities exist, which are nonetheless indiscernible.

A similar remark may be made in quantum mechanics: it is well known that, given two particles of the same type and with the same state, there is no way of telling them apart through a quantum-mechanical description; and yet, since the particles may be counted, we know that there is more than one of them. In other words, if *A* and *B* are identical, then they possess the very same properties, while the reverse implication is far from certain. However, even if Leibniz's principle falls, the ontological question is still left standing.

This is but one of the many ways the problem of identity may be spelt out. In particular, Black shows that it is tautological to prove Leibniz' principle assuming a notion of property which includes that of "being equal to *A*" or "being different from *B*." The validity of the principle depends on the universe of properties that is presupposed, and Black shows this also in relation to entities in the space of specific physical universes. Although I will not follow this route, I have hinted at it both in order to bring up the two key notions of numerical and qualitative identity, and as a means of suggesting—albeit briefly—a possible way of dealing with the identity of an object: what I intend to do is precisely to examine whether the latter may be defined through relations, as well as through properties. To this effect, I shall discuss the conceptions of two classics such as

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[1] Here, I left aside the discussion about referentially opaque contexts, which would make the logical identity much less obvious.

[2] Black himself hints at an objection of this sort at the end of his essay (cf. Black 1952, p. 163).

Aristotle and Hegel. The reason for doing so is that the ontological views of these authors, compared to their numerous counterparts in the history of philosophy, lay out sharply two points of view under which many others may be indexed. Despite their proximity on some specific issues, as a result of Hegel's careful reading of Aristotle, the two ontologies rest on diverging general perspectives: substance pluralism on one side, and relational holism on the other. I shall now examine the notion of identity within each of these ontologies, and subsequently, I will briefly explain how I believe the problem of identity may be laid out from an ontological point of view.

2. Aristotle deals with identity in different places, especially in the *Topics* and the *Metaphysics*.[3] According to William David Ross (1953, I, p. 311), "Aristotle's best classification of the types of identity is found in *Top*. I. 7." And this is my starting point, without mentioning the difficulties that arise or seem to derive from the fact that Aristotle combines logical reasoning with epistemological and ontological ones; this is a characteristic that is also found in other pages of the *Topics*.[4]

Aristotle distinguishes three types of identity: (1) in species, (2) in genus, and (3) numerical (cf. *Top*. I 7, 103a7–9). (1) Those things are said to be the same in species that are not different from each other in respect to their species, as for example two men or two horses. For the same reason, (2) those things are said to be the same in genus that fall in the same genus, like a horse and a man fall in the animal genus (cf. *Top*. I 7, 103a10–14). Aristotle takes the examples from the natural world, but if we extend the two meanings of identity examined, nowadays serial products can also be subsumed under them. Consider, for example, cars or books: two cars of the same model, or two copies of the same work, although they are distinct, have a certain "likeness," in the same way as the water from a certain spring is identical in species to any other species of water, even though it is distinct from it (cf. *Top*. I 7, 103a19–20). Finally, (3) there is numerical identity when several names or descriptions apply to the same thing. Besides, Aristotle points out that "things numerically one are called the same by everyone with the greatest degree of agreement."[5] This attribution applies on three different levels: first, (3.a) we must take into consideration the level on which sameness is rendered "by a name or definition," as when "cloak" (*himation*) is the same as "doublet" (*lōpion*)[6] or "two-footed terrestrial animal" the same as "man" (cf. *Top*. I 7, 103a23–27). Aristotle claims that both the names of one and the same thing and the name and the definition are interchangeable, when they have the same denotation; in this way, he connects numerical identity with sameness in species (and genus). This possibility is given by the fact that species and genus constitute a definition. This attempt is also developed in the eighth chapter of the first book of the *Topics*, where the philosopher explains in which cases and ways a *logos* is interchangeable or convertible (*antikatēgoreisthai*) with the thing (cf. *Top*. I 8, 103b6–19). As we shall see, Aristotle intends as a definition (*horismos*) the discourse that points out the *ti ēn einai* ("what it is," many scholars will say later: the "essence") of a thing

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[3] The classic passages are *Top*. I 7; V 4; VII 1–2; *Metaph*. V 9; X 3.

[4] As remarked by Zadro (1974, p. 327).

[5] Aristotle, *Top*. I 7, 103a23–24; cf. also 103a9–10 (Engl. trans. by W. A. Pickard-Cambridge).

[6] Cf. Aristotle, *Top*. I 7, 103a10, 27. The same example is repeated in *Metaph*. IV 4, 1006b25–27: "For being one means this—being related as 'raiment' [*lōpion*] and 'dress' [*himation*] are, if their definition [*logos*] is one." Cf. also *Phys*. I 2, 185b20.

(cf. *Top*. I 5, 101b38–102a1), which expresses the characteristics that are common to the members of a certain class of entities. Secondly, (3.b) there is numerical identity at the level of the proprium (*idion*), that is, when a name and the description of a proprium apply to the same thing; in such a case, the name of the thing is changed with a specific connotation of it (cf. *Top*. I 7, 103a28). The proprium is a predicate "which does not indicate the essence of a thing, but yet belongs to that thing alone, and is predicated convertibly of it" (*Top*. I 5, 102a18–19). For example, a proprium of man is "to be able to acquire knowledge"; therefore, if something is able to acquire knowledge, it is a man. The proprium is a specific property which always or almost belongs to the thing of which one talks about and only to it. Finally, (3.c) there is numerical identity at the accident level, as when an accidental description of a thing is used for it, for example when the descriptions "the creature who is sitting" or "who is musical" are used in place of the name "Socrates" (cf. *Top*. I 7, 103a29–31). In this context, both expressions can have both an intensional and an extensional value, that is, they can point out a property of an entity or denote it. "For all these"—Aristotle concludes—"are meant to signify numerical unity" (*Top*. I 7, 103a31). That this third kind of identity concerns also the accident is confirmed by the simple observation that, if we order someone to call by name one who is sitting among many others, and the person who has received the order does not understand it because he/she does not know the name of the person that he/she has to call, we repeat the request pointing out that the person in question is the one who is conversing. The accident translates into words a gesture that could be made with the index finger. In this case, the person is identified either by a name or by an accident (cf. *Top*. I 7, 103a32–39). Aristotle explicitly states, but at this point it should be obvious, that, while what is numerically the same is the same even in species and genus, "there is either no necessity or even no possibility that things that are the same specifically or generically should be numerically the same" (*Top*. VII 1, 152b31–32).

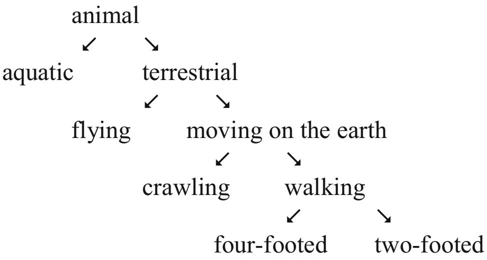
As Ross (1953, I, pp. 311–312) noticed, there are many correspondences, on the same subject matter, between the chapter of the *Topics* we have seen and other passages in the *Metaphysics* (in particular we can refer to *Metaph*. V 9, 1017b27–1018a9 and X 3, 1054a32–b 3). I shall not deal with them now, but let me emphasize an important addition which comes from the first passage just mentioned: the introduction of the notion of matter (*hule*) into our discussion on identity:

> things are said to be the same by their own nature in as many ways as they are said to be one; for both the things whose matter is one either in kind or in number, and those whose substance is one, are said to be the same (*Metaph*. V 9, 1018a4–7; Engl. trans. by W. D. Ross).

That matter can be identified with genus is stated in *Metaph*. V 28, 1024b8–9—"for that to which the differentia or quality belongs is the substratum, which we call matter"—and in *Metaph*. X 8, 1058a23–24—"the genus is the matter of that of which it is called the genus." However, the most significant passage from a theoretical point of view is in *Metaph*. VII 12, where Aristotle speaks about the definition that is obtained by means of the divisions—which I will discuss shortly—and redefines in an anti-platonic way the genus-species relationship. Taking the example of the voice, he says that it "is genus and matter," and that "its differentiae make the species [*eidē*], i.e., the letters, out of it" (*Metaph*. VII 12, 1038a6–8). For Aristotle, matter is not simply the perceptible, or rather, perceptible is not the matter as such, but that matter which has been determined by a form. The matter is, therefore, not the particular which is determined by the universal, but the higher-level genus, which is not yet determined by a last differentia. It is in this sense that the matter is the genus, more precisely the proximate genus or the proximate matter (cf. *Metaph*. VIII 6, 1045b18–19), which is made by a series of potential predicates.[7]

Let us return to the *Topics*. Apparently, Aristotle proposed only a classification of things that are said to be the same, without telling us what makes a thing what it is.[8] He told us that the water from a certain spring is the same in species to every other water, that water jets of the same spring are much more similar to each other than to those of other springs, but he did not tell us what made them differ and, therefore, what makes each water jet that thing which it is. Actually, Aristotle told us this and more; he pointed out the direction in which we have to continue our research. A glance at the *Posterior Analytics* and other passages of the *Metaphysics* may serve as explanation.

According to *Top*. I 7 and 8, Aristotle's indication directs us toward the notion of definition, that is, the first fundamental way of referring to identity in species (or also in genus) considered in relation to numerical identity. A recurring example in Aristotle is the definition of man as a "two-footed animal." We have to explain how it is possible to obtain this definition, that is, the way according to which this formula can put together, as a unity, the characteristics common to all men and express their essence (*to ti ēn einai*), which does not mean a plurality, but a congruent unity with the defined subject. Aristotle's answer[9] can be summarized as follows: "We must first inquire about definitions arising out of divisions" (*Metaph*. VII 12, 1037b28–29), starting from the first genus (or matter) and dividing it exactly into each of the differentiae that has the characteristics of a proprium. We will arrive at a last term (which cannot be divided any more) that we can call "differentia specifica" (as for example "two-footed" of man); it is that differentia which, together with the first genus (animal), "produces" the species encoding the differentiae that precede it in the dividing scale (for example, still in the case of man, the attributes "terrestrial," "moving on the earth," "walking," "two-footed," as in the following diagram). "[T]he *last* differentia"—Aristotle concludes—"will be the substance of the thing and its definition."[10]



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[7] The concept of genus-matter is explained with great clarity by Stenzel (1959^{3}, pp. 131–140).

[8] As maintain Charlton (1994, p. 46) and Gill (1994, p. 57).

[9] We find it both in *Metaph*. VII 12 and in chapters thirteen and fourteen of the second book of the *Posterior Analytics*.

[10] Aristotle, *Metaph*. VII 12, 1038a19–20. For a detailed explanation of the matter cf. Cubeddu (2004, pp. 67 ff.); cf. also Balme (1987).

Therefore, what determines the identity of a species, what makes a species to be what it is, is the essence expressed through the definition. Two species differ from each other because they have a different definition even if they have a common genus (cf. *Metaph*. X 8, 1058a2 ff.); if the same definition applies to two individuals, for example, the definition of man, these individuals will then be the same in species.[11] However, essence (*to ti ēn einai*) cannot be a distinctive criterion for individuals that are identical in species but numerically distinct. What is it that makes a certain individual, for example, Socrates, the individual that he is, and consequently distinguishes Socrates from Callias? In a passage from *Metaphysics* VII 8, Aristotle writes that Callias and Socrates "are different in virtue of their matter (for that is different), but the same in form; for their form is indivisible" (*Metaph*. VII 8, 1034a5–8; but cf. also VII 15, 1040a33–34). The form cannot be the criterion for distinction which is now required, because it captures what makes individuals the same. We could also ask: how can two individuals have the same indivisible form?

As we have seen, the form is indivisible inasmuch as the division has undergone an arrest, and a unity that is no longer divisible has been achieved. This indivisible is the universal object contained as one and the same in all objects falling under a species (cf. *An. post*. II 19, 100a6–8). In fact—says Aristotle at the end of the second book of the *Posterior Analytics*—"when one of the undifferentiated items makes a stand, there is a primitive universal in the soul; for although you perceive particulars, perception is of universals,—e.g. of man, not of Callias the man" (*An. post*. II 19, 100a15–17; Engl. trans. by J. Barnes). The universal is already present in things which are perceived; that is why the universal springs from the perception of the individual: "we perceive an individual thing,"—Ross explains—"but what we perceive in it is a set of qualities each of which can belong to other individual things."[12] This does not mean, of course, that from the first moment of the perception the universal is understood in all its specifications of genus and specific differentiae; in any case, what the mind understands, or can proceed to better understand, is what already is (as specified in genus and specific differentiae).

As for the difference in matter, chapter four of the first book of *De partibus animalium* provides clarification. Aristotle clearly distinguishes the genus of living beings that are different in terms of their form or structure and similar in terms of analogy (the fishbone of a fish corresponds to the bone in a man) from the species that are identical with respect to form but differ "in degree, and in the more or less of an identical element that they possess" (i.e., in smallness, softness, hardness, etc.).[13] Arguably, such variations are also the accidents which mix themselves with the propria, that is, with the differentiae that come into the definitions; although only these can become the subject of scientific discourse, which precisely consists of definitions that include the causes, the "why" of demonstrations. Therefore, individuals that belong to the same species are identical in terms of their form, that is, of their structure, but are different from one another "in the more or less," that is, in terms of the affections that can vary. For example, fish—as we already said—differ from each other because of the smallness, or the softness, hardness, etc. of their parts. It might seem that Aristotle maintains here a concept of matter opposed to that of genus-matter presented above. How can matter be both the genus common to several individuals and the distinguishing factor among individuals? In fact, the differences in "the more and the less" are quantitative differences, which presuppose that individuals belong to the same genus. Two individuals belong to the same genus, if they share something essential, which differs, however, in each of them (cf. *Metaph*. X 8, 1058a2 ff.). For example, two birds belong to the same genus because they possess wings, but they differ from a quantitative point of view, because one has long wings, the other short ones.[14]

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[11] As we have seen in chapter seven of the first book of the *Topics*, an analogous discourse can be made in reference to identity in genus.

[12] Ross (1949, p. 678). Cf. also the similar interpretation by Barnes (1994^2, p. 266), who observes, however, that Aristotle does not explain how we are to apprehend a universal. An answer *ante litteram* has been given by Wieland (1962, pp. 88 ff.): in his view, the individual "by its very nature stays always already in the light of a universality"; from the point of view of the single man, however, the error is always possible, that is why the research "then verifies whether it is in this case a genuine universality" (Wieland 1962, p. 95; cf. also pp. 98–99).

[13] Cf. Aristotle, *De part. anim*. I 4, 644a12 ff. (Engl. trans. by W. Ogle).

In brief, identity in species, which is given by the form, also concerns individuals, since whatever makes a man a man, also makes Socrates a man. But the proprium is not sufficient for identifying, and hence for distinguishing from each other, individuals that are the same in species. In such a case, the matter gives the criterion of identification: accidental attributes would identify Socrates as that individual who he is and distinguish him from other men. However, it still remains to be explained how matter can be a criterion for identification of two jets of water from the same spring or for Black's spheres mentioned at the beginning, whose matter is qualitatively identical.

In my view, the problem, for the Aristotelian theory, does not arise for possible objects like Black's spheres: Aristotle speaks about the identity of real objects made of flesh and bones, while the two spheres in question are possible objects in the space. Two geometrical objects (like two spheres) can be exactly identical, but if we are dealing with real objects, the properties of these objects must be verifiable, if not actually, at least potentially. Assuming that at present it is not possible to verify the depth of a mining layer from the surface of the earth's crust, it is not, however, intrinsically impossible. In the world postulated by Max Black, in which there are only two spheres made of pure iron, it is not possible to verify anything; if we introduce instruments such as a ruler, we would have another object that can stand in different relations with each of the two spheres, which would then possess different relational properties.[15] This induces Black to point out that the universe must be symmetrical, but not in the sense that everything that happens on one side is duplicated in the other side, on the contrary it must be "radially symmetrical," with a "centre of symmetry" such that "everything that happened at any place would be exactly duplicated at a place an equal distance on the opposite side of the centre of symmetry"—therefore, everything happens twice in exactly the same way—; in this universe, it is impossible for any material body to cross the centre of symmetry (cf. Black 1952, p. 161). Only if you are willing to admit a whole radially symmetrical universe, in which everything has its exact duplicate at the same distance from the centre of symmetry, does the example retain its validity. Aristotle is interested in explaining our world, and not a possible one like that hypothesized by Black.

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[14] Regarding this topic cf. Balme (1987, p. 72), Lennox (1987, pp. 340 ff., 346 ff., 358), and Carbone (2002, pp. 558–560).

[15] This eventuality is examined by Black (1952, p. 160) himself, who goes from here to postulate "a plane running clear through space, with everything that happens on one side of it always exactly duplicated at an equal distance in the other side," like in a mirror, but he immediately abandons this hypothesis.

Yet the problem of duplicate objects is still open. What about material objects like two jets of water from the same fountain, or two particles of the same type and with the same state? We can leave aside microphysics, a field quite unknown to Aristotle. A careful analysis of the difficulties in using matter to define the identity of individuals is given by Mary Louise Gill. In her opinion, there is no unique criterion of identification in Aristotle: Callias and Socrates differ insofar as there are differences in their matter, but we can also say that they are numerically different because their matter is not continuous. The discontinuity of matter would explain the distinction even of qualitatively identical objects like Black's spheres,[16] but not the particularity of duplicate objects as these spheres, two jets of water from the same fountain, or—according to the example discussed by Gill—of two bronze statues of Socrates worked one after the other by melting down the first and reusing the same bronze to get a statue which is identical to the former. In such a case, in which the form seems to migrate from one object to another, it is necessary to resort to temporal discontinuity.[17] The criterion of individuation, therefore, varies depending on the circumstances:

> Horses and men are differentiated by their form, Callias and Socrates by the discontinuity of their matter, and duplicate objects, composed at different times of the same matter, by the discontinuity of time (Gill 1994, p. 70).

In any case, the matter is a "weak individuator." A weak individuator "accounts for the numerical distinctness of the particulars. But it does not explain their particularity" (Gill 1994, p. 63), that is, what makes some particular individuals what they are. Weak individuation is defined by Gill in this way: one accepts some entities as basic particulars and one individuates the others with reference to them.[18] Therefore, matter is insufficient as a criterion for defining the identity of particular individuals, while as individuator it implies that a plurality of particulars and of relations among individuals is given.

The issue of relations had been widely treated by Aristotle. Speaking of the proprium and the definition, we implicitly touched on the problem of categories. Now, the identity obtained through the identification of the proprium requires the use of categories, but relation—Aristotle says—, unlike quality and quantity, does not define a substance. In *Metaph.* XIV 1 he states that "the relative is least of all things a real thing or substance, and is posterior to quality and quantity" (*Metaph.* XIV 1, 1088a23–24). Soon after, Aristotle provides two arguments in support of his claim.

> [T]he relatives—he says—are accidents of quantity, as was said, but not its matter, since there is something else both for relative in general and for its parts and kinds (*Metaph.* XIV 1, 1088a24–25).

It seems that the relation is neither a certain entity nor a substance, because it is non-independent, that is, it requires something else, a substrate, which is many or few, great or small, in a word: relative. Non-independence is but a characteristic of all categories with the exception of substance: even white, rough, or being two cubits high need a substrate. In fact, Aristotle himself, a little later, makes an explicit discrimination between the first category and the others, declaring that "all the categories are posterior [to the substance]" (*Metaph*. XIV 1, 1088b4). It should also be noted that Aristotle considered here as relations only relations of magnitude between bodies, and it is obvious that these are not real. Let us read the second argument:

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[16] Cf. Gill (1994, pp. 61–63). This interpretation, which refers to the passage of *Metaph.* VII 8 mentioned above, is supported also by Charlton (1994, p. 45).

[17] Cf. Gill (1994, pp. 65–66), who argues examining *Phys.* V 4.

[18] Cf. Gill (1994, p. 59); particular forms too may be considered as weak individuators (Gill 1994, pp. 69–70).

> A sign that the relative is least of all a substance and a real thing is the fact that it alone has no proper generation or destruction or movement, as in quantity there is increase and diminution, in quality alteration, in place locomotion, in substance simple generation and destruction. The relative has no proper change; for, without changing, a thing will be now greater and now less or equal, if that with which it is compared has changed in quantity (*Metaph*. XIV 1, 1088a29–35).

From the last example, it becomes evident that here Aristotle considers as relations only quantitative ratios: it is clear that a pencil, even though it is not used, without the slightest change "becomes" longer than one which has been used daily. But there are other relations which deteriorate, as is well known by anyone who, after a long relationship, has left the person they once loved (or has been left by him/her). In the latter case, we are not dealing with a quantitative relation, but it is equally clear that being beloved coincides with being in relation to the lover, according to the second definition of relatives given in *Cat*. 7, 8a31–32.[19] Notwithstanding the claims in *Metaph*. XIV 1, in other passages Aristotle himself uses relations in order to define a substance; for example, in *De an*. I 1, 403b3–5, the house is defined as "a shelter against destruction caused by wind, rain, and heat." Here, he considers the house not only in a context, but precisely in relation to alterity (wind, rain, and heat).

Finally, Aristotle defines the identity of an object through properties; he does but not exclude an openness to relations, as we have just seen. However, a different conception of the identity of an object can be found in Hegel, who strongly focuses on otherness, on relations.

3. In what follows, I do not intend to provide an exhaustive treatment of the notion of identity in Hegel. I will instead examine just one aspect, which on the one hand is opposed to the conception of identity discussed so far, but in another sense it seems to me that it could complete it. More specifically, I intend to return to a point which emerged in my last remarks about Aristotle, that is the possibility of defining the identity of a particular thing through its relations with other particular things. Now, in order to define the identity of an object, what is required, according to Hegel, is a plurality of particular objects and consequent relations among entities.[20]

A major difficulty in reading Hegel, as compared to Aristotle, was pointed out very well by Nicolai Hartmann in his classic essay "Aristoteles und Hegel": the concepts in

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[19] "[…] those things are relatives for which *being is the same as being somehow related to something*" (Engl. trans. by J. L. Ackrill).

[20] The centrality of the relations with the other in Hegel has been emphasized by Theunissen (1978, p. 29): "Die gesamte Logik gründet Hegel auf die Hypothese, daß alles, was ist, nur in der Beziehung und letztlich nur als die Beziehung auf ›sein Anderes‹ es selbst sein könne."

Aristotle are well delineated and connected; while in Hegel they appear only as moments of a process (cf. Hartmann 1957, pp. 223–224). Therefore, it is difficult to identify the specific passages in which Hegel expresses his definition of a concept, and it is also difficult to establish a univocal meaning of the terms employed by him, because meanings are determined by a conceptual context. As an example, the being, which in the "Doctrine of Being," is the pure abstract lacking in quality, in the "Doctrine of Essence" is shine (*Schein*). Besides, we have to consider the prevailing aversion Hegel had for examples, which are so rare in his pages, that his discourse ends up being rather abstract. The approach I take therefore is to examine briefly some moments of Hegel's *Logic* which may serve as exemplifications of the idea I intend to propose.

The first example I am going to adduce is drawn from the "Doctrine of Being"; it is the dialectics of "something and an other." The something stands for a substance in an Aristotelian sense, a "this" (a *tode ti*), that is, a determined, finished and mutable being.

> By "this" we *mean* to express something completely determinate, overlooking the fact that language, as a work of the understanding, only expresses the universal, albeit *naming* it as a single object (Hegel, *Wissenschaft der Logik* [henceforth: *WdL*], *GW* 21, p. 105; 2010a, p. 91).

The other too is a something. Therefore, each of them is equally a something and an other. On one side, the something is *one* with its non-being, with the other; on the other side, it does not identify with it. The something "stands in *reference* to an otherness without being just this otherness. The otherness is at once contained in it and yet *separated* from it" (*WdL*, *GW* 21, p. 106; 2010a, p. 92). The something and the other are two relatives, "their truth is their relation [*Beziehung*]."[21] This thesis becomes clearer if we take into consideration Hegel's notion of limit (*Grenze*), because the limit *ideally* contains both the moments of something and other (cf. *WdL*, *GW* 21, p. 113; 2010a, p. 98).

In § 92 of the *Encyclopedia of the Philosophical Sciences in Basic Outline*, Hegel writes that the limit is not a mere nothing, but refers to something else, namely to a being other which "is not something indifferent outside of it but instead its own moment" (Hegel, *Encyclopädie der philosophischen Wissenschaften im Grundrisse* [henceforth: *Enz.*], § 92, p. 197; 2010b, p. 147). Otherness is the limit, but also the integrating factor of the something. The limit plays both a relational and a constitutive role. In the first sense, "in limit, something marks the boundary of its other," which is in turn a something. "The limit that something has with respect to an other is, therefore, also the limit of the other as a something" (*WdL*, *GW* 21, p. 114; 2010a, p. 98). In the second sense, "*this something is what it is by virtue of it*, has *its quality in it*" (*WdL*, *GW* 21, p. 114; 2010a, p. 99). Later on, Hegel writes that the limit is the condition of existence of the something.[22] All that exists is determined, and then limited by other. "Something is what it is only *within* its limit and *due to* its limit,"[23] says Hegel. In this way, the limit is not simply external to the something; it is a qualitative limit, from which the quantitative should be distinguished. Hegel gives the example of a plot of land of three acres (this is a quantitative limit), which is also a meadow and not a forest or a pond. Without this qualitative limit, which is located in the other (in the forest and in the pond), the plot of land could not really be conceived, because we would no longer have something determined. Hegel writes:

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[21] Hegel, *WdL*, *GW* 21, p. 107; 2010a, p. 92. The English translation has been slightly modified.

[22] Cf. Hegel, *WdL*, *GW* 21, p. 115; 2010a, p. 99: "something has existence only in limit."

[23] Hegel, *Enz.*, § 92, Zus., p. 197; 2010b, p. 147; cf. also *WdL*, *GW* 21, p. 115; 2010a, p. 100: "something is what it is only in its limit."

> When thinking of the something, the [concept of the] other immediately comes to mind, and we know that there is not only something but also an other as well. But the other is not just something that we simply find such that the something could also be thought without it. Rather, something is *in* itself the other of itself, and in the other the limit of the something becomes objective for it (*Enz.*, § 92, Zus., p. 198; 2010b, p. 148).

The nature of the *tode ti* is such that, as something, it is not simply facing the other in an indifferent way.

Let us disregard the fact that the something-other dialectic gives rise to what Hegel called "bad infinity," thus proceeding to another figure, and take a look at a second example, that of "the thing and its properties." "The concretely existent something is thus a thing" (*WdL*, *GW* 11, p. 327; 2010a, p. 423), writes Hegel. Here, the term of reference is no longer Aristotle, but Kant, namely the concept of thing in itself. Hegel considers two conceptions. The first, which is directly related to the example just examined, is that the thing consists of its properties. Insofar as the thing does not distinguish itself from its properties but has them in itself, it is determined and concrete. Its properties "are, first, its determinate references [*Beziehungen*] to *something other*" (*WdL*, *GW* 11, p. 330; 2010a, p. 426). Through its properties, the thing can indeed become cause, that is, it can produce this or that in an other. As when honey, which is sweet, produces a certain flavor in those who eat it. However, Hegel points out that the thing exists only because it has some properties, but it exhibits them in relation to other things. This is evident when looking at the various colors, while it is clear that, if all objects were of the same color, this would not be an element of distinction. It is always through its properties that a thing distinguishes itself from other things and also has a mutual relation with them. Without properties, it remains the thing in itself in its abstractness (cf. *WdL*, *GW* 11, p. 333; 2010a, p. 429; cf. also Carlson 2007, pp. 353–354).

A contrary view is that the thing is something else with respect to its properties. According to this second conception, the properties are considered as independent elements—Hegel calls them "matters"—of which the thing is an extrinsic connection (cf. *Enz.*, §§ 126–127; 2010b, pp. 193–195). The properties/matters lose their relational character. "The thing consists of self-subsistent matters indifferent to the connection [*Beziehung*] they have in the thing" (*WdL*, *GW* 11, p. 335; 2010a, p. 432). This connection is unessential; the difference of one thing from another depends on whether and in what amount matters are present in them. The fact that the matters belong to a certain thing is no restriction for them, because every property is a universal that can belong to several things. The matters only admit a quantitative limit, in the sense that a thing consists of a determinate quantity of them. "The thing as *this* is just their merely quantitative connection, a mere collection, their 'also'" (*WdL*, *GW* 11, p. 336; 2010a, p. 432).

The science that inspires such a conception is chemistry (cf. *WdL*, *GW* 11, p. 334; 2010a, p. 430; *Enz.*, § 126, Zus., p. 257; 2010b, p. 194). Now, a thing as mere collection of matters dissolves: it is "porous," since their matters can circulate in or out of it. It follows that such a thing, which is just an external collection of selfsubsisting matters, is absolutely alterable. And it follows also—expressed in a form that is intentionally contradictory but explains well Hegel's thought—that

> the thing is only the "also"; it consists only of this externality. But it consists also of its matters, and not just the abstract "this" as such but the "*this*" *thing whole* is the dissolution of itself (*WdL*, *GW* 11, p. 336; 2010a, p. 433).

The contradiction reached is symptomatic of the inadequacy of the conception of the thing presented. Later on Hegel writes:

> This is contradictory. But the thing is nothing else but this contradiction itself; that is why it is appearance (*WdL*, *GW* 11, p. 339; 2010a, p. 436).

Again, we will not follow Hegel in his progression to another figure, namely that of appearance, but note that relation cannot be absolutely excluded from the concept of thing, even when this is conceived as an extrinsic collection of matters. Since the thing is not only the "also" of the matters, Hegel argues, but equally their negative relation,[24] we have to accept that "[t]he thing is, therefore, the connecting relation [*Beziehung*] of the matters of which it consists to each other" (*WdL*, *GW* 11, p. 337; 2010a, p. 433).

A contemporary statement of the thesis according to which properties are universals connected by means of an extrinsic nexus, is to be found in Gustav Bergmann, who postulates entities as bare particulars, to which properties belong. It is obvious that, without properties, bare particulars are indistinguishable from each other, though they are numerically distinct (cf. Bergmann 1967, pp. 4 ff.).

Another example that could be cited and presents several similarities with the one just examined is the relation between substance and accident (cf. *WdL*, *GW* 11, pp. 394–396; 2010a, pp. 490–492; *Enz.*, §§ 150–152; 2010b, pp. 223–225). In this case, Hegel speaks of the substance as the totality of the accidents and, vice versa, of the accidentality as coinciding with the whole substance. From the examples examined, it is clear that things are not understood by Hegel as being independent and separate from each other; on the contrary, they enter into mutual relationships, they determine each other and, hence, do not entirely have an own identity in themselves. Properties and qualitative limits refer to relations with the otherness, that is, with other things. The things come into mutual relationship through their properties.

Hegel speaks about relations with the otherness as being constitutive of things in some pages of the "Doctrine of Essence," specifically in the chapter on the determinations of reflection.[25] From this chapter—I will mainly refer to that in the *Encyclopedia*—it is possible to extrapolate a discourse, which revolves around the pivotal idea that the concrete is the "*reference* [*Beziehung*] *that connects* simple identity with *a* manifold which is *different* from it" (*WdL*, *GW* 11, p. 263; 2010a, p. 359). Hegel deals with identity in the distinction and opposition in the relation, and states that each thing is itself and its other. He distinguishes two main senses of identity: the identity that excludes distinction is abstract (cf. *Enz*., § 115, Zus.; 2010b, p. 178), while the identity in the distinction—that is, the identity which is also relation—is concrete (cf. *Enz*., § 116, Zus.; § 118, Zus.; 2010b, pp. 180, 182). The determined distinction—as we have seen in the example of something and an other—is constitutive of the identity (cf. Drüe *et al*. 2000, p. 112). Hegel understands the distinction—when it does not simply concern disparate terms like a pen and a camel—as a relationship between two opposite terms such as positive and negative, something and its other. In the distinction, "what is differentiated does not have an *other in general* but instead has *its* other opposite it. That is to say, each has its own determination only in its relation to the other, is only reflected in itself insofar as it is reflected in the other and the same holds for the other. Each is thus the other's *own* other" (*Enz*., § 119, p. 243; 2010b, p. 183). That is why Hegel can write that "[p]ositive and negative are thus essentially conditioned by one another and only are [what they are] in their relation to one another" (*Enz*., § 119, Zus. 1, p. 245; 2010b, p. 184). This means, again, that, "[i]n the opposition, what is differentiated has not only *an* other but *its* other opposite it." We usually tend to consider different things as indifferent in comparison to each other. Instead—Hegel writes in one of his rare examples—"one says: I am a human being, and around me are air, water, animals, and other things generally" (*Enz*., § 119, Zus. 1, p. 246; 2010b, p. 185). All of this must not be considered separate, as if each thing were indifferent to everything else; on the contrary, the necessity of their being related has to be shown—if indeed we want to understand things as they are. This understanding is difficult because what we perceive is never the whole, since there is always a part that is not perceived, that is underneath what is perceived and supports it. For instance, when I look at the tree that I may see from my window, I perceive the tree, but I do not perceive the air, the water that is found in the earth, the microorganisms in it, all the components that make possible the existence of the tree and contribute to building its identity, in the sense that the tree exists only if such a plurality exists. Therefore, Hegel can say in his language that "everything is opposed," because nothing exists separately; all that exists, is real, and hence it is different and opposite, in the sense of its being in relationship (cf. *Enz*., § 119, Zus. 2, p. 246; 2010b, p. 185).

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[24] The negative relation is the "puncticity" (*Punctualität*) of the thing, that is, the interpenetration, or intersection, of the matters with one another (cf. Carlson 2007, p. 358).

[25] Referring to these pages of the logic of reflection, Theunissen (1978, pp. 27 ff.) speaks about "Kritik der Verselbständigung."

If we briefly recall Black's argument of the two spheres, a striking difference with the Hegelian discourse becomes evident: for Hegel, it is essential what Black disregards, that is, the constitutive import of relations. It is in virtue of the defining value of relations that one keeps the dialectic between identity and properties, that same dialectic which permits an ecological-political application.

4. Aristotle proposes a concept of vertical identity, while Hegel elaborates instead a notion of horizontal identity, in which he tends to dissolve verticality. Aristotle, however, seems to be open to horizontality when he looks for a principle that applies to the identity of individuals (consider in fact what has been said about the example of the house). Nevertheless, it seems to me that it is not impossible to combine horizontality and verticality. In fact from what I have said, it follows (1) that the relations with its otherness are not completely extrinsic to an object, but are constitutive of its identity, in the sense that they are the necessary conditions for its being and identity; (2) that such relations require a plurality of objects and (3) that there can only be a plurality of objects relative to a context, or rather, such a plurality determines a context. By "context," I intend not so much the "phenomenological context"—that is the actual spatio-temporal context in which an object exists from time to time—as the context

resulting from the relations that the object entertains on the basis of its properties, and which I call "dialectical context." This is made up by a network of objects, not necessarily perceptible or belonging to the phenomenological context, to which a certain object (the initial one) is related, and accounts for the fact that it exists and is the way it is; eventually, we end up defining a constellation of objects, which all contribute to shape the identity of the object we set out to describe.[26] Therefore, different objects, situated in the same phenomenological context, may be associated with different dialectical contexts.

This ontological model applies to living beings (animals and plants): a living, real, concrete, not abstract tree needs for survival all Empedocles' four elements (water, air, earth, and fire). But then, it is difficult to consider it a separate and autonomous individual: it is more relevant to consider it an entity, whose identity is defined by the continuity of reactions and relations it has with other objects of the phenomenological context (the spatio-temporal context in which the plant actually lives) and the dialectical context, namely the network of objects like salts present in the earth or the carbon dioxide in the air, but also the sunlight and water, whose existence is a necessary condition for the life of the tree. A dead tree is not a tree, but wood for burning or with which to make paper, furniture or doors. Moreover, if we turn our attention to the process of chlorophyll photosynthesis and to the fact that plants are at the bottom of nearly all food chains on the planet, it becomes difficult to consider a man as a separate and autonomous individual, because man too needs not only all Empedocles' elements, but much more, the existence of which is essential for him to exist.

This ontological model also holds for technological artefacts. For example, a mobile telephone is what it is because of a cell phone company, a set of aerials, relay stations, a satellite, telephone switches, transmitting stations, mobile networks, and electromagnetic waves. Without such entities, it would not be a mobile phone, since it would not work as one. All artefacts refer to the dialectical context constituted by the beings which are involved in their production and—in the case of technological artefacts—by those allowing them to operate. And it holds for social objects (promises, contracts, laws, marriages), which require at the very least the presence of two or more persons performing an act (perhaps a tacit one), that is recorded, or "inscribed," on a material support.[27] Finally, it holds for the objects of our historical world, the facts, the propositions that describe them, the testimonies, and even for lies (cf. Raspa 2013).

As I said before, different objects (like a man and a mobile phone), situated in the same phenomenological context (in the same room), may be associated with different dialectical contexts, that is, with different pluralities of items with which each of them is in relation and which make possible their being, respectively, a man and a mobile phone. If we decide to call the object together with its context "totality" (but it would perhaps be better to use the expression "portion of the world," to avoid confusion with Hegel's absolute), then it follows (4) that an object, in accordance with its properties, entertains relationships with other objects and identifies a portion of the world. (5) The latter results from the combination of Aristotelian verticality and Hegelian horizontality.

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[26] I have dealt with this issue in Raspa (2008 and 2013, pp. 124 ff.).

[27] I assume here the definition of social objects given by Ferraris (2009, pp. 176, 183–184 and *passim*); cf. also Ferraris (2005, pp. 154 ff.). For more details on the idea outlined here in relation to social objects, cf. Raspa (2012).

Let us return to an example given previously. An object, since it possesses certain properties, can enter into relationships with other objects. Obviously, these relations will be more characterizing if they are moving from essential properties. A man, as a two-footed terrestrial animal, needs water, air, sun, earth, plants, and animals—as do other animals too. It is a proprium of man—says Aristotle—to be able to acquire knowledge; or, to take another example, it is peculiar of man, according to Marx and Engels, to produce their means of subsistence, new needs and therefore new objects.[28] Hence, a set of relations of man with the world arises which—aside from Empedocles' requirements which are common to all animals—precisely through knowledge, or production (of means of subsistence, needs and objects), also determines the identity of man.[29]

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[28] "Men can be distinguished from animals by consciousness, by religion or anything else you like. They themselves begin to distinguish themselves from animals as soon as they begin to produce their means of subsistence, a step which is conditioned by their physical organisation. By producing their means of subsistence, men are indirectly producing their actual material life" (Marx & Engels [1845–1846]/1958, p. 21; 1998, p. 37). "The second point is that the satisfaction of the first need (the action of satisfying, and the instrument of satisfaction which has been acquired) leads to new needs; and this production of new needs is the first historical act" (Marx & Engels [1845–1846]/1958, p. 28; 1998, p. 48).

[29] This is a revised and enlarged version of my essay "Che cosa fa di una cosa quella cosa. Aristotele e Hegel sull'identità," published in Azzarà, S. G., Ercolani, P. & Susca, E. (Eds.). *Dialettica*, *storia*, *conflitto*: *il proprio tempo appreso nel pensiero* (pp. 73–93). Napoli: La scuola di Pitagora, 2011. Versions of this essay have been presented at the International Congress *Identity*: *Ontological Perspectives* (Amsterdam, 25th–27th May 2005), in a seminar held at the Department of Philosophy at the University of Turin on December 13, 2005, at the International Congress *Metaphysics Today between a priori and a posteriori* (Alghero, 8th–9th October 2010) and at the International Congress *Dialectic*, *History and Conflict. The own Time grasped in Thought* (Urbino, 18th–20th November 2011). Many thanks to those who intervened with questions and critical comments; a special thanks to Italo Cubeddu and Silvio Bozzi, who read and discussed with me this paper, and to Angus Dawson, for his help with translations.

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