

# ARISTOTLE'S TAKE ON INADVERTENTLY MADE OBJECTS

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**Abstract:** The way metaphysicians conceive of inadvertently made objects has consequences for their understanding of the relation between intentions and kinds. Indeed, the very possibility of concrete material objects produced without human intention shakes the common identification of an object's kind and the intentions of the maker. The disruptive potential of inadvertently made objects also affects historians of philosophy, who have often failed to engage with the issue. In this paper, I shall reconstruct Aristotle's account of inadvertently made objects and the fortune of his examples. I will argue that Aristotle opens a conceptual space for inadvertent objects and will indicate the consequences for the relation between the intentions of the maker and an object's essence. Furthermore, I will put Aristotle into conversation with modern accounts and show the extent to which Aristotelian inadvertent objects constitute an instance different from the currently debated cases of appropriation, residues and by-products.

**Keywords:** Aristotle, Metaphysics, Objects, Intention, Inadvertent, Commentators

## 1. *Background and Introduction*

Notoriously, according to Aristotle's natural philosophy, an object can be accounted for by reference to four causes or four types of explanation:<sup>1</sup> material, formal, efficient, and final. This is true for natural and artificial beings alike (*Phys.* 2). Taking a traditional example, the material cause of a statue is the marble, the formal cause is its shape, the efficient cause is the sculptor, and the final cause is the statue's function. Aristotle introduces finer-grained distinctions applicable to all four cases:<sup>2</sup> (1) incidental and per se, (2) particular and general, (3) prior and posterior. While (2) refers to the level of generality, (3) has to do with whether a cause is prior or posterior in time, in account, or in substance.<sup>3</sup> (1) marks the difference between a cause that is genuinely explanatory (per se) and a cause that is only incidentally so: the per se efficient cause of the Doryphoros is

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<sup>1</sup> For the interpretation of Aristotelian causes (*aitiai*) as kinds of explanation see Annas 1982, 319.

<sup>2</sup> For a clear discussion and illustration of the finer-grained distinctions see Cameron 2019, 69-70.

<sup>3</sup> On the various senses of priority see *Met.* Δ 8, 1049b4-1050b27.

the sculptor Polyclitus, not a musical man (even if Polyclitus also happens to be a musical man). Giving the right explanation of something is to target, whenever possible, explanatory causes rather than incidental ones.

Now, there are two main kinds of efficient cause: nature (*physis*) and art (*technê*).<sup>4</sup> Nature is famously defined as an inner principle of behaviour, an innate impulse with which natural beings are equipped.<sup>5</sup> Art, by contrast, is an external principle of behaviour. While art is typically external in a spatial sense (it resides in the maker, not in the object fashioned), the sense in which art is external is not merely spatial. In *Phys.* 2.1,<sup>6</sup> Aristotle draws a distinction between artefacts such as the house, in which the principle (the housebuilder) is clearly outside the object, and artefacts in which the principle is spatially inside the thing, as a container, but cannot be said to be in the thing of itself. He refers to the case of the doctor healing herself:<sup>7</sup> of course, the doctor is in a way internal to the healed person, but to be spatially inside does not mean to be a genuinely inner principle (otherwise, puppets would be natural beings too). The doctor restores the health in the healed person not qua healed person but qua doctor. With the due distinctions, both nature and art are efficient causes, the former being internal and the latter being external. What is more, nature and art have another feature in common in that they both are teleological causes. Things that come to be by nature as well as things that come to be by art have a final cause, i.e. they come for the sake of something.<sup>8</sup>

This is however not the whole story about causes. Indeed, «some things are due to nature; for others there are other causes» (*Phys.* 2.1, 192b8). Among other causes, Aristotle includes not only art but also luck (*tychê*) and chance (*tautomaton*). Things can indeed happen due to causes, such as luck or chance, which are privations of nature and art.<sup>9</sup> Luck and chance are both responsible for things that occur “for the sake of something” or with some sort of an end, but that do so incidentally.<sup>10</sup> They are called “privations” of nature and art precisely because they yield the same result but “incidentally”, i.e. “without” per se causes such as nature or art. Luck occurs specifically among things in accord with decision (or among things with thought). Chance is broader than luck, for luck is chance that occurs to people. Consider a man who went to the marketplace to sell olives but met someone who owed him money and repaid the debt. This is a case

<sup>4</sup> I translate *technê* with “art” for consistency with and adherence to the modern discussion on artefacts.

<sup>5</sup> *Phys.* 2.1, 192b12-15.

<sup>6</sup> *Ibidem* 192b27-32.

<sup>7</sup> *Ibidem* 193b23-27.

<sup>8</sup> The notorious art analogy is centered on the topic of final causation. Briefly put, we understand that there is a final cause in nature because art imitates nature and art has a final cause. The literature on the art analogy is vast, see for instance Broadie (1990); Scharle (2015); Witt (2015).

<sup>9</sup> *Met.* A.3, 1070a7-8.

<sup>10</sup> For Aristotle’s discussion of luck and chance, see *Phys.* 2.4-6.

of luck. Chance, by contrast, can involve also animals, children, or inanimate objects. Consider a statue which fell onto the man who had murdered. It is by chance that the murderer met his justice. In both cases, the outcome is the sort of result that nature could have caused for a purpose but has an incidental cause.

Scholars have primarily been discussing luck for its moral relevance and chance as occurring in the natural cases (i.e. spontaneous generation) because of its biological interest and related ethical implications. Chance, however, is privation not only of nature but also of art, and the scholarly debate has only addressed this specific case marginally, if at all. This understandable lack of discussion can be justified with the fact that Aristotle does not address this issue directly. Hence, his supposed account of things that come to be by chance as privation of art has to be patiently reconstructed by resorting to different passages in various works. My goal is to sketch Aristotle's account of "artefacts by chance", and, to do so, I will principally deal with the *Metaphysics* and the *Physics*. In particular, I will show that we have reasons to ascribe to Aristotle the view that there can be inadvertently made objects or – provisionally put – artefacts by chance. Moreover, I will argue that, according to Aristotle, an inadvertently made seat is not an artefact strictly speaking but still a seat, i.e. still an item belonging to the kind *seat*. This solution entails the non-trivial view that intentions are not built into the essence or the definition of members of artificial kinds. In the first section, I show that Aristotle opens a conceptual space for *beings* that come to be by chance by offering a close reading of *Met. Z 9*. In the second section, I employ Aristotle's example of the tripod to show that he can account for *material concrete objects* coming to be by chance, or inadvertently made objects. Here, I also chalk out the history of the ancient reception of this example. The third section will then reconstruct Aristotle's account of inadvertently made objects. Finally, the last section concludes by comparing Aristotle's notion of inadvertently made objects with the modern discussion of cases such as appropriation, residues, by-products, and other unintended results of human production. Although the subject matter demands touching upon wider topics, I will neither dive into Aristotle's account of artefacts proper nor address the problem of the substantiality of artefacts and inadvertently made objects.<sup>11</sup>

## 2. Making Room for Objects by Chance: A Close Reading of *Met. Z 9*

The very possibility that something comes to be by chance, or spontaneously, is openly asserted by Aristotle with reference to both the animal and the artificial kingdom. This possibility is clearly stated in *Met. Z 7-9*, the so-called "physical chapters" of the seventh book of the *Metaphysics*. In the beginning of *Z 7*, Aristotle states that some things come to be by nature, some by art, and some by chance. In all three cases, things come to be by the agency of something (efficient

<sup>11</sup> For such a discussion see Papandreou (manuscript).

cause), out of something (material cause), and they come to be a thing of a certain kind (formal cause). Aristotle then focuses on the distinction between natural generation (*genesis*) and production (*poiêsis*). He further subdivides types of production into three kinds, depending on the governing principle: products can come about either by art (*technê*), by some capacity (*dunamis*), or by thought (*dianoia*).<sup>12</sup> He goes on saying that some of the things *produced* also can come to be by chance.<sup>13</sup> Aristotle here<sup>14</sup> introduces a problem which he puts on ice till Z 9, where he finally sets out the following aporia: why can some things come to be by art as well as by chance and others can only come to be by art?

There are indeed some artificial things, such as the house, that cannot come to be without an artisan, whereas others, like the health, can come to be even without the art of the doctor. For instance, let us imagine that Socrates is sick: he can turn healthy either by going to the doctor, or he might acquire his health without taking any appointment, perhaps just by way of taking a walk for other reasons. The solution of the aporia (1034a10-a14) refers to the matter involved in the generation of something (*hê hylê hê archousa tês geneseôs*). The matter involved in a production is either: (1) capable of being set in motion by its own agency (*oia kineisthai hup'hautês*), (1a) in the particular way required (*hê men hôdi hoia*) or (1b) not in the particular way required (*hê de adunatos*); (2) or it is incapable of being set in motion by its own agency (*hê d'ou*). It seems that some things that are brought about by art can be brought about by chance because the matter, that in the artistic production is that which initiates the coming to be and in which there is already some part of the outcome product, in some cases can move by its own agency. While (2) is not mentioned again, Aristotle basically deals only with (1a) and (1b), which also are the cases relevant to our discussion. We soon (1034a14-a18) learn that the case of the matter of the house, namely the stones, represents (1b), for it is said that this matter is incapable of being set in motion in the particular way required unless the agency of something else intervenes. That stones can move by their own agency is not puzzling, for Aristotle has clearly in mind their natural downwards tendency. Stones can move so as to fall downwards but not so as to form a house (i.e. in the particular way required). At this point, we could easily think that (1a) is supposed to represent the case of health. The reasoning would be the following: heat (as matter of health) can move by itself so as to produce health (1a); whereas stones (as matter of the house) cannot move

<sup>12</sup> In *Met.* E 1, products come to be either by art (*technê*), reason (*nous*), or some capacity again (*dunamis*).

<sup>13</sup> This reminds us of Cray's (2017: 290) distinction between *artefacts*, i.e. products of human activity involving creative intentions, and mere *products*, i.e. products of human activity not coupled with an intention to generate. Applying Cray's distinction to Aristotle, one could say that products by art and by reason (or thought) are *artefacts*, whereas products by a certain capacity are *mere products*.

<sup>14</sup> Z 7, 1032a28-32.

by their own agency so as to produce a house. This is why some things can come to be by art as well as by chance, while others cannot.

Aristotle then addresses the case of chance in more detail (1034a18-a21). What happens when something that comes to be by art comes to be by chance? There are two possibilities: either (a) the motion is started up by the agency of things that do not have art but can be moved by other things not having art, or (b) the motion starts out of a part. Now, these options are unclear at the very least, for Aristotle unfortunately does not immediately provide examples. So, how are we to understand (a) and (b)? Aristotle seems to provide an example for (b) soon afterwards (1034a26-a30), with the aim of showing how things coming to be by chance come to be out of something containing some part of the product (1034a25). Indeed, health comes to be out of a part of itself, namely the heat. As explained in 1034a26-a30, friction can produce heat in the body, and heat in the body might be part of what health is. An example of (a) is not provided in the text, but we could imagine the case of a dam: a dam can come to be either by art, if a skilled builder builds it, or by chance, if a large amount of stones just falls into the water («motion will be started up by the agency of these things that do not have the art») and creates a dam of a sort, because an earthquake occurs («but are themselves capable of being moved by other things not having the art»).

After addressing the case of natural type of things and providing an explanation parallel to that of artefacts' type of things,<sup>15</sup> Aristotle clarifies that this state of affairs applies to *beings* belonging to any category, substances and predicates alike (1034b7-b10). I cannot stress the relevance of this statement enough. Indeed, given the focus on the case of health, one might say that, in Aristotle's view, only properties belong to the class of things that can come to be by art as well as by chance, whereas beings that would belong to the category of substance, such as the house, do not. However, this statement seems to establish that the account offered applies to substances too, i.e. not only to *beings* but also to *material objects*. Certainly, the fact that Aristotle expressly denies that a house can come into existence by chance could be taken as a denial of inadvertently made *objects*, and evidence that only events or properties can occur by chance. On the contrary, one might interpret Aristotle's endeavour in *Met. Z 9* as establishing the possibility of inadvertently made objects and to understand the case of the house as just so complex that it cannot simply come to be by chance. The more complexity an artefact shows, the more it appears to come from intelligent design. What is more, for the house to come to be by chance, the matter,

<sup>15</sup> Aristotle will then tell a similar story for things that are constituted by nature (1034a33-b4). Some natural beings can come to be by nature as well as by chance, whereas others cannot. Indeed, some natural beings can come to be only by co-specific parents, whereas other natural beings (bloodless animals) can also come to be spontaneously. As in the case of artefact types of thing, also in the case of natural types of thing the reason why some can come to be without nature being the principle refers to the ability of matter to move by its own agency (1034b4-b7).

i.e. bricks and stones, ought to be able to move upwards by its own agency. But what if we take an object which requires the matter to move accordingly to its natural impulse? What if there is a case of an object (not a property) whose matter can move in the particular way required? There is indeed a pertinent example, offered by Aristotle and widely discussed in the later reception.

### *3. The Tripod Example and its Fortune*

Aristotle chiefly discusses the notions of luck and chance in the second book of the *Physics*. As already mentioned, while luck obtains in matters of human practical life, chance is a wider concept and involves animate and inanimate beings alike. It is precisely when it comes to inanimate beings that we are offered the relevant example. In *Phys.* 2.6, 197b16-18, we read: «Chance on the other hand is found both in the other animals and in many inanimate objects – for example, the horse came by chance, we say, in that it was saved because it came, but did not come in order to be saved. And that the tripod fell [on its feet] is a case of chance, since, though it stood that way for the sake of being sat on, it did not fall for the sake of being sat on».<sup>16</sup> He then explains that something occurs by chance when it is one of the things that occur for the sake of something, but does not occur for the sake of what actually results: the tripod as something to be sat on is among the things that come to be for the sake of something, but it was by chance that it could serve as a tripod. In this sense, it was due to an external cause, i.e. chance, that the tripod could serve its function. Aristotle does not tell us why the tripod fell, but it could have dropped onto the floor and knocked down a flight of stairs by someone accidentally.<sup>17</sup> There is no necessity that the tripod falls on its feet instead of its side. However, it could move “in the particular way required”, i.e. so as to serve as a tripod, because its matter necessarily tends downwards.<sup>18</sup> The tripod therefore seems to offer an example of an artefact type of thing that comes to be by chance, although typically coming to be by art. Importantly, a tripod is not a property like health. To this extent, it might qualify as an inadvertently made object.

In ancient Greece, tripods were frequently used to support lebes, or cauldrons, for cooking and they had other uses such as supporting vases, trophies or offerings. The best known tripod is the stool at Delphi on which the Pythia sat to utter her oracles.<sup>19</sup> In this way, serving as a seat is indeed one of the relevant functions of a tripod. Thus, the tripod was originally positioned so as to form a seat and happened to fall in such a way that it did so once again. This is important

<sup>16</sup> Translations of the passages from Aristotle’s *Physics* are by Reeve (2018).

<sup>17</sup> See Lacey (1993: 176 n. 630).

<sup>18</sup> For the concept of material necessity and its difference from hypothetical necessity see Cooper (1987).

<sup>19</sup> Suhr (1971) discusses the meaning and significance of the tripod’s early prototype.

to highlight as it does not make it a case of *appropriation*, in which something is employed by a later user with a function that was not intended by the original maker. However, since the tripod was already a tripod before falling, Aristotle might still be treating the example not so much as the inadvertent coming to be of a new object, but rather as a fortuitous event (with emphasis on the falling on its feet) happening to the same object.

However it might be, this example did not go unnoticed in the later reception of Aristotle's works. Its fortune can be found in the commentators on the *Physics* as well as on other Aristotelian works. Indeed, whereas the example in Aristotle also can be understood as an instance of a fortuitous event, the commentators appear to pull Aristotle in the direction of conceptualizing the case of inadvertently made objects. Interestingly, they do so by conflating the example of the tripod with another example made by Aristotle few lines ahead in the same chapter: «in fact the stone that fell did not do so for the sake of hitting the man; it was by chance, therefore, that the stone fell, because it might have fallen due to someone and for the sake of hitting the man» (197b30-32). This second example is more clearly portraying the case of fortuitous *events*. If someone were to throw the stone to hit a man, the event of the stone hitting the man would not happen by chance; however, since the stone, in this case, fell by chance, the result is a fortuitous event. Now, later philosophers have conflated the two Aristotelian examples and have often talked about a stone that fell in such a way as to serve as a seat.<sup>20</sup> This operation is not without major consequences. First, focusing on the result of a seat instead of hitting a man makes the example concern objects and not events; second, taking the stone instead of the tripod amounts not only to taking a natural object<sup>21</sup> instead of something already belonging to an artificial kind<sup>22</sup> but also, and perhaps more importantly, to shifting the attention to an acquired function, i.e. that of a chair, which was never intended before and is certainly not the essence of a stone. Therefore, they more clearly introduce the case of an inadvertent production of a new object. I will briefly go through the reception of the example and its fortune by addressing authors in a chronological order, so as to illustrate – albeit incompletely – its fascinating history. We can witness something more than just a distorted repetition, for commentators also make different proposals as to what makes a seat a seat. What makes the stone a seat, i.e. something you can sit on?

<sup>20</sup> An exception is Thomas Aquinas, who, in his commentary on the *Physics*, maintains the tripod as the initial item and presents it as an example of chance happening to inanimate beings (Lecture 10, 232).

<sup>21</sup> Naturefacts are naturally occurring objects intentionally modified to serve some human purpose (Hilpinen (2011)).

<sup>22</sup> In this sense, the example is different from the one advanced by Juvshik (2021): «A lampshade that's turned upside down as a birdbath».

Alexander of Aphrodisias is the first and most influential Aristotelian commentator. In *Mantissa* 24, he (or his school) discusses the notion of luck as narrower than the notion of chance. Chance is referred to results that come about and are not that for the sake of which something occurs: «Thus the stone which was carried downwards and fell in such a way that it is possible to sit on it acquired this position fortuitously, [the position] following on the natural downwards motion of the stone on account of its weight.» (179,1-3; Sharples (2004)). As mentioned, Alexander is conflating the two examples. The stones acquired the *position* required for it to be sat on.

Considering the Neoplatonic School of Athens, Themistius and Simplicius introduce new elements to the picture. Themistius, after faithfully reporting the Aristotelian example of the tripod, twists the second example: «If, for example, a stone that has fallen down has the shape of a cube, it does not spontaneously occupy a position in which it can be effectively sat on, since if it falls, it is in its nature to fall that way every time» (*in Phys.* 55,2). He here adds an interesting element. Provided that the stone already possesses the right *shape*, it is only by necessity (and not by chance) that it falls down and can therefore serve as a seat.<sup>23</sup> The stone falls downwards due to its natural tendency. While Themistius seems to slim down the space for inadvertently made objects unless the *shape* changes, Simplicius makes more room for objects by chance – genuinely intention-independent – by opposing them to objects by luck – ultimately intention-dependent. In *in Phys.* 352,9-20, he stresses that, in the case of outcomes of chance, «the cause should be neither inherent nor entirely evident». Hence, the efficient cause could not be the shape of a cube, as «it would not be outside its nature to provide a seat» (translations by Fleet (1997)). Chance is an external cause in the sense that it must be outside the nature of the thing involved. Interestingly, Simplicius states that if it could be shown that an outcome resulted from intended actions (although intended for a different purpose), this would move it from the category of chance outcomes to that of lucky outcomes. For instance, the tripod fell by luck so as to provide a seat when it was thrown away by the thief who was being chased.<sup>24</sup> In this case, there is some intention, just not where we would normally find it.

As for the Neoplatonic School of Alexandria, the engagement with the Aristotelian example is not elaborate before Philoponus. According to Ammonius *in Int.* 142,31-143,1 it is the position of the fallen stone that makes it fit to serve as a seat. His pupil Asclepius also reports the example in the commentary on the *Metaphysics* written “from the voice” of Ammonius. In *in Metaph.* 398,1-5, while

<sup>23</sup> See also Simplicius, *in Phys.* 347,16-17 and Philoponus *in Phys.* 288,5 ff.

<sup>24</sup> Simplicius switches from the stone to the tripod, although they both wind up being a seat. In *in Phys.* 261,15-17, he states «while others again happen as a result of chance, such as the occurrence of a portent or the way a stone falls to form a seat» (translation by Fleet (1997)). The stone example appears again at 347,16-17.

commenting on Z 7's distinction between coming to be by nature, by art, and by chance, he reports the example of a stone falling down and thus becoming suitable for a seat, but does not specify how the stone comes to be a seat or what makes it fit to serve as a seat.<sup>25</sup> A more developed interpretation is provided by Philoponus, who turns to the example in his commentaries on *Categories*,<sup>26</sup> *Physics* and *Posterior Analytics*. The example is most recurrent in the commentary on the *Physics*,<sup>27</sup> where he takes the change of shape to be what ultimately makes the stone become a seat. The more detailed explanation is however provided in *in An. Post.* 380,18-22: «But if somehow, when occupying the place down below, the stone came to be [shaped in a way that is] suitable for a chair, on account of having its protuberances removed from around it during its descent and it were to be formed into a square, this very process of becoming [shaped in a way that is] suitable for a chair is said to be by chance since it is something that occurs as [what is] itself random and not in accordance with the aim of its nature» (translation by Goldin (2014)).

Now, the change of shape seems to be the key element for inadvertently made objects as the change of position alone can be due to the nature of the stone itself, which tends downwards. If it is in the nature of an object to change position in the particular way required *and* the shape of the object does not undergo any change, it seems that one cannot take it as an outcome of chance, after all – for the outcome is merely the result of natural necessity. We have seen, though, a growing attention to the *shape* of the matter, which must change too. If there is no intrinsic modification of the matter, then it may be a stone and its natural downward tendency. This condition is held also by Aristotle. Reconstructing the seat example by looking back to *Met.* Z 9, one might tell the following story. Objects that typically come to be teleologically might also come to be by chance if the matter can move in the particular way required. Now, in the case of a seat, one might say that the matter, i.e. stone, can move by itself in the particular way required, i.e. downwards. However, if all it takes to make a seat is for the stone to fall down, we would just have the case of a stone acting naturally. Thus, if the stone is to represent a case of chance, it needs not only to change position but also to change shape. If the stone becomes suitable to be a seat because, on the way down, it changed in shape, then (i) there is not merely natural necessity involved; (ii) the stone can move in the particular way required because the motion, i.e. the

<sup>25</sup> Asclepius reports the stone example also at 371,12-15; 372,8-10.

<sup>26</sup> *in Cat.* 127,17-20.

<sup>27</sup> *in Phys.* 260,12-13; 269,13-17; 288,6-291,21. For instance, *in Phys.* 260,13-14, we read «A stone fell down from above and breaking off its jagged edges became suitable for a seat - and it is said to have become [so] 'spontaneously'.», and at 269,17 «For instance, a stone fell from on high, not having been securely perched, and was borne down by [its] natural impulse to the appropriate and natural place, and having been borne down smashed against some solid bodies and had its projections broken off and became suitable for a seat» (both translations by Lacey (1993)).

change of shape, is started up by the agency of things that do not have art (perhaps the hitting of the stone on surfaces) but can be moved by other things not having the art (whatever caused the falling of the stone).

#### 4. Aristotle's Account of Inadvertently Made Objects

We have seen that the tripod example has been more clearly treated as a case of inadvertently made object by the later reception. However, Aristotle does make room for objects by chance and provides some hints as to how we should understand them. I will hereon sketch Aristotle's account of inadvertently made objects without going into the details of his account of artefacts.<sup>28</sup> In particular, I will stress how his account of inadvertent objects makes intentions unnecessary for identity.

Things can indeed come to be inadvertently, but I would like to focus on the fact that they are still the kind of thing they are. For instance, we have seen that health could be restored by a doctor or come about unintentionally, perhaps through going for a walk with a purpose other than getting your health back. However achieved, the result is still essentially the same. Health is a uniform state of the body, and a uniform state of the body is equally so whether achieved through medical skill or unintentionally. While Aristotle excludes that highly complex artefacts, such as the house, can come about without intention, he does not preclude the possibility that artefacts of lesser complexity might come to be inadvertently. What makes a house a house is a complex arrangement of matter, such that it seems highly unlikely that, without an external principle such as a skilful maker, matter would simply arrange by itself as to make a house.<sup>29</sup> By contrast, what makes a seat a seat is a less complex arrangement of matter, such that it seems plausible that matter would arrange itself as to make a seat, without a skilful maker.<sup>30</sup> There is just less demand on the matter.

The very possibility of inadvertently made objects resonates well with Aristotle's proposed definitions of certain objects in *Met.* H 2, 1043a5-18: «For instance, if we had to define a threshold, we should say 'wood or stone lying like this', and a house we should define as 'bricks and timbers lying like this', (or again, also the final cause would be in some cases), and if ice 'water frozen or solidified in this way', and harmony 'such and such a blending of high and low'; and similarly, in all other cases» (*Met.* H 2: 1043a2-12; my translation). Apart

<sup>28</sup> For the purpose of this paper, I will refer to key-passages that help illustrating Aristotle's view of artefacts without discussing them at great length. I refer the reader to Papandreou (manuscript) for more details and implications of his account.

<sup>29</sup> Michael of Ephesus, a Byzantine commentator of Aristotle's *Metaphysics*, mentions the ship and things of the sort alongside the house (498,23-24).

<sup>30</sup> Here I follow Corkum's intuition: «I agree that the result is not an artifact, but it is less obvious to me – both as a philosophical claim and as a point of Aristotle interpretation – that the result is not a chair» (11).

from the case of the house, one might easily imagine those things coming to be intentionally as well as inadvertently. A threshold could come about by chance if wood and stone ended up in the right place; water can be solidified without a skilful maker intervening; a harmony might be achieved unintentionally. What is built into the essence of these objects are the arrangement, the structure, and the relations obtaining between the parts.<sup>31</sup> It seems, at least, that intentions or social acceptance are not part of the essence of an artefact or a product. «A threshold is, in that it lies in this way, and the being means its lying in this way, and there being ice [means] being solidified in this way. Of some things, the being will be defined by all of these, by some [parts] being mixed, some blended, some bound, some solidified, and some require the other *differentia*, just like hand or foot.» (1042b26-31; my translation). Although some kinds are typically produced artifactually, this does not mean that the intention of the maker or the creative action constitutes the essence of the object or the kind of thing it is. As Corkum (p.15) points out, there is no textual evidence against the view that inadvertently made objects are possible. If anything, Aristotle would think that some instances are unlikely, given the complexity of the object and, thus, the work the matter would be required to do. At the same time, Aristotle would hold that *some* kinds only have artefacts in the strict sense as members.

Importantly, allowing for inadvertent objects does not make Aristotle's ontology "too easy". One risk, indeed, is to allow for a proliferation of new objects, if intention is not needed. If every time something falls down and can be used as something else a new object comes into existence, it would be too easy or even too frequent to come to be. However, according to Aristotle, for something new to populate the world, an intrinsic modification of matter *must* occur, such that social acceptance alone or later-use cannot bring about a new object.<sup>32</sup> Consequently, intentions are not only unnecessary for the production of members of artificial kinds, but also insufficient. The relevant intention is insufficient even if paired with social acceptance. One might say that the case of the threshold in H 2, whose being is position, resembles the case of the stone becoming a seat. I cannot here fully develop Aristotle's account of proper coming to be, but placing something somewhere else or using something in some new way are not enough to bring about a new item. This is why Philoponus' intuition that the stone should not only fall down but also, crucially, change in shape, is a genuinely Aristotelian one.<sup>33</sup>

<sup>31</sup> This also implies that functions are not the essence, at least not from a strictly metaphysical perspective. For this claim, see Papandreou (manuscript).

<sup>32</sup> For a general defense of this claim see Papandreou (2018).

<sup>33</sup> Change of position alone does not mean coming to be. Perhaps in Aristotle's text the ambiguity as to whether he is introducing inadvertently made objects or just speaking of fortuitous events is inescapable, for the case of the tripod happening to function once again as a tripod does not necessarily involve any change of shape or ceasing to exist along the way.

Therefore, are artefacts necessarily mind-dependent or intention-dependent? The focus on and the very possibility of material objects that are produced without human intention challenges the simple identification of an object's kind and the intentions of the maker. This challenge calls for an important clarification. If by "artefact" one means something that comes to be in virtue of art, then inadvertent artefact is a contradictory concept. Yet, if by "artefact" one means an object belonging to a certain kind K whose members are *typically* but not *necessarily* brought about in virtue of art, then there may exist inadvertent artefacts. To avoid ambiguity, one might say that Aristotle makes room for inadvertently made objects. Things that typically come about by art might still come about by chance (provided that the matter undergoes some relevant change like a change in shape), but this does not make them different things. A seat typically comes about by art, but it might come to be by chance, yet the seat that comes about by chance is still a seat. What we ought to say, then, is that things belonging to artificial kinds might occur without intention. However, not all artificial kinds have members that might occur without intention. A house, for instance, can only come to be by art.<sup>34</sup>

### *5. Aristotle's Inadvertent Objects Confronted with Modern Issues*

How one conceives of inadvertently made objects has implications on their notion of artefacts. Surely, it can also go the other way, namely that depending on one's definition of artefacts, inadvertently made objects qualify as artefacts or not. Either way, there is a connection hard to ignore. Koslicki (2018) stresses the importance of being clear as to what one means by "artefact". Any definition of artefact, indeed, seems to fail to accommodate «tricky cases» (Koslicki 2018: 218-219), among which Koslicki includes «by-products, residues, and other unintended outcomes».<sup>35</sup> By-products and residues<sup>36</sup> are, in fact, unintended results of intentional activity. Examples are pollution, sawdust, or scrap metal. Although these are unintended objects, it is important to stress that they represent a case different from the one discussed here, of inadvertently made objects. Koslicki also provides examples of «other unintended outcomes» that seem more relevant to our case: a village might unintentionally result from a collection of houses close to one another; a trail might be the unintended result of many walkers choosing the same path. Koslicki challenges the traditional definitions of "artefact" to accommodate such cases, either within or without the class of

<sup>34</sup> As pointed out by an anonymous referee, one could imagine tree branches spontaneously interwoven in such a way as to function as a shelter or even a cave, which can be used as a shelter. These are cases of later-use, which I shall briefly discuss in the last section.

<sup>35</sup> Other tricky cases are artificially produced members of natural kinds, artworks, products of non-human intentional activity, ready-mades and found objects.

<sup>36</sup> Residues are unintended by-products of intentionally creative activity (Hilpinen (2011)).

artefacts, as long as they are not left in a no-man's-land. Based on the observations made so far, according to Aristotle, unintended outcomes such as the village and the trail might not qualify as artefacts after all, but may still be a village and a trail respectively, and thus members of their respective artificial kind. Yet, they importantly differ from the case of residues. This is not the place for an exhaustive discussion of this distinction, which demands more attention and detail. My hunch, however, is that the sawdust (residue) and the inadvertently made chair importantly differ in that the latter embodies a structure which locates the object into a specific kind, whereas the former lacks a structure and, thus, resembles a heap. While the chair is *one* chair, the sawdust or pollution are still *many*, such that Aristotle would not regard them as *one* thing of a kind K.

This idea might be challenged by Juvshik (2021), who claims that in all accidental makings one can still identify the relevant intentions, such that there really are no inadvertently made objects in the strict sense. As he explains, accidental making can occur in three ways: first, historically, there are cases of accidental creation, such as the Post-it Note Adhesive, where the maker intended to do something but not quite what he ended up making. Second, there are cases in which there is no intention to make anything whatsoever. The example is that of Sophie the Clutz, who makes an accidental chair by way of her clumsiness, and her bumping and knocking around. While both cases are mind-dependent, neither seems to be intention-dependent. Juvshik however argues that both cases are still intention-dependent, but that the intentions are not where one would expect to find them. In the first case, one should trace the relevant intention not in Spencer Silver but in Art Fry (the man who had the idea of applying to paper an otherwise unimpressive adhesive), whereas in the second case, the relevant intention is Sophie's later intention to move the new arrangement into the house and use it as a chair. On this account, both cases are cases of *appropriation*, which is «taking a pre-existing object and making it into an artifact without modifying it, like moving a rock inside from the garden to become a doorstep». Lopes (2007) advances the distinction between accidental and incidental creation. Accidental creation obtains when someone unintentionally creates something in virtue of failing to make something else.<sup>37</sup> Incidental creation occurs when someone unintentionally creates something in virtue of succeeding in making something else. Both instances, though, involve some kind of intention – albeit disattended or indirect. Juvshik persuasively argues that both accidental and incidental creation are best understood as cases of appropriation.

Now, Aristotle does not accept the assumption that artefacts can be created by appropriation, i.e. without any intrinsic change in the matter. Let us consider once again the stone becoming a seat. Surely, it does not represent a case of failed artefact, as there was no intentional agent starting up the process. All the more,

<sup>37</sup> For a discussion of failed art see Xhignesse (2020).

we have seen that chance differs from luck in that it does not necessarily involve intentional agents. Thus, Aristotle's example does not resemble the Post-It story. Is it analogous to Sophie's story? Despite a *prima facie* similarity, Aristotle's example is significantly different in two ways, and, to this extent, it resists Juvshik's claim that accidental makings are intentional. First, Aristotle does not care to mention what happens after the tripod/stone falls, whether someone is really sitting on it. The later use might as well not even happen. The seat is a seat even if no one ever uses it as such. The emphasis on the structure rather than the intention<sup>38</sup> carries this result, and it extends to the point made by Bloom 1996, 5-6 with the example of the chair: it might be produced without the intention to be sat on and only to serve as an exhibition model, but it would still belong to the kind *chair* because «being sat on is what chairs are for». Second, while in both cases material parts undergo some structural change, the truly "creative" bit in Sophie's example is her moving the parts into the house. Now, merely moving the matter makes hers indeed a case of appropriation, but Aristotle's case can be understood as involving more than just moving the stone somewhere more suitable. Not only is later use not changing the essence of an object but any extrinsic change is not enough for something new to come to be. Hence, Aristotle's account of artefacts and inadvertently made objects does not allow for the treatment of inadvertently made objects as cases of appropriation. Juvshik 2021 states «a rock can genuinely become a doorstop with the right intentions, use, and communal acceptance». But in this case, if there is no intrinsic physical modification of matter but only an extrinsic one, the rock does not become a doorstop and remains a rock. Aristotle's interpretation, then, is able to hold two views that often are not simultaneously held: first, the view that appropriation is not "creative" of any new object; second, that one might create a new object without the relevant intention. Goodman (2020: 5) forcefully states «intentions are utterly irrelevant as to whether or not it is an artifact, and to what kind of artifact it is». Here, Aristotle would make a distinction. Intentions are relevant as to whether or not something is an artifact, but are irrelevant as to what kind of artefact it is. Intentions are therefore not only unnecessary for a seat to be a seat but also insufficient. In this regard, Goodman (2020: 6) strongly agrees with Aristotle when he states that «humans add to the inventory of the world by shoving parts about, and thereby configuring those parts in ways that are suited for further human use». An intrinsic modification of the matter is imperative for adding to the inventory of the world. The way parts are shoved around so as to create a given structure is indeed what a member of an artificial kind is. Whether this arrangement is achieved with or without intention does not make a difference on the kind to which the object will end up belonging.

<sup>38</sup> Both the intention of the original maker and the intention of a later user.

## References

- ANNAS, J.  
1982 «Aristotle on Inefficient Causes», *Philosophical Quarterly*, 32 (129), 311-326.
- CAMERON, M.  
2019 «The Moving Cause of Artefacts: the role of *techné* in metaphysical explanation», *Ancient Philosophy Today*, 1 (1), 64-83.
- COOPER, J.M.  
1987 «Hypothetical Necessity and Natural Teleology», in A. Gotthelf and J. Lennox (Eds.), *Philosophical Issues in Aristotle's Biology*, Cambridge U.P., Cambridge, 243-274.
- CORKUM, P.  
in prog. «Aristotle on Artifactual Essences», available at <https://sites.ualberta.ca/~pcorkum/art.pdf>.
- CRAY, W.D.  
2017 «Abstract Generationism: A Response to Friedell», *Journal of Aesthetics and Art Criticism*, 75 (3), 289-292.
- EVNINE, S.J.  
2016 *Making Objects and Events: A Hylomorphic Theory of Artifacts, Actions, and Organisms*, Oxford U.P., Oxford, UK.
- FRIEDEL, D.  
2017 «Abstract and Concrete Products: A Response to Cray», *Journal of Aesthetics and Art Criticism*, 75 (3), 292-296.
- GOODMAN, J.  
2021 «On Inadvertently Made Tables: a Broccean Theory of Concrete Artifacts», *Acta Analytica*, 36, 1-9.
- HILPINEN, R.  
2011 «Artifact», in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2011 Edition).
- JUVSHIK, T.  
2021 «Artifacts and mind-dependence», *Synthese*, 1-24.
- KOSLICKI, K.  
2018 *Form, Matter, Substance*, Oxford U.P., Oxford, UK.
- PAPANDREOU, M.  
2018 «Aristotle's Hylomorphism and The Contemporary Metaphysics of Artefacts», *Discipline Filosofiche* 28 (1), 113-136.  
ms. *Aristotle's Ontology of Artefacts*.
- SCHARLE, M.  
2015 «Man from Man but not Bed from Bed: Nature, Art and Chance in Phys. II», in M. Leunissen (ed.), *Aristotle's Physics: A Critical Guide*, Cambridge U.P., Cambridge, 88-106.
- SUHR, E.G.  
1971 «The Tripod», *Folklore*, 82 (3), 216-232.

WITT, C.

2015 «In Defence of the Craft Analogy: Artifacts and Natural Teleology», in M. Leunissen (ed.), *Aristotle's Physics: A Critical Guide*, Cambridge U.P., Cambridge, 107-120.

XHIGNESSE, M.

2020 «Failures of Intention and Failed-Art», *Canadian Journal of Philosophy*, 50 (7), 905-917.