

# A PLACE FOR ARTIFACTS

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**Abstract:** In this paper, I show how it is possible to allow for the existence of artifacts within a neo-Aristotelian conceptual framework. In order to do this, I show the main features of the mainstream Quinean approach to ontology, I then expose the main features of the neo-Aristotelian metaphysics and introduce some key notions such as sortal concepts and criteria of identity, and finally, I propose a criterion of identity for artifacts based on Evnine's doctrine of amorphism. I also propose a solution to a possible objection to amorphism.

**Key Words:** Artifacts; Ontology; neo-Aristotelian Metaphysics; Criteria of Identity; Amorphism.

## *1. Introduction*

In this paper, I show how a neo-Aristotelian approach to ontology constitutes a theoretical background well suited for the formulation of a plausible metaphysics of artifacts. In order to do so, in the second section, I introduce the main features of the dominant approach to ontology, namely Quinean metaontology. In the third section, I expose the main characteristics of the neo-Aristotelian metaphysics and I outline the main differences with the received view. I stress how the neo-Aristotelian, unlike the Quinean, sees reality as structured and constituted of different layers with substances at the base grounding the identities of all the other sorts of things. In the third section, I introduce the notion of a sortal concept and I show how such concepts have associated with them criteria of identity, metaphysical principles that determine in what the identity under a sortal consists of. I argue that criteria of identity can be seen as revealing the identity-dependence of the kinds of objects for which the criterion is formulated. In the final section, I show how, employing Evnine's theory of artifacts, it is possible to formulate a criterion of identity for artifacts according to which the identity conditions for such objects are stated in terms of creative acts. I finally try to provide a solution to a possible objection to Evnine's theory. The main aim of the paper is to show how a neo-Aristotelian approach to ontology, as opposed to the Quinean one, can provide the conceptual resources needed in order to understand the dependent nature of artifacts.

## 2. *The received view: Quinean metaontology*<sup>1</sup>

According to Quine, the goal of ontology is to answer the question “what is there?” and the answer to such question is very easy: “everything” (Quine 1948: 21). The Quinean approach to ontology is nowadays considered the received view and the one that most of the philosophers working in the analytic tradition endorse. Even though the spreading of Quine’s theses represented a renewal of interest towards metaphysics after its decline during the neo-positivist period, this should not lead us to think that Quine was an enthusiastic defender of traditional metaphysics. Quite the opposite! He believed that the traditional metaphysical debates were senseless and that because of that it was perfectly fine to completely redefine the scope and methods of the discipline.

Quinean metaontology, namely the rules of the ontological game according to Quine, comprehends a series of principles. The first principle is the idea that ontological questions are indeed quantificational ones. Are there numbers? Are there universals? Are there possible worlds? According to Quine metaontological principles, the general form common to the just reported questions is the following:  $\exists x (Fx)$ ? Where ‘F’ stands for a generic kind of entity. Quine follows Frege and Russell in believing that the existential quantifier adequately expresses existence. Our general form of the ontological questions mentioned in the previous lines could equivalently be rephrased as ‘Do Fs exist?’. Existence in these terms is not a first-order property of objects, but rather a property of properties.<sup>2</sup> This does not mean that by saying that Fs exist we are claiming the existence of the property of *being F*, but rather that such property is instantiated<sup>3</sup> (of course by existent objects). I don’t have space here to discuss this matter, but I don’t find this move entirely convincing and I believe that the Meinongian has some reasons protesting against the Quinean on this point, especially when singular negative existential statements are taken into consideration.

The second principle of the Quinean metaontology consists in the thesis that everything exists (Quine 1948: 4). This might appear as an odd claim. It is just not true that the Sasquatch<sup>4</sup> exists. What Quine means by saying that everything exists is that existence is a logical property, namely a maximally general property that everything must have (Giaretta e Spolaore 2011: 11). ‘Everything’ here is taken as quantifying over the totality of the existents and when we claim ‘the Sasquatch does not exist’, we are saying, according to Quine, that there is nothing

<sup>1</sup> For an extended exposition of this topic see Berto and Plebani (2015: chs. 1-3).

<sup>2</sup> Indeed Quine does not accept the existence of properties. The only things that exist are the objects constituting the domain of quantification, that is the ontology. Everything else is ideology. Predicates, on this view, do not refer to properties.

<sup>3</sup> As Berto (2012: 27) correctly points out, existence is not exactly identified with quantification in the Frege-Russell account, but it is rather explained away.

<sup>4</sup> Also known as Bigfoot, a large, hairy, humanlike creature believed by some people to exist in the northwestern United States and western Canada.

identical with the Sasquatch. The Sasquatch then, according to this view, is not something, but it is nothing. By taking the domain of quantification to be constituted by all and only the existents, 'Everything exists' must of course be true. Furthermore, Quine analyzes existence in terms of the logical notions of identity and quantification. So, *to be* is equivalent to *being identical with something* and since everything is self-identical, everything exists. Furthermore, if 'Everything exists' is true, 'Something does not exist' must be false since each statement is the negation of the other. Another important point to be stressed regarding the Quinean approach is that *being* turns out to be a univocal notion in virtue of its strict connection with the concept of number. As van Inwagen (1998: 17) points out, there is a close relation between being/existence and number. To claim that horses exist is to claim that the number of horses is greater than zero and to say that werewolves do not exist is to say that the number of werewolves is zero. According to van Inwagen, given the univocity of number and its strict relation with that of being/existence we can infer the univocity of the notion of existence.

The third principle of the Quinean metaontology is the criterion to establish the ontological commitments of a given theory and it can be synthesized with the motto "to be is to be the value of a variable". According to Quine, a theory is ontologically committed to a certain kind of entity, let say the Fs, if it explicitly contains the statement 'There are Fs' or if it can be derived logically from other statements of the theory (Quine 1948: 9). In order to discover the ontological commitments of a theory then, we need to translate it into the language of first-order logic, and then we need to find out the quantified statements implied by the theory. These will express the ontological commitments. According to Quine, we need to admit in our ontology all and only the entities that must be included in the domain of quantification in order to make the quantified statements true.

The method outlined in the lines above is to be applied, according to Quine, to our best theories about reality, namely, scientific theories (Quine 1981). This makes Quine an adept of the doctrine of naturalism, the position according to which we should admit the existence of all and only the entities postulated by science. Ontology can be seen as concerned with the task of making explicit the ontological commitments of our best theories in the way just showed, namely by translating them in the language of first-order logic and determining what the domain of quantification must contain for such theories to be true. What if the best theories are at odds with our common sense? Then too bad for common sense! The Quinean approach to ontology is revisionary in nature.

Nowadays many philosophers accept the Quinean metaontology and when arguing for the existence of a given kind of entity, they try to show that our best theories unavoidably quantify over such objects. This, as Lowe (1998: 34) points out, is a semantic approach to ontology. We start from language and get an ontology out of it. Analogously to the Fregean strategy of defining an object as

the referent of a singular term, Quine takes objects to be the possible values of a bound variable. Should we then accept the existence of whatever turns out we need to admit for our best theories to be true? Not exactly. Quine poses some restrictions and these can be summarized by the motto “no entity without identity”. The idea is that whatever we accept in our ontology, should have clear criteria of identity. What if one of our best theories quantifies over problematic entities? We have different options: we can reject the theory, we can bite the bullet, or we can try to find some eliminative paraphrase that shows how commitment to the problematic entities is dispensable.<sup>5</sup>

When talking about identity conditions, it seems to me, we are moving from a purely semantic level to a more genuinely metaphysical one. The resulting view though is not ideal either. If following Lowe (1998: 29), we take ‘object’ to mean ‘entity with determinate identity conditions’, it follows from the Quinean approach that only objects exist. In this way, to exist/be would be equivalent to being an object. But this means that we condemn to non-existence a variety of entities that, not having clear identity conditions, do not satisfy the requirements to be considered objects. We should conclude then that properties do not exist, as well as meanings or other kinds of entities to which we usually refer to and quantify over in everyday talk. Of course, a Quinean would not take this as a *reductio* since her approach is reformative by its nature. I think though that in doing metaphysics one should always try to save as many pre-theoretic intuitions as possible. Of course, our intuitions are sometimes incoherent and confused, but I believe that the correct approach is that of trying to reinterpret and systematize them. From this point of view, I feel more sympathetic towards an Aristotelian approach that takes experience as the starting point of philosophy, as the *datum* that has to be explained. From this perspective, the apparent inconsistencies in our experience are what stimulates philosophical reflection.

### 3. *A neo-Aristotelian approach*

Nowadays, even though the Quinean metaontology is still dominating, there has been a resurgence of Aristotelian approaches to metaphysics.<sup>6</sup> From this perspective, what is central in ontology is not to answer existential questions like “Are there numbers?” or “Are there properties?”, but rather to articulate the

<sup>5</sup> As Yablo (2001, p.72) points out, fictionalism adds an additional voice to what he calls the Quinean menu, namely we can maintain our talk about problematic entities, but take it with a different attitude. This means take the statements involving our problematic entities in a non-letteral way.

<sup>6</sup> We can find this renewed interest in the Aristotelian approach to metaphysics in authors such as, David Wiggins, Jonathan Lowe, and Kit Fine. I believe though that the initial input was given by Saul Kripke and its work in modal logic that, somehow, rehabilitated the notion of essence (even though understood in purely modal terms).

structure of reality.<sup>7</sup> The Aristotelian sees reality as hierarchically structured and constituted of different levels. The real interesting question in an Aristotelian account of, let us say, properties, is not whether these entities exist or not, but what position they occupy in the hierarchy of being. This philosophical approach seems better suited than the Quinean one to accommodate our pre-theoretical intuitions. At the same time though, someone might worry that it could lead to the acceptance of an overpopulated ontology. Is this worry justified? From a Quinean perspective, the domain of quantification that contains the objects to which our best theories are committed is flat (Schaffer 2009: 354). So, any kind of object is on a par with all the others, and admitting the existence of one more kind of things, just means expanding the ontology. As I have already pointed out, from an Aristotelian standpoint, reality is not flat, but structured. There are different levels and each one is grounded in the ones underneath. At the bottom, we find substances, namely concrete objects. Everything else is in some way dependent on substances.<sup>8</sup> From this perspective, matters of ontological parsimony are important at the level of substances, but not at the higher ones. We don't need to be parsimonious regarding non-substantial entities as long as we are capable of showing how these are related to the deepest strata of reality.

What about identity conditions though? One might think that, even in the Aristotelian approach, the Quinean motto "No entity without identity" still holds. But this is not the case. As Lowe (1998: 38) writes «Not everything is a thing» and I agree with him. 'Thing' here is to be taken as equivalent to 'object' whereas the quantifier 'everything' ranges over a domain not entirely constituted of objects, namely, containing also entities not possessing clear identity conditions. Such entities would be those belonging to the Aristotelian categories other than substances such as, for instance, properties and relations that characterize substances and that depend for their existence upon them. This does not mean that the only things that depend on substances are the non-substantial entities, but, as I will try to show, dependence is a relation holding among objects as well. By this, I mean that there are kinds of objects that depend upon other kinds of objects and, consequently, that some kinds are more basic than others. We could then stipulate that among the objects, those more basic are the substances, the entities upon which every other entity depends but that do not depend upon anything else. This claim might be puzzling, in what sense substances, namely concrete objects, are not dependent upon anything else? As I will specify in the following

<sup>7</sup> From a neo-Aristotelian perspective, the commonly accepted distinction between ontology and metaphysics is not particularly relevant. For the neo-Aristotelian, the acceptance of a kind of entity depends upon the possibility of showing what position such entities occupy in the hierarchy of reality. Hence you cannot decide whether a certain kind of entities exist before knowing what such entities are.

<sup>8</sup> It is worth to specify that not all those who accept this way of conceiving ontology agree on the idea that there is a basic grounding level.

paragraphs, I take identity-dependence as the central relation to consider when trying to determine the structure of reality.

### 3. Sortals

From an Aristotelian perspective, reality is not flat but structured, beings are not all on the same level. This structure, I believe, is manifested in the relations of dependence holding between the various kinds of entities present at the different levels. As I claimed in the previous paragraphs, I take objects to be entities with clear identity conditions and substances as basic objects. This means, as we will see, that substances are directly or indirectly involved in the determination of the identity conditions of all the other objects. A notion strictly connected with that of an object is that of a sortal concept. A sortal concept, when truly predicated of a subject, tells us what the subject is. An example is the property expressed by the predicate ‘being a human being’, when (truly) predicated of Socrates it tells us what kind of being Socrates is. On the other hand, the predicate ‘being white’ does not tell us what Socrates is, but rather how he is. If we asked the question “What is Socrates?”, “white” would not be an acceptable answer. Furthermore, it seems plausible that Socrates might continue to exist even without being white, but not without being human. When Socrates loses his humanity, he ceases to exist; this means that his humanity determines, or at least contributes to determine his existence conditions.

The distinction between sortal concepts and attributes can be traced back to Aristotle’s *Categories*. There we find the distinction between what is *said of* and what is *in* a primary substance. To maintain our original example, humanity is *said of* Socrates whereas whiteness is *in* Socrates. We can, alternatively, call the first mode of predication essential and the second accidental. The idea is that a true substantial predication expresses what the subject is, whereas the accidental predication expresses a way of being of a primary substance. For a substance, it is necessary to fall under the sortal that it instantiates, or better, it is necessary to fall under the substantial sortal that it instantiates. This means that if the substance *s* falls under the substantial sortal *K*, then *s* must be *K* at every time at which it exists. If there is a time *t+1* at which *s* is not *K*, then *s* does not exist at *t+1*. As Wiggins (2001: 30) has shown, some sortals are not substantial like *being a child*. A human being can cease to be a child without falling out of existence. Wiggins calls sortals like these, phasals. There are also compounds sortals like ‘white man’, here though we don’t need to accept the existence of a property *being a white man*, but only of a sortal predicate the conditions of application of which involve the sortal concept *being a man* and the attribute *white*. Anyway, the fact that a substance instantiates a phasal sortal, presupposes that that same substance instantiates a substantial sortal: for every *t*, if something is a child at *t*, then it is a human being at *t*.

Substances are usually referred to through singular terms and are never *said off/in* anything. Primary substances, namely concrete individuals, are never *said of* anything. Secondary substances, namely the kinds and species, are *said of* primary substances. Here though we need to distinguish different levels: we can say of Socrates that he is a human being, but we can also say of the human being that it is an animal. So there are sortals that can only be predicated of individuals and sortals that can be predicated both of individuals and other sortals. If we predicate a sortal  $K$  of another sortal  $K_1$  (with truth) and  $K_1$  can only be predicated of individuals, then every individual falling under  $K_1$ , also falls under  $K$ . Furthermore, when a substantial sortal is predicated of a substance like in the statement ‘Socrates is a human being’, we can substitute the occurrence of the sortal predicate with its definition *salva veritate*. So, if the definition of ‘Human being’ is ‘Rational animal’, we can substitute the former with the latter and obtain ‘Socrates is a rational animal’ which is a true statement. In general, if ‘ $s$ ’ is a singular term referring to a substance, ‘ $K$ ’ a substantial sortal predicate and ‘ $\varphi$ ’ the definition of ‘ $K$ ’, then ‘ $s$  is  $K$ ’ is true if and only if ‘ $s$  is  $\varphi$ ’ is. In other words, in a true substantial predication, the definition of the predicate is always truthfully predicable of the subject. The same does not hold for accidental predication. First of all, the grammatical subject does not satisfy necessarily all the predicates satisfied by the predicate. Let us consider ‘Socrates is white’ and ‘White is a color’, from these two statements we cannot infer that Socrates is a color and, since the definition of white will refer to the notion of color, Socrates will not satisfy the definition of ‘white’ either. What about Socrates’ whiteness? It cannot be a substance since it is *in* Socrates, but it is white and also satisfies the definition of ‘white’, is then ‘Socrates’ whiteness is white’ a substantial predication? The answer is “no”, since both Socrates’ whiteness and whiteness are *in* Socrates. Primary substances are never said of anything, secondary substances are only *said of* substances, individual properties (e.g. Socrates’ whiteness) are only said *in* and universal properties are said both *in* and *of*.

Kathrin Koslicki (2018: 140) takes the two modes of predication mentioned in the previous lines as indicating two varieties of ontological dependence. She takes the fact that primary substances are always the subject in a sentence and never the predicate as a sign of their ontological priority. The general principle here seems to be that what is predicated is dependent on what is the subject of the predication. Since substances are never predicated, they must be somehow basic. I am not completely sure that it is correct to read in the modes of predication that Aristotle distinguishes in the *Categories* a distinction in the way in which secondary substances and attributes depend on the primary substances, but I am not unsympathetic either towards the idea that somehow language reproduces in its structure some aspects of the extra-linguistic reality and I think this is a conviction that could be attributed to Aristotle as well. As Christopher Shields (2007: 148) points out, Aristotle in the *Categories* is interested in the features of

language as long as these can tell us something about the nature of the reality represented by it. Following Lowe (2009; 2006), from the analysis of predication that we find in the *Categories*, it is possible to extract a general ontological framework according to which there are four main ontological categories: individuals, kinds, individual attributes, and universal attributes.

The category of individuals in Lowe's system is not to be confused with that of primary substances though. It is important to keep in mind that objects are entities with clear identity conditions but this is not sufficient to catalog them as substances. As I have already said, objects are individuals falling under a sortal concept and, even though all substances are objects, the converse does not hold. In a neo-Aristotelian perspective, different kinds of objects can occupy different positions in the hierarchy of reality. Substances are the basic objects, those that occupy the fundamental level.

### 3.1 *Criteria of Identity*

A typical feature of sortal concepts is that of having associated with them a criterion of identity for the entities falling under them. A criterion of identity, in the sense that I consider here, is a metaphysical principle establishing what it is for two entities of a given kind to be identical.<sup>9</sup> The notion of a criterion of identity was introduced by Frege in the *Grundlagen* (1884: sec. 62) where he prescribes to associate to the introduction of a singular term, say 'a', a criterion of identity, namely a method that permits to decide whether a is identical with b or not. More precisely, where 'a' and 'b' are singular terms and 'K' a sortal predicate, a criterion of identity is a principle that establishes the conditions under which the statement 'Ka & Kb & a = b' is true. According to the metaphysical reading, criteria of identity are metaphysical principles that determine what the identity of two objects under a sortal consists in. They are not epistemic principles that we use to determine the truth value of an identity statement.<sup>10</sup>

A criterion of identity for Ks can be formulated as follows:

C.I.K: *If K(x) and K(y), then  $x = y$  iff C.*

C here stands for a sufficient and necessary condition for the identity of objects falling under K. A classic example of a criterion of identity is the well-known principle of extensionality for sets:

<sup>9</sup> Besides the metaphysical one, there are also epistemic e semantic ways of understanding a criterion of identity (see Carrara and De Florio, 2018).

<sup>10</sup> Criteria of identity are not to be taken as definitions of the notion of identity. Such notion seems to be too basic to be defined (see Noonan and Curtis (2018)).

(PE) If  $x$  is a set and  $y$  is a set, then  $x = y$  iff every element of  $x$  is an element of  $y$  and *vice versa*.

C here is the condition that we find at the right end of the biconditional, namely co-extensionality. If two sets have the same members, they are identical and if they are identical, they have the same members. This explains why, for instance, there is only one void set. Condition C is constituted by an equivalence relation involving objects of the same kind over which the criterion quantifies. In (PE), for instance, the relation is *having the same members*. Of course, identity is an equivalence relation as well, but an identity criterion that states that two sets are identical when they are identical would be completely useless and uninformative.<sup>11</sup>

A common distinction found in the literature is that, introduced by Williamson (1990: 145), between one-level and two-level criteria of identity or, as Fine (2016: 2) calls them, direct and indirect criteria. A one-level criterion of identity is something like (PE) in which the quantifiers range over entities of the same kind for which the criterion is formulated. A two-level criterion of identity quantifies over objects of a different kind from those for which the criterion is formulated and refers to these through functional terms. The arguments of the functions are objects of the kind over which the criterion quantifies and condition C is formulated in terms of an equivalence relation holding between objects of this same kind. A classic example is Frege's criterion of identity for directions:

$$(D) \forall x \forall y ((\text{Line}(x) \ \& \ \text{Line}(y)) \rightarrow (dx = dy \leftrightarrow x/y))$$

Here the criterion of identity for directions is formulated in terms of the relation of parallelism between lines. The criterion explicitly quantifies over lines and refers to directions by means of the functional sign 'dx', namely, the direction of  $x$ . So the identity of directions is to be understood in terms of parallelism between lines.

I will now turn to a matter that I think is related to the topic of criteria of identity. It seems plausible to me that in two-level criteria of identity it is explicitly expressed a relation of ontological dependency of the kind of entities for which the criterion is formulated from those over which the criterion quantifies. So, considering (D), the fact that the identity conditions for directions are expressed in terms of parallelism between lines is an indication that directions ontologically depend on lines. This might be thought to be true in general of what is designated by means of functional signs and their argument. Take for instance

<sup>11</sup> This does not mean that identity should never appear in C, but simply that C should be a condition that informatively determines what it means for two instances of a sortal K to be identical. This does not exclude that the identity conditions of two instances of a given sortal K could be specified in terms of identity of instances of a different sortal K1.

Socrates' whiteness, the particular instance of white that Socrates has is, in fact, dependent upon Socrates and this is represented in the way in which we refer to it. I would be careful though in taking this linguistic fact as a secure indication of a relation of ontological dependence. After all, I can refer to anything as the object of my thought, but this does not make what I think about dependent on me in any way. Let us suppose that I am thinking about the Moon, since the Moon is the object of my thought should I conclude that it depends ontologically on me? Such a conclusion would be absurd! The thought itself would depend on me, not the object represented in it.

Even though a functional way of referring to something is not always to be taken as an indicator of a relation of ontological dependence between the argument of the function and its value, it seems to me that in the case of two-level criteria of identity this assumption might hold. In general, it seems to me that when a functional way of referring to an object is somehow revealing of its essence, we can conclude that there is a dependence of the value of the function from its argument. In other words, when it is essential for an object to be the something of something else, the object in question ontologically depends upon the "something else", namely, the argument of the function. From this point of view, two-level criteria of identity can be seen as metaphysical principles that express explicitly the relation of ontological dependence between kinds of objects.

I borrow here Lowe's (2013: 193) notion of essential identity-dependence<sup>12</sup> which I believe is the kind of ontological dependence metaphysically more relevant for the comprehension of an entity's nature. According to Lowe, an object  $x$  essentially depends for its identity on an object  $y$  if and only if it is part of the nature of  $x$  that there is a function  $f$  such that  $x = f(y)$  (Lowe 2013: 194). Furthermore, which instance of its kind  $x$  is, is determined by which instance of its kind  $y$  is. In other words,  $y$  is the individuator of  $x$ .<sup>13</sup> This implies that for every  $x$  and  $y$ , if  $y$  is the individuator of  $x$ , then  $x$  essentially identity-dependes on  $y$ . As Lowe (2012: 217) points out, criteria of identity and principles of individuation are not the same thing, even though a principle of individuation for  $K$ s can provide a criterion of identity for  $K$ s, the converse does not necessarily hold. From the point of view that I exposed in the previous lines, namely that in the hierarchy of being substances occupy the most fundamental level, this might be problematic. Concrete particulars seem to be individuated by their matter, this would imply that it is possible to formulate a criterion of identity for such entities in terms of their matter, but this would imply that they depend for their identity upon it. Substances though are supposed to be ontologically independent and to ground the identities of all other entities. I don't have the space here to deal with such an

<sup>12</sup> See also Lowe (1998: 147).

<sup>13</sup> I intend here individuation in a metaphysical as opposed to cognitive sense (Lowe 2012: 214).

issue, but it seems to me that at the level of substances it is not possible to find non-circular identity criteria. This is because the identity of substances is somehow primitive. The matter of a given substance is designated functionally as the matter of *x* and this seems to me to indicate that the identity of that matter presupposes the identity of the substance of which it is matter.<sup>14</sup> Substances are not something of something else, the best way to show what they are, is to point at them. For my purposes here it suffices to take the identity of substances as primitive. In the next section, I will consider the case of artifacts and consider a way in which such entities can be taken to be objects depending for their identity on other more fundamental entities.

#### *4. Artifacts*

I now turn my attention to artifacts and how they can find a place in a neo-Aristotelian conception of reality. Despite what I have said in the previous paragraphs, the received view on artifacts is anti-realism (Carrara & Mingardo 2013: 358). This is mainly due to the work of David Wiggins (2001) which, from a neo-Aristotelian perspective, denies the existence of artifacts on the grounds that such entities would lack an internal principle of activity and hence clear identity conditions<sup>15</sup> (Carrara & Mingardo 2013: 360). The lack of clear identity conditions associated with artefactual kinds is due, according to Wiggins, to the fact that artefactual kinds are functional kinds (Carrara & Mingardo 2013: 359) and this means that the fact that a certain object belongs to a given kind, depends on it being able to perform a certain function. This makes artefactual kinds dependent on our minds and intentions and hence not real kinds, but just conventional ones. Artefactual kinds, according to Wiggins, are not substantial kinds because there are no clear identity criteria associated with them, and this, in turn, is due to their mind-dependency. I agree with Wiggins on the non-substantial nature of artifacts<sup>16</sup> and their mind-dependency as well, the point on which I disagree is their lack of identity conditions. According to the perspective that I presented in the previous paragraph, I believe that non-substantiality and mind-dependency are perfectly compatible with the possession of clear identity conditions as in the case of non-substantial objects. In the remainder of this paper, I will propose a formulation of a two-level identity criterion for artifacts based on Evnine's (2016) theory.

<sup>14</sup> On this point I agree with Oderberg (2007: 78).

<sup>15</sup> Another influential anti-realist position can be found in van Inwagen (1990).

<sup>16</sup> Indeed we might allow for the existence of substantial artefacts like plastic or genetically engineered organisms. I don't have the space here to deal with such particular cases and I will concentrate on common kinds of artifacts like pencils, chairs and screw drivers.

#### 4.1 Evinine's Amorphism

Evinine (2016) puts forward a theory that he calls amorphic hylomorphism (amorphism from hereon). Such theory has been developed with artifacts in mind as the paradigmatic case of objects with a hylomorphic structure and then extended to other kinds of entities like organisms. I don't believe that Evinine's theory is convincingly extendible beyond artifactual objects, but I will not be concerned with this issue here since the focus of this section is on artifacts. I will try to show how, adopting amorphism, it is possible to formulate two-level criteria of identity for artifacts. This will show how such entities are dependent for their identity on entities of a more fundamental kind and will determine their status as non-substantial objects.

Classical hylomorphism is the doctrine according to which concrete particulars are compounds of matter and form. Amorphism is a version of hylomorphism that abandons the notion of form and relies only on that of matter. According to Evinine (2016: 3), «some things stand in the relation of *being the matter of* to other things and this relation (the matter relation) is irreflexive and asymmetric». This means that where such relation is instantiated, there are at least two objects and nothing can be its own matter. Furthermore, any theory satisfying the condition just quoted can, according to Evinine, be considered hylomorphic. According to amorphism, artifacts are “ideal objects”, and this means that they are “the impression of mind on matter”. What an artifact is and its function(s) are aspects strictly related to the creative process that led to its existence. This process consists of the work done by the maker on a certain portion of matter with certain intentions in mind. On this view, artifacts are essentially the result of intentional work, and the act of creation that brings them into existence is essential for their identity.

In formulating his theory, Evinine takes inspiration from Aristotle which saw a connection between the doctrine of hylomorphism and that of the four causes. The four causes are the material, the formal, the efficient, and the final one. The first two are just the constituents of a hylomorphic compound, namely, matter and form and they account, respectively, for what a given thing is made of and what kind of thing it is. The efficient cause accounts for how a certain thing comes into existence and the final one for its purpose, what it is for. Evinine (2016: 8) points out how, according to Aristotle, formal, efficient, and final cause very often coincide. Amorphism conceives artifacts as objects non-identical with their matter but gets rid of the notion of form. As Evinine writes (2016: 12):

[...]hylomorphically complex entities are sui generis entities that have matter to which they are not identical, but there is no further component of them that plays the role of form. Such objects fall essentially under certain kinds and must be understood in terms of the kind-related processes of work on their (original) matter by which they come to exist.

An artifact then, from the amorphic point of view, is what it is not in virtue of some internal principle, but because it is the result of a certain intentional process. For instance, a chair is a chair because a certain individual worked on some matter, let say wood, with the intention of making a chair out of it, namely an object with a certain function and characteristics. The chair is what it is because of the intentions of its maker. Of course, the intention is not sufficient, the result of the process must be adequate. A shapeless piece of wood is not a chair even though someone worked it with the intention of making a chair.

An artifact *a* of a kind *K* with an associated function(s) *f* exists because of its maker, it is a *K* because its maker intended to make a *K* and has the function(s) *f* because *K*s have such function(s) associated to them. In other words, you cannot have the intention of making a *K* without wanting to create an object capable of performing the function(s) *f*. *a* is what it is because its maker worked the matter it was made out of with some specific intentions in mind. In this respect, we can say that *a* has not an internal nature determining the kind of thing it is, but its being what it is depends on something external to it, namely, the intentions of the maker. Furthermore, *a* is not just the kind of thing it is because of its maker, it also is the particular instance of such kind because of the relation it bears to its creator. *a* is essentially the result of a certain act of creation, it is the impression of its creator's mind on matter. This implies that *contra* Kripke (1980: 113-14), the wood out of which a chair was made is not essential to it, its maker could have made the same chair out of a different portion of wood.<sup>17</sup> What is essential to the chair is being the result of a specific act of creation.<sup>18</sup> In other words, the identity of the chair is determined by the identity of the act of creation that brought it into existence and this, in turn, depends for its identity upon the individual that performed it.

From what I have said so far we can draw some interesting conclusions. As we have seen, an artifact is necessarily the result of a specific act of creation. This act is essential for the identity of the artifact in the sense that it determines the kind to which the artifact belongs and its being the specific instance of that kind. Using Lowe's terminology, we can say that the artifact essentially identity-dependes upon the act of its creation since being the result of that specific act determines what instance of its kind the artifact is. So, if *a* is an artifact and *c* is the act by which *a* begun to exist, we can say that *a* is identical to the (intended) result of *c*. 'Being the result of *c*' is then the functional term that we can use to refer to our artifact *a*. Furthermore, *c* is, recalling what I said earlier in this paper, the individuator of *a* and this means that we can use the functional term 'Being

<sup>17</sup> Not necessarily out of a different material. If the intention had been that of making a wooden chair, the same chair could not had been made out of a portion of, let say, plastic.

<sup>18</sup> Evinne (2016 pp. 86-96) adopts a thesis which he calls "necessity of origin as act" distinct from Kripke's necessity of origin as matter.

the result of  $x$ ' to formulate a two-level criterion of identity for artifacts that quantifies over acts of creation. The criterion will quantify over acts of creation and refer to artifacts through the functional term 'Being the result of  $x$ '.

The two-level criterion of identity for artifacts I propose is the following:

$$(C.I.A) \forall x \forall y ((C(x) \ \& \ C(y)) \rightarrow (R(x) = R(y) \leftrightarrow x = y))^{19}$$

Here 'C(x)' stands for the predicate 'x is an act of creation' and 'R(x)' stands for the functional term 'being the (intentional) result of x'.<sup>20</sup> This criterion states that two artifacts are identical if and only if they are the result of the same act of creation. A problem though might beset the plausibility of what I am claiming. Aren't acts of creation a kind of event? Now, the time at which an event occurs is essential for its identity and this means that no two events can be numerically identical if they occur at different times. If acts of creation are events, this implies that they are subject to the same condition regarding the time of occurrence. But this means that if an artifact had been created a minute later than it was actually created, it would have been a different artifact. This seems an implausible conclusion.

A possible solution might consist in claiming that the relation between acts of creation and events is not identity but a kind of constitution. An act of creation is not identical with an event, but it is constituted by it and this would allow for some flexibility regarding its identity. In these terms, an act of creation could have occurred at a different time and hence be constituted of another event. What then does determine the identity of an act of creation? The solution advanced by Evnine and towards which I am sympathetic, consists in taking acts of creation as being identified by intentions. In these terms, an act of creation would be the expression of a creative intention and it would be dependent for its identity upon it. In these terms, an act of creation would be essentially the expression of a certain creative intention and it would be constituted by an event.

Another possible solution to the problem just considered might be that of maintaining the identity between creative acts and events, but changing the equivalence relation in the formulation of the identity criterion for artifacts. The relation that must hold between two creative acts for their products to be identical would not be identity, but the relation of *being the expression of the same creative intention*. Two artifacts would then be identical if and only if they are the result of creative acts that originated from the same creative intention. For this solution

<sup>19</sup> One could restate the criterion in a direct form in the following way:  $\forall x \forall y ((A(x) \ \& \ A(y)) \rightarrow (x = y \leftrightarrow \exists z (C(z) \ \& \ x = R(z) \ \& \ y = R(z))))$ . What is important is not whether the criterion of identity is one or two-level, but rather that the identity conditions of artifacts are stated in terms of acts of creation and that an artefact can be uniquely referred to by means of the functional term 'Being the result of x'.

<sup>20</sup> Rx is here intended as a function from creative acts to artifacts.

to work, it should be added that a creative intention is like a gun loaded with a single bullet, once the bullet is fired, there cannot be other shots. Similarly, once a creative intention is expressed by a creative act in a possible world, that act is the only expression of that intention in that world. This stipulation allows for some modal flexibility since the time of occurrence of a certain act of creation doesn't need to be the same in all possible worlds. So, the same artifact could be the result of acts of creation occurring at different times in different possible worlds as long as these are expressions of the same creative intention. On this view, intentions are individual, namely, no two makers can have numerically the same intention, but at most the same type-identical intentions. From this, it follows that acts of creation are essentially tied to the individuals that perform them. A certain act of creation  $a$  is essentially the expression of the creative intention of some individual  $s$ . From this, we can conclude that the result of  $a$ , say  $o$ , is essentially the result of  $a$  and consequently the impress on matter of  $s$ 's mind. From this, it follows that necessarily, for every  $x$ , if  $x$  made  $o$ , then  $x = s$ .

The identity dependence of an artifact upon its maker seems to follow from the transitivity of such relation. It seems quite plausible to assume that if  $a$  depends on  $b$  for its identity, then  $a$  depends on everything upon which  $b$  depends for its identity. In our case, an artifact depends for its identity on the act of its creation, the act of creation depends on the creative intention of which it is an expression and this depends on the individual whose intention it is. Hence, by the transitivity of the identity dependence, it follows that the artifact depends for its identity upon its maker. This is a welcomed consequence from the Aristotelian perspective that I have exposed in the previous section. Makers are human beings and human beings are substances, the denizens of the most fundamental level of reality. Again, from a neo-Aristotelian point of view, the goal of ontology is not just that of making a list of what there is, but rather that of showing if and how a given kind of entities is grounded in the fundamental level.

At this point, I would like to consider some possible issues for the amorphist account of artifacts. Are we sure that *being the result of  $x$*  is actually a function? In other words, are we sure that for any (successful) act of creation there is exactly one artifact that is the result of such act? And conversely, could not be the case that a certain artifact is the result of multiple creative acts? I will not be concerned with the first issue since Evnine (2016: 97-103) gives a plausible explanation of mass production. I will then focus on the second problem, namely, the case in which an artifact seems to be the result of multiple creative acts. I don't intend to consider the case in which I, for instance, decide what to make and how and then I call someone over to help me, in this situation the intention is mine and my helper is just an executor, the mind impressed in the matter would be mine and only mine. I think there are more puzzling cases. Consider for instance two sculptors that decide to create a sculpture together without any previous agreement besides that of accepting everything the other will come up with. They

start to work the clay and the final result is the sculpture *c*. The problem now is: what is *c*? Whose intention does it depend upon for its identity? Is this a counterexample to amorphism? Is *c* the result of two creative acts?<sup>21</sup>

I believe that a response to the possible objection just considered, might be that of recognizing that there are two creative acts involved, but that *c* is the result of neither of them. Rather, the two creative acts constitute a third one and it is of this one that *c* is the result. What about the identity of this composite creative act? Which intention is it the expression of? As I argued before, two distinct individuals cannot have numerically the same intention and the two sculptors in question have different intentions anyway. One possibility compatible with amorphism would be that of admitting that there isn't a single object *c* but rather two distinct co-located objects, one for each sculptor. Let us say *c*<sub>1</sub> and *c*<sub>2</sub>, *c*<sub>1</sub> is the impression on matter of sculptor *s*<sub>1</sub> and *c*<sub>2</sub> of *s*<sub>2</sub>. It seems to me that for this solution to work, the intention of *s*<sub>1</sub> must comprehend the will of accepting *s*<sub>2</sub>'s contribution and *vice versa*. I believe though that this is a quite counterintuitive solution. Alternatively, one could admit the existence of collective creative intentions. In the case here considered the intention of *s*<sub>1</sub> and *s*<sub>2</sub> of accepting each one the work of the other could give rise to a sort of second-level intention whose expression is the creative act constituted by the work done respectively by *s*<sub>1</sub> and *s*<sub>2</sub>. There would be in this case only one object, namely *c* and this would depend for its identity upon the creative act that is constituted by the creative acts of *s*<sub>1</sub> and *s*<sub>2</sub> and this, in turn, would depend upon the second level intention which is grounded in *s*<sub>1</sub> and *s*<sub>2</sub>'s creative intentions. Ultimately, the identity of *c* would depend upon *s*<sub>1</sub> and *s*<sub>2</sub>, it would be the impress on matter of their minds.

## 5. Conclusion

I have shown how, adopting a neo-Aristotelian approach to ontology, it is possible to accept artifacts conceived as objects that depend for their identity upon acts of creation. Acts of creation, ultimately, depend on human beings for their identity, namely on a kind of substance. Substances are the fundamental entities in a neo-Aristotelian conception of reality and showing how a kind of entities depend on such basic beings, means sanctioning their admissibility in our ontology. From this point of view, it is impossible to sharply separate the ontological and the metaphysical question. In order to determine whether a kind of beings exists, we need to know whether it is substantial or not, and if it isn't we need to show how it is grounded in the fundamental level.

<sup>21</sup> Note that this example says nothing against the functional nature of *being the result of x* since a function can perfectly have multiple values for a given argument. 4 is both the square of 2 and -2, yet the squaring function is still a function.

I have shown how, following Evnine's theory, artifacts can be seen as essentially identity-depend upon acts of creation and how a given artifact can be referred to by means of the functional term 'The result of  $x$ ' where ' $x$ ' stands for an act of creation in general. Following Lowe, I have adopted the position according to which if  $x$  is the individuator of  $y$ , then there is a function  $f$  such that  $y = f(x)$ . Furthermore, I have formulated a two-level criterion of identity for artifacts which directly quantifies over acts of creations and refers to artifacts through the functional expression 'The result of  $x$ '. I have then posed as a condition for the identity of two artifacts the identity of the creative acts that brought them into existence, namely the identity of their individuators. Finally, I have considered some possible objections to Evnine's amorphism and I have proposed some possible solutions.

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