

ARTIFACT CONCEPT PLURALISM

ALPER GÜNGÖR

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Alper GÜNGÖR

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The thesis of Alper GÜNGÖR

has been approved by:

Assoc. Prof. Nurbay Irmak
(Thesis Advisor)

Assist. Prof. Sun Demirli

Prof. Kathrin Koslicki
(External Member)

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ABSTRACT

Artifact Concept Pluralism

Countless artifacts surround our lives. We have a rough idea of what artifacts are: artifacts are objects made to serve a certain purpose. However, there is no consensus on how to specify this definition. Essentialists argue that objects are grouped into artifact kinds by sharing non-trivial artifact essences, while anti-essentialists argue that there is no such essence to be found. However, the prominent essentialist and anti-essentialist accounts suffer from extensional and definitional problems. In this thesis, I aim to show that the problems current essentialist and anti-essentialist accounts face mainly stem from the assumption of *artifact concept monism*. According to artifact concept monism, there is only a single way to group objects into artifact kinds. To remedy the problems that stem from artifact concept monism, this thesis offers an alternative framework by drawing parallels from the debates on species concept pluralism and art concept pluralism. I call this framework *artifact concept pluralism*. According to artifact concept pluralism, there are (at least) three ways to group objects into artifact kinds. I believe pluralism enables us to bring metaphysical and epistemic considerations together without giving up on the classificatory aims and requiring a significant revision in our taxonomical practices. To this end, this thesis explores the viability of artifact concept pluralism and attempts to defend it from several objections.

ÖZET

Yapıt Kavramı Çoğulculuğu

Hayatımız sayısız yapıtla çevrili. Yapıtların ne olduğu hakkında kabaca bir fikre sahibiz: Yapıtlar belirli bir amaca hizmet etmek için yapılmış nesnelere. Ancak bu tanımın ayrıntılarıyla nasıl belirleneceği konusunda bir fikir birliği yoktur. Özcüler nesnelere önemsiz olmayan yapıt özlerini paylaşarak yapıt türlerine ayrıldığını savunurken, özcülük-karşıtları ise böyle bir özün bulunmadığını savunurlar. Bununla birlikte, önde gelen özcü ve özcülük-karşıtı açıklamalar, tanımsal ve kapsamla ilgili sorunlardan muzdariptir. Bu tezde, mevcut özcü ve özcülük-karşıtı açıklamaların karşılaştığı sorunların esas olarak *yapıt kavramı tekçiliği* varsayımından kaynaklandığını göstermeye çalışıyorum. Yapıt kavramı tekçiliğine göre, nesnelere yapıt türlerine ayırmanın tek bir yolu vardır. Yapıt kavramı tekçiliğinden kaynaklanan sorunları gidermek için tür kavramı çoğulculuğu ve sanat kavramı çoğulculuğu tartışmalarından paralellikler çizerek alternatif bir çerçeve sunuyorum. Ben kendi görüşüme *yapıt kavramı çoğulculuğu* diyorum. Yapıt kavramı çoğulculuğuna göre, nesnelere yapıt türlerine ayırmanın (en az) üç yolu vardır. Çoğulculuğun, sınıflandırma amaçlarından vazgeçmeden ve taksonomik uygulamalarımızda önemli bir revizyon gerektirmeden metafizik ve epistemik hususları bir araya getirmemizi sağladığına inanıyorum. Bu amaçla, bu tez yapıt kavramı çoğulculuğunun uygulanabilirliğini araştırıyor ve onu çeşitli itirazlara karşı savunmaya çalışıyor.

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In memory of Fatma



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CHAPTER 1

INTRODUCTION

The rapidly growing literature on artifacts revolved mostly around finding non-trivial artifact essences, while dissenting voices pointed out the plurality of artifact kinds and raised legitimate concerns about the applicability of any essence for artifacts and artifact kinds. I call the first endeavor *artifact essentialism* and the latter *artifact anti-essentialism*. Both essentialists and anti-essentialists, implicitly or explicitly, share the same assumption: that there is only one legitimate artifact concept that we can profitably use. I call this view *artifact concept monism*. I argue that the current state of artifact essentialism cannot provide an extensionally adequate and definitionally coherent overarching concept. The extensional and definitional problems I point out led some anti-essentialists to give up on classificatory aims and others to doubt the primacy of metaphysics on the topic of artifacts. In this thesis, I aim to offer an alternative to artifact concept monism. I call my view *artifact concept pluralism*. I argue that artifact concept pluralism provides a better framework to deal with the problems artifact essentialism and artifact anti-essentialism face. Furthermore, I believe pluralism enables us to bring metaphysical and epistemic considerations together without giving up on the classificatory aims and requiring a significant revision in our taxonomical practices.

Following Kathrin Koslicki (2008), I take kinds as “taxonomic classifications under which particular objects may be grouped based on shared characteristics of some sort” (p. 201). Accordingly, an artifact concept singles out the relevant characteristics required for artifact kind membership. Artifact concept monism

assumes that there can only be one way of grouping entities under artifact kinds and thus it assumes that there is an overarching artifact concept. Artifact concept pluralism rejects this assumption. I construct a model of artifact concept pluralism following Christy Mag Uidhir and P. D. Magnus's proposal on the art concept pluralism. According to Mag Uidhir and Magnus, there are at least four art concepts, in other words, there are four ways of grouping art objects, and each way of grouping has its own strengths and weaknesses (Mag Uidhir and Magnus, 2011, pp. 91-2). Mag Uidhir and Magnus (2011) draw their art concept pluralism on the model of species pluralism. According to species pluralism, there are several ways of grouping organisms into species. I take both models as guides for this project of artifact concept pluralism. Artifact concept pluralism proposes that there are multiple correct ways of grouping entities into artifact kinds.

This thesis is structured as follows: In chapter 1, I briefly formulate artifact essentialism. In the following two sections of this chapter, I discuss two prominent essentialist accounts, namely *function essentialism* (sub-chapter 2.1) and *intention essentialism* (sub-chapter 2.2). I find essentialist accounts susceptible to definitional and extensional problems. In chapter 3, I discuss artifact anti-essentialism. In this chapter, I point out two anti-essentialist strategies that can be developed for artifacts: *context relativity* (sub-chapter 3.1) and *the homeostatic property cluster view* (sub-chapter 3.2). In chapter 4, I motivate and outline a pluralist proposal for artifacts by drawing parallels from species pluralism and art concept pluralism. After outlining the artifact concept pluralism (sub-chapter 4.1), I compare my view with artifact anti-essentialism (sub-chapter 4.2) and artifact essentialism (sub-chapter 4.3). In chapter 5, I consider four objections to such a project. The first objection doubts pluralism on methodological grounds; the second objection challenges the strength

of the analogy between artifact concept and species/art concept; the following objections raise the odd metaphysical consequences of adopting pluralism.



CHAPTER 2

ARTIFACT ESSENTIALISM

In this chapter, I start by briefly explaining what I understand from essentialism, then based on this understanding I formulate artifact essentialism. Artifact essentialism mainly focuses on two salient features artifacts display: functional properties and intentional properties. Accordingly, I outline two types of artifact essentialism: function essentialism and intention essentialism. In sub-chapter 2.1, I explicate function essentialism. According to function essentialism, the nature of artifacts is best understood by their functions. Here, I do not limit my discussion only to the intended functional views, but I also discuss etiological functional views as well. In doing so, I show that none of the functional views can evade *the extensional problem*. Each view leaves out a crucial part of the entities that the term “artifact” intuitively ranges over. In sub-chapter 2.2, I explicate intention essentialism. According to the most elaborate version of intention essentialism, intentional properties selected by makers constitute the nature of artifacts. Even though intention essentialism extensionally fares better than function essentialism, still intention essentialism leaves out a significant number of artifact cases. These cases include accidental creations such as woodchips, as well as unintentional creations. Besides the extensional problem, both function and intention essentialism restrict the domain which the term “artifact” ranges over. This, I argue, leads to *the definitional complexity problem*. Considering the definitional complexity problem and the extensional problem I conclude that artifact essentialism fails to provide a coherent overarching artifact concept.

Essentialism is a vexed notion. It requires some preliminary remarks about the nature of essences. John Locke famously distinguished the real essence of things from their nominal essences (Locke, *Essay*, Book III, chap. III, §15, as cited in Thomas Reydon, 2014, p. 127). The former is generally construed as the mind-independent nature of things (e.g. intrinsic nature of water, H₂O), whereas the latter depends on how the relevant minds conceive of entities (e.g. odorless and colorless liquid) (Reydon, 2014, p. 127).

In the case of natural kinds, those authors who prefer semantics put forward by Kripke (1980) and Putnam (1975) seek out kinds whose nature is constituted by mind-independent essences (Thomasson, 2007a, p. 54). As Irene Olivero (2019) remarks, this Kripkean/Putnamian “externalist semantics” account has two crucial imports for any term in our language (e.g. ‘tiger’, ‘pencil’, ‘university’, etc.): “(a) it refers to things that have a nature (necessary features) possessed by all of the members of the term’s extension, and only by them; (b) linguistically competent speakers can be ignorant of, or mistaken about, such a nature” (p. 106). For instance, in the case of a natural kind term like gold, all gold atoms share the same atomic structure, and this structure is discoverable by the relevant scientific practices. This mind-independent essence of gold, in turn, fixes our reference to the term ‘gold’ and enables us to distinguish genuine gold from fool’s gold (Olivero, 2019, p. 106; Reydon, 2014, p. 130).

Some theorists suggest that a similar strategy applies to artifact kind terms as well (Putnam, 1975; Kornblith, 1980). Similar to the case of natural kind terms, these theorists argue that there is a functional structure for artifact kinds that can fix our reference for artifact kind terms. Philosophers like Crawford Elder (2007) argue further that some artifact kinds have mind-independent nature akin to natural kinds. I

will explain this point further in sub-chapter 2.1. For now, it should be noted that the traditional distinction between mind-dependent and mind-independent essences and their bearing on reality is contested (Reydon, 2014, p. 130). Not all natural kinds neatly follow this distinction. For instance, some philosophers point out that biology failed to provide genetic essences unique to species simply because species are found to be subjected to constant evolutionary change (Reydon, 2014, p. 131). A new form of essentialism is on the rise in the philosophy of science (Boyd 1999a, b; 2000; 2010 as cited in Reydon 2014, p. 130). According to this new essentialism, the essences need not be non-relational properties. Especially for biological kinds, historical and relational properties are taken into consideration in extracting essential properties (Reydon, 2014, pp. 130-131). Similarly, Nurbay Irmak notes that most of the artifact literature follows this form of essentialism (Irmak, manuscript). According to this view, Irmak writes “the essential properties of artifact kinds are relational or historical properties such as *being intended for φ* , or *being selected and/or reproduced for φ* , or *having a causal role φ in system S* , etc.” (Irmak, manuscript; italics original). Following Irmak, in this thesis, I do not assume that artifact essences are relational or non-relational. I take both types of essentialism into consideration. Having briefly elucidated what I understand from essentialism, I formulate essentialism about artifact kinds broadly as follows:

Artifact Essentialism: Necessarily, for all x , if x is an artifact, then there’s some essence E such that x has E , and x is a member of artifact kind K in virtue of E .

First, it should be noted that artifact kind essences and individual artifact essences need not always coincide. Kind essentialism is different from individual essentialism (Bird and Torbin, 2017). Individual entities necessarily instantiate kind essences,

however not vice versa (Bird and Torbin, 2017). Keeping that in mind, given the aim of this thesis is classificatory, I will consider artifact essentialism as a condition about kind essences. E indicates a non-trivial essential property or a set of properties for artifact kind membership. For instance, if artifact essentialism is best understood in terms of functions (more on this below), one would expect individual chairs to have the function of “seating a single individual”, and by this functional property, one could assess whether a given chair is a proper chair, or a malfunctioning chair or a non-chair (e.g. a chair beyond repair).

The most commonly discussed artifact kind essences (E) are the following (Grandy, 2007; Vega-Encabo and Lawler, 2014; Koslicki, 2018):

- 1) Functions
- 2) Maker’s intentions

I will not provide a detailed explication of any individual account.¹ However, I shall provide a general sketch –while focusing on some details when necessary– and see whether essentialism can provide an overarching artifact concept. Having provided the general essentialist outline, I raise two problems against artifact essentialism, namely the extensional problem and the definitional complexity problem. Both problems are raised by Mag Uidhir and Magnus (2011) in their attack against the art concept monism. I follow a similar argument.

¹ Vega-Encabo and Lawler (2014) makes a similar distinction between functional approaches and intentional approaches. However, their purpose limits them to focus on only etiological functions in discussing functional approach. I will consider both etiological and intended functions.

2.1 Function essentialism

A quick survey both on the literature and pre-theoretical intuitions shows that functions are the most favored artifact essences.² Even many familiar artifacts around us are named after their functions (Baker, 2008). To list a few: screw-driver, corkscrew, coffee machine. Hilary Kornblith (1980) writes, “At least, for the most part, it seems that what makes two artifacts members of the same kind is that they perform the same function” (p. 112). Kornblith’s statement provides us with the basic intuition behind function essentialism.

Recall that, I formulated artifact essentialism as the following: Necessarily, for all x , if x is an artifact, then there’s some essence E such that x has E , and x is an artifact of artifact kind K in virtue of E . Accordingly, Tim Juvshik (2021b) explicitly formulates function essentialism as follows: “Necessarily, for all x , if x is an artifact, then there’s some function F such that x has F , and x is an artifact of artifact kind K in virtue of F ” (p. 3). According to function essentialism, functions provide kind membership conditions for artifacts. For example, a triangle screwdriver and a magnetic screwdriver have distinct designs and perform their function differently. The former’s design is more safety-oriented, whereas the latter with the help of magnetic force performs a better job with smaller screws. Yet, they both drive screws. Given the significant multiplicity of form and design, according to function essentialists, functions provide a *prima facie* suitable artifact essence that can bind various artifacts under a single artifact kind. As Olivero (2019) states: “[...] contrary to the form, the function explains the principle of *multiple realizability*, namely that frequently we classify objects with very different shapes and appearances as

² Juvshik (2021b) formulates function essentialism and attempts to refute it. In this chapter I largely benefit from his discussion.

members of the same artifactual class” (p. 117). A kitchen usually includes spoons made of all kinds of materials such as wood, silver, and porcelain (Preston, 2013, p. 135).

However intuitive the functional characterization of artifacts and artifact kinds is, there is no consensus on how to characterize functions. Thus, there is not a unified account of function essentialism. The first attempt to characterize functions may be taking functions as answers to “what is it there for” questions, which in turn explains “how the thing got there” (Wright, 1973, pp. 146-56; Vega-Encabo and Lawler, 2014; Juvshik, 2021b). For instance, I can use a chair to reach the top shelves, yet a chair is *for* seating a single individual, just as the heart is there for pumping blood not for producing a unique sound. Larry Wright (1973) calls the former function of my chair function *as* and the latter *the* function.³ The main difference between these two senses of functions is that the latter has the explanatory force that accounts for the historically successful reproduction of, say, chairs which the former lacks.

Beth Preston notes that there is, in fact, a spectrum of functional views; reproductionist views at one end and intentionalist views at the other, while many mixed accounts in between (Preston, 2009, p. 218). Thus, Wright’s account falls on the pole that aims to explain both natural and artifactual entities’ existence in terms of their causal reproductive history, which are often called etiological views. On etiological views, *the* function of an artifact provides the best explanation for that artifact’s historical reproduction without requiring any reference to the mental states of the relevant agents. Corkscrews are reproduced since 1685 because they are good

³ The same distinction is used by many under different headings. Vermaas and Houkes (2003, pp. 262–66 as cited in Juvshik, 2021b) use standard/accident functions, Evnine (2016) calls it kind-associated/idiosyncratic functions.

at removing corks. However, corkscrews are not merely reproduced, they also have changed and show enormous variations; including but not limited to winged corkscrews, electric corkscrews, lever corkscrews (Juvshik, 2021b). Many corkscrews, on the other hand, are not even used for removing corks but used for aesthetic purposes. Thus, the causal reproductive history of an artifact does not provide enough tools for discerning the novel uses or an answer to the question of when a new artifact kind comes into existence. Etiological function accounts only for the nature of new members of a given artifact or natural kind (Thomasson, 2009, p. 205).

This is the well-known *novel kind problem* for etiological accounts (Preston, 2013).⁴ Pure etiological accounts fail to attribute functions to novel kinds and the first members –prototypes– of those novel kinds. Nevertheless, there are various ways to counter this problem. One of the most appealed solutions is proposed by Ruth Millikan (1999). By adopting intentionality into her theory of etiological function she argues that novel prototypes derive their functions from the intentions of their makers (Millikan, 1999, p. 205). In her view, “reproductively well-established families” of kinds have direct proper functions while novel artifact kinds have derived proper functions (Houkes and Vermaas, 2003, p. 276).

Theorists of function are not primarily concerned with elaborating artifact essences, but mostly discuss artifact functions in passing (Preston, 2009). Whereas many philosophers have recently pursued the consequences of adopting one aspect of proper function or the other.⁵ For instance, emphasizing the etiological aspect while eschewing the intentional properties Elder suggests that many artifact kinds

⁴ Houkes and Vermaas (2003) name it “the novelty desideratum” and Vega-Encabo and Lawler (2014) name it “the creation requirement”.

⁵ See also Marteen Franssen (2014) for a theory of structural kinds similar to Elder’s copied kinds.

share a similar nature with natural kinds (Elder, 2007).⁶ These kinds essentially instantiate a cluster of properties that are copied among the members (Elder, 2007, p. 37). The cluster of properties for artifact kinds includes three main elements: particular shape, proper function, and historical placement (Elder, 2007, p. 43). The kinds of objects that satisfy all these elements are *copied kinds*. Copied kinds include both natural and artifact kinds without having any ontologically significant difference between them.

However, Elder's account leaves us with conclusions that are at odds with our ordinary linguistic practices (Thomasson, 2007a; Juvshik, 2021b). In Elder's view, a familiar artifact kind such as *corkscrew* turns out not to be a copied kind since its nature is not specific enough because the shape shows high variations among corkscrews. Thus, Elder admits only specifiable artifact kinds like *winged corkscrew* which has a certain shape (e.g. winged), proper function (e.g. *to remove corks*), historically proper placement (e.g. H.S. Heely's 1888 patent) (Thomasson, 2007a). This result is controversial for those who try to account for intuitive artifact kinds such as *corkscrew* and *chair* (Thomasson, 2007a; Juvshik, 2021b).

Many philosophers, on the other hand, emphasize the intentional aspect of proper functions rather than the etiological aspect. Artifacts after all, as the argument goes, are in a significant sense dependent on the activities of conscious agents. Given the importance of intentions of the relevant agents, these philosophers appeal to Millikan's derived proper function instead of her direct proper function. Thomasson states that "as items created by our own intentional needs, desires, and plans,

⁶ There is a long debate of so-called realism/anti-realism about artifacts. Because of intentionality's alleged infringement on realism, artifacts are considered to be ontologically inferior. Thomasson and Baker, among others, argued that mind-independence is not a *sine qua non* for realism, still Elder and others favored the traditional mind-dependence/mind-independence dichotomy. See Thomasson (2003) for a more detailed discussion.

artifacts would seem to have derived proper functions — so, as Millikan herself notes, artifacts have as derived proper functions ‘the functions intended for them by their makers’” (Millikan, 1999, p. 205 as cited in Thomasson 2009, p. 205). To illustrate, the pasta dish I made for supper has the proper function of nourishment derived from my need for nutrients.

The intended function view seems to provide a better ground for artifact essences as it circumvents both the novel kind problem and the counter-intuitive fineness of grain of Elder’s account. For the former, novel prototypes have proper functions because their makers bestowed upon them those functions by making the necessary arrangements according to their conception or design.⁷ As for the latter, more general kinds like chairs or corkscrew are united by those proper functions intended by their makers. However, neither solutions that the intended function provides are uncontroversial. For now, I will focus on the second issue.

As mentioned before, some corkscrews are only produced or used for aesthetic purposes and are not intended to remove any cork. For instance, Paul Bloom presents exhibition ships as counter-examples to functional theories (Bloom, 1996, p. 5). Suppose that an agent decides to make a ship that is capable of sailing, but they decide that the ship is only to be used as an exhibition ship. In such cases, either one should admit that artifact kinds are not united by a shared intended function or that those particular entities are not members of the relevant artifact kinds.

Acknowledging the above cases, Simon Evnine (2016) defends the essentiality of functions for artifact kinds by making a distinction between kind-associated functions, the functions which bind the members of a given kind and

⁷ See Juvshik (2021c) for a detailed discussion of the role modification plays in the artifact creation.

idiosyncratic functions, the function unique to a member of an artifact kind (Evnine, 2016, p. 119). For instance, the kind-associated function of a chair is to be sat upon. When someone produces a chair for exhibition purposes, *that* chair in addition to its kind-associated function (*seating a single individual*) has an idiosyncratic function (*being an exhibition piece*). Thus, for Evnine, artifact functions are still present even when they are not performed or not intended to be performed (Evnine, 2016, pp. 121-24).

Although Evnine's distinction seems to secure kind-associated functions for Bloom's cases, still it suffers from a more serious case: artworks. Artworks are considered the epitome of artifacts. However, if artifacts are grouped under an artifact kind by their kind-associated (proper) functions, then many high esteemed artworks (especially the modern works after Marcel Duchamp's *The Fountain*) of the 20th and 21st century turn out not to be artifacts simply because they lack functions (Koslicki 2018, p. 218; Juvshik, 2021b). Furthermore, even if specific paintings may have functional properties such as heightening religious experience (e.g. religious paintings), *painting* kind does not seem to have unifying functional properties (Juvshik, 2021b). Thus, functional theories can only account for specific art kinds that are produced to fulfill certain functions.⁸

To sum up, etiological versions of function essentialism face the extension problem. Etiological function views are extensionally inadequate as they can only provide an arbitrary fineness of grain at best and leave out many familiar artifact

⁸ This argument, of course, rests on the assumption that there is not a working theory of art that attributes function to all artworks. Evnine (2016) is ultimately welcoming but skeptical about the possibility of a functional account of art that does not leave out purportedly functionless artworks (p. 129). However, see Enrico Terrone (2016) for an attempt to provide such an account. According to Terrone, the function of an artwork is to be assessed based on the features "which are relevant to its aesthetic appraisal" (2016, p. 499). Yet, as the debate is not settled, I will not get into further details and simply appeal to the strong intuition that modern art and conceptual art present cases of functionless artworks.

kinds. In contrast, intended function views are better equipped to deal with intuitive artifact cases. However, even the most elaborate versions of intended functional views suffer from the extension problem as they cannot easily explain Bloom's cases (e.g. exhibition ships). Even if there is a possibility to parry those cases, many non-functional artworks still constitute a deep extensional worry.

Given the heterogeneity of the artifactual world, some proponents of intended function restricted their domain of inquiry only to cover "technical artifacts" (Baker, 2007, p. 49). This, however, leads to a further problem, namely the definitional complexity problem (Mag Uidhir and Magnus, 2011, p. 85). Mag Uidhir and Magnus (2011) write, "In order to capture art's plurality and thereby avoid extensional worries, definitions often become dangerously complex, borderline arbitrary, or circular" (p. 85). Similarly, in the case of artifacts, delineating a distinction between technical artifacts and non-technical artifacts is proved to be not principled (Koslicki, 2018, p. 235; Juvshik, 2021b, p. 19). For one reason among many, appealing to the "technical artifact" restriction cannot be profitably defined to exclude "technical" artworks (Juvshik 2021b). For instance, the cases of computer art discussed in Dominic MacIver Lopes (2009) show that there are technically complex artifacts that have no obvious function (Juvshik, 2021b). Therefore, given these definitional complexities and extensional problems, it seems that both etiological and intentional theories of functions are far from providing an essence for the overarching artifact concept. Acknowledging this problem, Evnine also admits some form of pluralism by considering artworks as *sui generis* artifact kinds (Evnine, 2016, p. 129). Having explicated the functional essentialism and found it liable to extensional and definitional problems, in the next sub-chapter I will examine another promising essentialist account, namely intention essentialism.

2.2 Intention essentialism

The basic motivation behind intention essentialism is rooted in Paul Bloom (1996). Bloom (1996) writes “Someone can create a chair without intending anybody to sit on it, yet it is difficult to see how someone can create a chair without intending it to be a chair” (p. 10). The upshot of Bloom’s insights is that function and shape do not provide a stable ground for artifact grouping, but the maker’s intention does.

Based on Bloom’s insights, Amie Thomasson further develops an argument for intention essentialism (Thomasson 2003; 2007a; 2009; 2014). She examines the ramifications of Bloom’s suggestions in semantics and metaphysics of artifacts. Unlike Baker and Eynine, she does not appeal to the technical artifact restriction and aims to account for a wide array of cases including artworks. According to her, what lies at the core of artifacts is the maker’s intentions: “The creator’s intentions generally (whether or not they specify an intended function) are most relevant to determining whether or not her product is the extension of an artifact kind term” (Thomasson, 2007a, p. 55). Note that Thomasson’s intentionalist account is different from the functionalist accounts explicated in the previous sub-chapter.

Necessarily, for all x and all artifact kinds K , x is a K only if x is the product of a largely successful intention that (Kx) , where one intends (Kx) only if one has a substantive concept of the nature of Ks that largely matches that of some group of prior makers of Ks (if there are any) and intends to realize that concept by imposing K -relevant features on the object. (Thomasson, 2003, p. 600)

Thomasson’s intentionalist account does not imply any strict necessary *and* sufficient condition. Even if intention essentialism does not impose strict necessary *and* sufficient conditions, still, as the above quote shows, Thomasson argues that the maker’s intentions are necessary for *all* artifacts. Given that Thomasson’s intentionalist account constitutes some form of essentialism, it faces several problems. As I focus on the cases which seem to be artifact cases but fail to be one

given the definitional restrictions of essentialist accounts, I will leave the discussion of other problems aside.⁹ Intention essentialism leaves out what I will call *twilight kinds*.¹⁰ Twilight kinds include kinds such as *path*, *village*, *trail*, *footprint*, *doodle*, etc. Members of these kinds are not exhaustively products of intentions. For instance, a path can unintentionally come into existence as a result of many agents' repeated movements from one place to another via the same way (Koslicki, 2018, p. 219; Sperber, 2007, p. 125). Although some members of twilight kinds come into existence unintentionally, still as a kind *path* or *village* we seem to agree on their status as artifact kinds (Irmak, manuscript).

Acknowledging the twilight kinds Thomasson slightly restricts her account. She limits her account to cover only “the essentially artifact kinds” members of which are exhaustively produced with the right sorts of intentions (Thomasson, 2007a, p. 58n5). Also in a later work, she restricts her account to cover only “public artifact kinds” (Thomasson, 2014, p. 46). By adopting the element of recognition to her account, she claims that public artifacts are essentially artifact kinds that are produced to be regarded as artifacts (Thomasson, 2014). Thus, she excludes “useful objects that an individual might privately create for some novel need” (Thomasson, 2014, p. 46). Still, in addition to private artifacts, twilight cases are ruled out from her account. This exclusion, to my knowledge, is not defended thoroughly, except in Juvshik (2021a) to some extent.¹¹

⁹ See Koslicki (2018, pp. 226-37) for a list of problems intention essentialism faces and see Juvshik (2021a) for a reply.

¹⁰ Twilight kinds are discussed in Margolis and Laurance (2007), Preston (2019) and Koslicki (2018, pp. 219-20). I derive the name “twilight kind” from Koslicki’s discussion. Koslicki claims that if the law of excluded middle does hold, then these cases cast a confusion since they seem to be neither natural kinds nor artifact kinds (Koslicki, 2018, p. 235).

¹¹ Hilpinen (1992, p. 66) in a short paragraph suggests that cases like village should be taken as “natural cultural objects”, echoing what some archeologists and anthropologists call “naturefact”. These are objects crafted by natural forces put into human use, such as rocks used as hammers. See Hilpinen (2011) and Preston (2019) for further discussion. Similar to Thomasson, Evnine (2016, pp. 19-20) and Grandy (2007, p. 24) rule twilight kinds out of their discussion.

According to Juvshik, there are two lines of argument against the intention-dependent nature of artifact kinds: “(1) Artifacts are not necessarily mind-dependent, but most of the artifacts around us happen to be. (2) Artifacts are necessarily mind-dependent, but do not need to be intention-dependent” (Juvshik, 2021a). To defend intention essentialism, Juvshik (2021a) considers five cases: Regarding (1), swamp and modal cases. Regarding (2), accidental creation, mass-production and automated production. Not all of these cases are related to my purposes. Leaving out mass-production and automated production, I will discuss swamp and modal cases later. For now, I will focus on accidental creation.

The closest case discussed by Juvshik to the twilight cases is the case of accidental creation. Accidental creation is distinct from proper creation because in the former the intention to create *that* item is lacking. His discussion of accidental creation mostly revolves around the cases of failed-attempts-turned-into-new-artifacts. For instance, the piece of bread I forgot in the toaster turns out to be pretty good charcoal for my new drawing. So, I accidentally create a new piece of drawing charcoal. However, Juvshik aims to show that there is neither a toast nor a piece of charcoal unless they are *appropriated* in the right sort of way. The moment of my appropriation of the failed toast as a piece of drawing charcoal marks the moment of the new artifact’s coming into existence. Appropriation also requires me to have, at least, a basic awareness of the relevant success conditions of making a piece of drawing charcoal.

Note that Juvshik does not directly defend the essentiality of the maker’s intention (Juvshik, 2021a). On the contrary, in his account, a later appropriator’s intentions can override the original maker’s intentions. For instance, my friend who loves her meal burnt can see the failed attempt as a perfect toast and grab my piece

of drawing charcoal only to happily eat it. In this case, it is hard to determine who is the ultimate appropriator or whether the resulting object is both a piece of drawing charcoal and a delicious toast. This problem is related to a more general problem of “user intentions” (Koslicki, 2018, pp. 227-30). In many cases, user intentions seem to replace the makers’ original intentions. For instance, the first telephone Graham Bell invented as a hearing aid later became the most common device for long-distance communication (Koslicki, 2018, p. 228). As mentioned above, Juvshik’s discussion of appropriation addresses this problem, however as the case with toast/drawing charcoal exemplifies, it can lead to conflicting results. Because the exact point of time an artifact comes into existence seems to be indeterminate.

Still, I think twilight kinds pose a threat different from the cases of accidental creations and the problem of user intentions, and they are not directly addressed in Juvshik’s paper. Twilight cases do not seem to result from failed attempts. Instead, they come into existence without attempting to create an artifact. Yet, Juvshik might respond that even if some members of twilight kinds are not failed-attempts-turned-into-new-artifacts, they are still non-artifacts unless they are correctly appropriated. If that is the case, then the path resulting from repeated commuting from my barn to my house is not actually a member of the *path* kind. Unlike Thomasson, Juvshik rules out not the kind itself but the unintentional cases. However, this will end up admitting that a large number of twilight cases, even though they share a similar morphological structure with their intentionally created counterparts, are ultimately waiting for an appropriator to confer them a status of artifactuality. I do not think that an archeologist or an anthropologist would accept the result that the path resulting from repeated commuting is not created, say, one thousand years ago but at the moment they approve it as a path. Archeologists and anthropologists would

discuss the significance of the path to that culture regardless of it being a product of specific intentions. Thus, contrary to Juvshik, I think that the twilight cases amount to genuine artifact cases without requiring a strict intention dependence. Twilight cases can be considered mind-dependent since their coming into existence requires the presence of agents with minds.¹² However, Juvshik might respond that the term “artifact” in fields such as archeology does not pick up the same sense under dispute here. This is both an objection and a motivation to the pluralism I outline in this thesis. It is an objection because mixing the domains seems to result in conflating two or more different senses of the same term. It is a motivation because pluralism aims to account for extensional problems without requiring a significant restriction or revision in our artifact ontology. I will discuss this issue further in chapter 5.

Even if one agrees that the twilight cases pose a legitimate worry for intention essentialism, still, a proponent of intention essentialism can point out that those cases are a burden for everyone. Thus, as Juvshik argues against swamp cases¹³, they can suggest that those cases are best left out until our most promising theory can account for them (Juvshik, 2021a).¹⁴ However, we should not opt for the inference to the best explanation without examining other alternatives in depth. I think there is a neglected alternative. I will outline artifact concept pluralism as an alternative to the artifact concept monism after I challenge artifact anti-essentialism in the next chapter.

¹² I elaborate on the distinction between mind-dependence and intention-dependence in sub-chapter 4.2.

¹³ Swamp cases are cases in which the natural forces shape artifact-like objects by sheer luck.

¹⁴ See also Bloom (1996): “the current appearance and potential use of entities like the rock-chair are best explained in terms of intention- it is just that the best (most plausible, least mysterious) explanation is not the one that is actually correct” (p. 22n6).

CHAPTER 3

ARTIFACT ANTI-ESSENTIALISM

Preceding discussion indicates that there seem to be a plethora of essentialist accounts. In contrast, unfortunately, there is not any fully developed anti-essentialist account. This is the reason why Koslicki discusses general anti-essentialist frameworks that might apply to the case of artifacts instead of artifact anti-essentialism (Koslicki, 2018, pp. 237-40). However, here I will focus on the artifact literature to extract some anti-essentialist views.

Some anti-essentialists argue that *artifact* is a family resemblance notion, that there is no property or cluster of properties shared by all artifacts or necessary for something to be an artifact (Sperber, 2007). As Preston (2018) points out, Dan Sperber emphasizes the continuum between artifact kinds and natural kinds. Here, a continuum between natural and artifact kinds implies that a hard line between natural and artifact kinds cannot be easily drawn. Because whether it is function or intention that should delineate an artifact's essence, Sperber argues, both can be found among many members of natural kinds (Sperber, 2007). Sperber exemplifies the continuity of functions and intentions in the case of seedless grapes. Seedless grapes cannot reproduce by themselves but can only be reproduced by humans for nutrition purposes (Sperber, 2007). This suggests that intentions can interfere in natural functional processes in a way that definitions provided in the previous chapter cannot exclude these examples. And they can easily be multiplied. Given the extensional problems and the continuum problem artifact essentialism faces, Sperber (2007), as well as Preston (2018), suggest that we are “better without an overarching

artifact concept in social sciences” (Preston, 2018). The continuum problem is pressing as the difference between natural and artifact kinds evaporates due to technological advancement (Baker, 2004). Baker (2004) cites the bacteria grown in laboratories, synthetic body parts, etc. However, this problem needs its own detailed treatment. Instead, I will now focus on two anti-essentialist strategies in the vicinity that aim to account for the extensional and definitional problems faced by essentialists without giving up on the classificatory aims. Although Sperber’s anti-essentialism aims to argue against classificatory aims since there is no unique property picked out by all and only artifacts, the following anti-essentialist accounts aim to give the nature of artifacts not in terms of necessary or essential properties, but through context relativity (sub-chapter 3.1) and homeostatic property clusters (sub-chapter 3.2).

In this chapter, I explain two anti-essentialist strategies. In sub-chapter 3.1, I focus on Thomas Reydon’s (2014) “epistemological turn” to artifact kinds. Here, epistemological turn means that metaphysical issues come after epistemological considerations in the case of artifact kind groupings (Reydon, 2014, p. 133). Although I agree with Reydon that the metaphysics of artifacts should pay closer attention to the relevant epistemic contexts and inquiries, I reject his way of grouping artifacts solely on an epistemic basis. I argue that the discussions about these relevant epistemic contexts and inquiries mainly come up with at least three kinds of groupings by virtue of which we can develop pluralistic metaphysics. In sub-chapter 3.2, I discuss one possible anti-essentialist view that might be developed for artifact kinds, which is based on the Homeostatic Property Cluster view Richard Boyd (1999) advances. I share the same worries and motivations with both anti-essentialist views while developing the pluralist account, which is to account for

extensional problems without definitionally restricting the domain of artifacts.

However, I worry that the current state of anti-essentialism suffers from eliminating all necessary properties from the discussion on artifacts and this results in the proliferation of counter-intuitive artifact cases.

3.1 Context relativity

One anti-essentialist strategy takes artifact groupings as context relative. Thomas Reydon (2014) is less pessimistic than Preston and Sperber. While the latter authors imply, as mentioned above, that the term artifact should be put aside, Reydon defers the issue of artifact kind groupings to particular relevant epistemic contexts (Reydon, 2014, p. 133). For Reydon (2014), "These epistemic contexts include academic disciplines such as archeology, art history, cultural anthropology, museum studies as well as engineering and design practices" (p. 137). The reason behind Reydon's turn to epistemology is that extensional problems threaten the authority of armchair philosophy. As explicated in the previous chapter, etiological functions, intended functions, and maker's intentions fail to provide an overarching account. Given the problems they face, each requires some form of domain restriction. For Reydon, to avoid counter-intuitive or arbitrary restrictions we should settle down the ontological questions only after determining the epistemic context (Reydon, 2014, p. 141). Thus, what is left for a metaphysician (or, in this case, an anti-metaphysician) is to track and analyze how the different artifact concepts are used in the relevant epistemic contexts.

According to Koslicki, pure context relative solutions of artifact anti-essentialists are not plausible in the case of artifacts (Koslicki, 2018). Koslicki (2018) writes,

“[...] empirical questions only arise once we have taken as fixed that screwdrivers are primarily intended to be used by agents who wish to engage in certain kinds of actions, viz., to tighten and loosen screws” (p. 239). Thus, she claims that we engage with artifacts not on an explanatory basis, but on practical grounds (Koslicki, 2018, pp. 239-240). This means that, according to Koslicki, while we engage with members of natural kinds to discover their shared properties, what it means for an entity to be an artifact is something we decide before we engage with the candidate entities.

Reydon agrees with Koslicki that the metaphysics of artifacts primarily aims at specifying the general nature of artifacts before we engage with artifacts. For Koslicki, this is why context relativity is not helpful in determining the nature of artifacts. However, Reydon argues that metaphysical approaches, so far, failed to agree on how to specify the general nature of artifacts, that’s why it is better left open:

Any metaphysics-oriented approach to developing a theory of artifact kinds must begin by agreeing upon the kind of metaphysics that is sought a metaphysics in terms of necessary and sufficient properties for kind membership, one that recognizes only structures as real, one that allows both non-sharply delimited kinds next to strict kinds, one that conceives of artifacts as being individuated only by functions, one that thinks of artifacts as having a dual nature, etc. Thus, on metaphysics-oriented approaches, as long as the nature of artifacts is an unsettled issue, the nature of artifact kinds must remain open too. (Reydon, 2014, p. 141)

This implies that if metaphysical approaches are far from settling on the general nature of artifacts, we should better track how epistemic contexts fare with artifacts, only then can it be decided whether “an overarching metaphysics of artifact kinds is feasible or a pluralist metaphysics is required” (Reydon, 2014, p. 142). Agreeing with Reydon I think context relativity can help us solve the definitional and extensional problems artifact essentialism faces. However, I do not believe that the

solution is purely epistemological. In the remainder of this thesis, I will argue for an epistemically informed pluralist metaphysics for which Reydon seems to pave the way. Once I explicate the form of artifact pluralism I have in mind, I will qualify this claim in chapter 4. For now, note the following points by Mag Uidhir and Magnus that make pluralism suitable for both species concept and art concept (Mag Uidhir and Magnus, 2011, p. 90). I adapt the following points for artifacts.

Multiple concepts are profitably used by practitioners [1] . . . Even without a settled [artifact] concept, we can agree on the rough boundaries of many [artifact kinds] [2] . . . No overarching concept can profitably apply to all instances [3] . . . Some of the concepts involve an arbitrary fineness of grain [4]... (Mag Uidhir and Magnus, 2011, p. 90)

Artifact anti-essentialists seem to endorse (1) and (3), they use (2) to argue that the nature of the artifact concept is better left open. However, they miss the fact that not only do we agree on the rough boundaries of many artifact kinds, but also on the ways individual artifacts can be grouped under those artifact kinds. The pluralism I motivate in chapter 4 is also similar to the anti-essentialist proposals in spirit. I take it that there is no single way of dividing the artifactual world. However, I deny the inference from the idea that there is no overarching artifact concept to the idea that there is not any legitimate way of dividing the artifactual world. I think ample theories recently developed concentrate on at least three productive artifact concepts: *morphological artifact concept*, *purely intentional artifact concept*, and *intentionalist functional artifact concept*. I argue that even though none of these concepts are extensionally or definitionally unproblematic, still they play distinct yet significant roles both in ordinary talk and other disciplines. Thus, instead of completely withdrawing from classificatory aims or leaving the nature of artifacts unspecified, I suggest that by adopting artifact concept pluralism we can rather focus on the merits of artifact concepts individually. For now, I will turn to one possible artifact anti-

essentialist theory based on Richard Boyd's Homeostatic Property Cluster view which aims to account for the extensional and definitional problems artifact essentialism suffers from.

3.2 The homeostatic property cluster view

Thomas Reydon (2014) outlines the second anti-essentialist strategy as well but does not expand on it. He considers the possibility of artifact kinds being homeostatic property clusters. Nurbay Irmak (manuscript) expands on this possibility and benefits from the HPC view to formulate an anti-essentialist metaphysical approach. I think it would be informative to explicate the HPC view briefly and contrast a possible anti-essentialist view based on the HPC view with the pluralistic metaphysics that I outline in this thesis.

Richard Boyd (1999) develops the HPC view for natural kinds. According to the HPC view, members of a certain kind are not united in virtue of necessarily instantiated essences but in virtue of similarities. The similarities among the members of a kind are stable enough to sustain our taxonomical practices. Furthermore, these similarities are not clustered arbitrarily, as Boyd argues, they result from some "underlying homeostatic mechanisms" (Boyd, 1999). One advantage of the HPC view over essentialist proposals might be that it accounts for the flexibility and change in both natural kinds and artifact kinds. The reason is that the HPC view takes the nature of species as open. This means that the nature of species, for the proponents of the HPC view, is not fixed by some essential properties as opposed to what traditional species concepts take them to be (Reydon, 2014, p. 134).

However, a quick concern regarding the kind membership conditions arises against the HPC view: How do we assess whether a given organism or an artifact belongs to a certain kind? The answer is not straightforward. The HPC view suggests that there is a property cluster associated with a kind. The properties are not necessary or essential to a given cluster because it can lose some of the associated properties or gain others over time (Reydon, 2014, p. 134). Furthermore, Boyd argues that not all members of a kind need to instantiate all the properties of a given cluster (Boyd, 1999, p. 143). For instance, assuming that the kind *chair* has the functional property of *seating a single individual* necessarily, then a functional essentialist would expect all individual chairs to have that functional property. However, since the HPC view takes properties neither as essential nor necessary, when adapted to artifact kinds it admits the possibility of non-functional chairs. Thus, an exhibition chair or a malfunctioning chair (or a chair beyond repair) can still be considered as a member of the *chair* kind. The reason is that the HPC view still seems to work if artifacts instantiate only some properties associated with an artifact kind. Adapting the HPC view to artifacts, one can leave which conditions are minimally fixed necessary and sufficient for an artifact to be a member of an artifact kind as unspecified. Although there are not minimally fixed necessary and sufficient conditions that entities need to satisfy, still this does not mean that the nature of artifact kinds is determined arbitrarily. Similar to the case with species, according to the HPC view, the properties associated with a certain artifact kind might result from certain causal-historical relations. These causal-historical relations might include the reproductive history of an artifact kind, being selected for a certain intended function over a certain period, etc. These causal-historical relations might not result in associated properties as stable as in the natural kinds. However, this might be the

price an anti-essentialist who argues in the line of the HPC view might willing to pay to account first for the extensional problem artifact essentialism faces and second for the evolutive nature of artifact kinds. One benefit, or for some philosophers an additional cost, of the HPC view is that this form of anti-essentialist account, in turn, might admit accidental creations as well as byproducts that lack intentional properties. Simply because, in this view, artifact kinds do not have their associated properties necessarily or essentially.

Although an anti-essentialist view advanced in these lines seems to account for the extensional problems, still, the cost is worrying. Eliminating the necessary and essential features from artifact kinds leaves us with vague boundaries, as Reydon (2014) acknowledges by saying that “[t]he HPC view fails to provide membership criteria for kinds” (p. 140). I believe this cost stems partly from assuming the monistic framework at the backdrop. So the argument goes, if it is not possible to come up with an extensionally adequate overarching artifact concept, then alternatively the nature of the overarching artifact concept should be left open.

Consider the following case with anti-essentialism about art concept. To account for the revolutionary artworks of the 20th century that defied the limits attributed to the preceding artworks and art traditions, Morris Weitz (1956) argues that we should regard art as an open concept. This does not mean that the nature of art is lacking, rather it means that there is not any property such that it is necessary for something to be an artwork (Mag Uidhir and Magnus, 2011). Similarly, an anti-essentialist view based on the HPC view also provides a structure to account for the flexibility that artifact kinds show at the cost of denying necessary properties.

However, being an artifact seems to require, at least, one necessary property: that all artifacts are mind-dependent.¹⁵

If artifact kinds are not necessarily mind-dependent, in other words, if artifact kinds do not require the presence of agents with cognitive capabilities, then there seems to be no basis for discarding the swamp cases and modal cases from our artifact ontology (Juvshik, 2021a). A proponent of the HPC view might respond to modal and swamp cases by claiming that those cases lack the causal and historical mechanism required for the existence of the members of the HPC clusters. As mentioned above these causal and historical mechanisms might include the history of selection and reproduction in the case of artifact kinds. Even though some members of kinds such as *path*, *village*, *doodle* do not have a history of selection and reproduction, still one can respond like the following: Granted that twilight kinds are genuine artifact kinds, then the HPC view can secure mind-dependent properties among associated properties of those kinds. Thus, without claiming that those kinds are necessarily mind-dependent, the HPC view might claim that twilight kinds happen to be mind-dependent due to some causal-historical mechanism.

However, this response does not seem to directly address the threat of modal and swamp cases. The HPC view owes us an account of how and why certain properties are associated with, say, *village* kind. Keeping the lack of such an account in mind, suppose that due to a strange accident of nature a swamp village comes into existence. Then, what would preclude one from arguing that the nature of the *village* kind is changed in a way that now the *village* kind does not have *being mind-dependent* among its associated properties? I can imagine that the proponent of the

¹⁵ See sub-chapter 4.2 for an elaboration on mind-dependence and further comparison between the HPC view and pluralism.

HPC view might deny that a single case suffices by itself to change the nature of an artifact kind. However, it is not hard to twist the example so that many modal and swamp villages come into existence over a certain period of time. Thus, I do not see a reason why sufficient frequency of modal and swamp cases would not participate in determining the associated properties of a given artifact kind.

The pluralism I outline in the next chapter shares the same main motivation with an anti-essentialist account based on the HPC view briefly outlined in this paper. That is to account for the extensional problems without restricting the scope of the term artifact. However, instead of completely eliminating necessary or essential features from the picture, I suggest that we should adopt pluralism without giving up on the mind-dependence condition. Pluralism takes note of the benefits of the artifact concepts individually. Moreover, there are only a limited number of candidate artifact concepts that direct us to fruitful taxonomic practices.

CHAPTER 4

MOTIVATING PLURALISM

It is not surprising that a single definition cannot easily capture the nature of all artifacts. This is hinted at in many philosophers' discussions. For instance, Thomasson (2014) writes, "The very term "artifact" is itself used quite loosely, and in many different ways, so there may be no single characterization of what is essential to artifacts that fits best" (p. 46). Bloom, in a similar vein, states that intentions provide the best source for what is essential to artifacts, but not the one that is exactly correct (Bloom, 1996, p. 20). However, the background assumption of monism remains unchallenged despite the extensional problems monism leads to.

In this chapter, by outlining how species and art concept monism leaves out other widely used senses of these concepts, I aim to draw a parallel to the artifact concept. I argue that in the case of artifact concept too, the multiplication of senses is not a vice but an advantage. However, this does not necessarily lead us to an unrestricted proliferation of the senses. Classifications such as "objects that can be used either as doorstops or as cleaning supplies"¹⁶ do not guide us to a useful concept. After I introduce the species and art concept pluralism, I outline three widely used artifact concepts and their implications. In the following two sub-chapters, first I compare and contrast artifact concept pluralism with artifact essentialism and then second with artifact anti-essentialism. Even though the artifact concept pluralism outlined in this thesis is not perfectly detailed, still I conclude that pluralism has certain advantages that cannot be neglected and thus is worth pursuing.

¹⁶ I borrowed this example from Koslicki (2008, p. 202).

4.1 Pluralism in other fields and artifact concept pluralism

Many different species concepts are proposed by various biologists such as the ecological species, the phylogenetic species, the biological species, just to name a few (Ereshefsky, 2002). These concepts classify organisms into species according to different principles.¹⁷ Marc Ereshefsky (1998) picks out three prominent species concepts that are used by biologists. However, different versions of each concept have pitfalls that leave certain organisms or significantly shared characteristics of those organisms out of the picture.

The phenotypical (also called morphological¹⁸) species concept uses exhibited characteristics of organisms to sort them into species at a given time while ending up disregarding the evolutionary history of species. The biological species concept sorts organisms according to their sexually reproductive capabilities, simply leaving out asexual organisms that reproduce by other means (e.g. vegetative reproduction). The phylogenetic species concept traces the evolutionary ancestry of organisms to situate species in the evolutionary tree of life, however, due to the evolution, the phylogenetic concept does not provide a stable taxonomy (Ereshefsky, 1998, pp. 104-6; Mag Uidhir and Magnus, 2011, p. 89).

Similarly, Mag Uidhir and Magnus (2011) argue that there are at least four distinct art concepts that are gainfully used by the philosophers of art. These concepts do not overlap while agreeing in many cases. The aesthetic art concept emphasizes the formal properties of artworks and provides a valuable source of

¹⁷ Ereshefsky claims that these are not epistemological principles based on our cognitive incapacity or lack of scientific information, but ontological principles based on “biological forces” (Ereshefsky, 2002).

¹⁸ See John Dupré (1993, pp. 44-5).

information primarily for perception-related cognitive inquiries. The historical art concept emphasizes the historical properties of artworks, useful for historical inquiries. Conventional art concept traces the norms governing the art world institutions and practices, providing significant information for sociological and anthropological studies. The communicative art concept focuses on “the representative, semantic and expressive content” of artworks, serviceable for learning and emotion-related cognitive inquiries (Mag Uidhir and Magnus, 2011, p. 92).

According to Mag Uidhir and Magnus, in both cases, insisting on monism ends up in a parochial understanding of the relevant domains (Mag Uidhir and Magnus, 2011, p. 92). Arguing for a single overarching concept disregards the other fruitful senses of both the species concept and the art concept. As explicated above, for instance, in the case of species concept the biological species concept does not range over asexual organisms whereas the phenotypical species concept does. Similarly, in the case of art concept, the conventional art concept excludes outsider art, whereas the aesthetic art concept can range over those cases (Mag Uidhir and Magnus, 2011, p. 92). However, admitting pluralism does not mean that all senses of art or species are fruitful. The relevant senses that pluralism should include are epistemically informed, in other words, these concepts must already be in use among the practitioners (e.g. biologists, art critics and historians, philosophers of art).¹⁹ Mag Uidhir and Magnus name this form of pluralism “responsible pluralism” to distinguish it from “anything goes” approaches (Mag Uidhir and Magnus, 2011, p. 90). Granted that an epistemically informed responsible pluralism is possible for

¹⁹ I explain why the pluralistic framework is fruitful for artifact concept later in this chapter, after I list the candidate artifact concepts.

both species and art concepts, in the remainder of this chapter I try to motivate a similar form of pluralism for the artifact concept and defend it against possible objections in chapter 5.

My aim in this thesis is to outline a rough guide for artifact concept pluralism. It is enough for pluralism if I can show at least two different artifact concepts are well-motivated (Mag Uidhir and Magnus, 2011, p. 91). I state three. These are morphological, purely intentional, intentionalist functional conceptions. I choose to focus on these three concepts as I believe the combination of these three concepts provides the best result extensionally. Before turning to the relevant domains and purposes, let me first briefly state the candidate concepts I have in mind:

Morphological artifact concept: Considerations regarding shape are undeniably important when it comes to artifacts. Psychologists Barbara C. Malt and Steven A. Sloman write,

[Researchers] then asked children and adults whether objects having either the same function or same shape should be called by the training name. They found that the children tended to accept the name for objects with similar shapes. Adults tended to accept the name for those with similar functions, but they did so more for unfamiliar objects than familiar ones and more when function had been demonstrated during training than when not. (Malt and Sloman, 2007, p. 89)

According to Malt and Sloman, artifact categorization is not settled on a single feature artifacts display. Shape, function, and intended category membership all play a role in our various ways of artifact groupings. For instance, “beanbag chair that is called ‘chair’ by virtue of a functional relation to kitchen chairs and an electric chair that is called ‘chair’ more on the basis of its form” (Malt and Sloman, 2007, p. 122).

While many do not consider morphology as a standalone concept, it is almost uniformly agreed that shape constitutes a major part of any theory about artifacts. In

the metaphysics of artifacts, shape plays an indispensable role in Franssen and Elder's respective artifact ontologies. As we see in chapter 2, exact similitude is one tenet of these philosophers' non-intentionalist ontology. Recall that Franssen's and Elder's fine-grained ontologies can accommodate only highly specific artifact kinds such as *Pasha Seatimer grand modèle automatique Cartier watch* and *Eames 1957 desk chair* (Elder, 2007; Franssen, 2014). Whereas according to intended function essentialism, shape follows function. More importantly, if the intuitive kinds like *chair* and *table* are to be retained, then shape cannot provide stable kind membership conditions for such artifact kinds. Simply because members of these artifact kinds come in various shapes. Intentional essentialists also agree with functional essentialists and argue that morphological properties although important cannot provide a solid basis for kind membership. Instead, morphological properties sometimes play a more crucial role than function in some maker's intentions. This, I believe, stems from the monistic assumption in the background. The shape is mixed into functions and makers' intentions. This need not be the case if we shift the framework to pluralism. I believe that a morphological conception needs to be fleshed out in order to accommodate morphological classifications in certain domains and inquiries. For instance, in archeology, classifications based on morphological properties play a crucial role in artifact classification. These classifications do not necessarily involve reference to makers' intentions or functions whether intended or etiological. Archeologists Robert Laurens Kelly and David Hurst Thomas remark that morphological classification is highly used by practitioners alongside the functional and temporal classifications (Kelly and Thomas, 2013, pp. 99-100). Depending on the task and the object at hand, an archeologist can classify an object under a coarse-grained grouping such as "flat-

bodied-with-protruding-legs” (Kelly and Thomas, 2013, pp. 99-100). According to Kelly and Thomas, morphological classification requires an item to show similarity in displayed characteristics, also the item should be laden with information regarding the past culture (Kelly and Thomas, 2013, p. 100).

Thus, under the morphological artifact concept, we can say that artifacts are mind-dependent objects that show displayed similarities. These objects need not have functional properties or be intentionally created. I am aware that the notion of similarity is quite vague and needs further specification. However it is left unspecified purposefully as it should be noted that some variations of the morphological concept may require more strict similarity and result in a finer-grained classification whereas others, depending on the inquiry, may involve a coarse-grained classification (Houkes and Vermaas, 2013; Franssen, 2014; Elder, 2007).

Purely intentional artifact concept: Intentions provide a better understanding of the normative aspects of artworks compared to the other two concepts. For instance, David Friedell (2020) argues that since Bruckner’s unfinished 8th Symphony is intended to be produced as a member of *symphony kind* in the Western classical music tradition, a subsequent composer could finish the work posthumously. This is because the relevant convention (e.g. Western classical music tradition) allows for such a change in a given symphony while sustaining the work’s identity.²⁰ Thus it seems that what is essential to artworks is determined by the intentions of their makers and the conventions these intentions play out. If that’s the case, then a purely intentional concept would better capture the nature of these

²⁰ Perhaps, only if there is no explicit “sanction” by the artist precluding any such change. See Sherri Irvin (2005) for a relevant discussion.

artifacts. Under the purely intentional concept, we can say, artifacts are mind-dependent objects that are made to be a member of a certain artifact kind. These objects may or may not have functional properties (Thomasson 2003, 2007a, 2014; Juvshik 2021a).

Intentionalist functional artifact concept: The intentionalist functional concept successfully sorts artifacts that show significant form variations under the same kind (Baker 2004, 2007; Hilpinen 1992, 2011; Evnine, 2016). However, it cannot be profitably used in the case of artworks (e.g. conceptual art). Intended functions are used both in folk classification and engineering practices. Thus, under the intentionalist functional artifact concept artifacts are mind-dependent objects that are made to perform certain functions.

It must be noted that the concepts of artifact briefly elaborated above is not an exhaustive list, it only aims to cover the widely used senses of artifact concept. As expected, these artifact concepts share many of their extensions. In the case of species and art concepts, people can use “species” and “art” distinctly without specifically stating the concept they use (Mag Uidhir and Magnus, 2011, p. 92). Similarly, in the case of artifact concept, folk classifications, as well as social sciences and engineering practices use the artifact concept quite liberally.

By shifting the focus we do not have to settle down the problem cases as “spoils to the victor” (Juvshik, 2021a). The winner-take-all approach flat-out rejects the problematic senses of the artifact concept. However, in a pluralistic framework, we can fruitfully approach specific kinds of problem cases within the boundaries of a specific artifact concept and see to what extent that concept manages to account for such cases (Mag Uidhir and Magnus, 2011, pp. 92-5). Many consider artworks as artifacts (Dickie, 1984; Levinson, 2007; Mag Uidhir, 2013). If some artworks are not

functional, then we can better approach the philosophy of art with a purely intentional artifact concept at the backdrop.

The substantive necessity of intention-dependence should be seen as posing a philosophical constraint not just for any theory of art but also for the philosophy of art itself. That is, we ought to expect any and all philosophical enquiry into art and its associated *relata* (i.e., the nature of art, artworks, art forms, art practices, art ontology, art interpretation and evaluation, etc.) to yield conclusions at least minimally consistent with, if not directly informed by, the basic background assumption that intention-dependence is a *substantive* necessary condition for being art. (Mag Uidhir, 2013, pp. 5-6; italics original)

According to Mag Uidhir, the intention to create an artwork provides significant information regarding the nature of that artwork. Thus, even though a certain snowy hill may have more exciting aesthetic properties than Pieter Bruegel's *Hunters in the Snow*, with the purely intentional artifact in mind, we can rule out such cases since they are not artifacts, according to the purely intentional concept, hence not artworks.

This means that depending on the inquiry we may need distinct concepts to classify certain artifacts. For instance, in historical inquiries conducted by archeologists shape may play a crucial role in evaluating the cultural significance of the found object. Archeologist Steven Mithen (2007) notes that "Polly Wiessner (1983), for instance, studied the arrowheads of the !Kung bushmen of Southern Africa and documented how their specific shapes are not only effective at killing game but define individual and social identity" (p. 290). !Kung bushmen's arrowheads thus belong to different artifact kinds under the morphological artifact concept. In this case, it is not the function but the shape plays a more important role in determining the membership conditions. One may object that it is not the shape itself but the intention to create an arrowhead that has a certain shape is what plays this role. However, we can imagine a scenario in which a !Kung bushman can find

an arrowhead-shaped stone in the forest, still, that arrowhead would provide a valuable source of information for archeologists. Furthermore, archeologists not only may classify found objects as artifacts, but also accidental or unintentional creations such as woodchips that result from making wooden spears are considered to be artifacts (Schick and Toth 1993 as cited in Preston, 2018; Fullagar and Matheson, 2014). Mithen writes:

Archeologists are able to use artifacts of modern humans in this manner because even the most mundane, such as slabs for grinding plants or stone blades for slicing meat, are potentially laden with information about the social, economic, and ideological worlds of past peoples (Mithen, 2007, pp. 289-90).

Both unmodified slabs and accidentally modified stones can hint to archeologists and anthropologists crucial information regarding the past cultures. In engineering practices as well, both functional and morphological concepts are frequently used.

As Sven Ove Hansson writes:

The vast majority of the categories we use to classify technological objects are specified according to functional characteristics. Screwdrivers, nutcrackers, calculators, pens, aircrafts, chairs, diodes, ladders, lamps, refrigerators, and particle accelerators are all functionally defined categories. Other technological categories are predominantly structural (physical). This applies for instance to the notions of a plank, a steel wire, a rope, and a fiberboard. As these examples indicate, technological categories defined in structural terms tend to be raw materials or multipurpose components. In order to determine if an object belongs to one of these categories, it is sufficient to know its structure, i.e. what its components are and how they are put together. (Ove Hansson, 2020, p. 71)

Ove Hansson's discussion indicates that even though functional and structural properties are entrenched with the intentions of designers, in order to make sense of the engineering objects we dominantly need functional and morphological artifact concepts.

It should be noted that variations of the morphological concept result in arbitrary fineness of grain. For instance, depending on the inquiry and context

artifacts can be partitioned into fine-grained artifact kinds such as *Pasha Seatimer grand modèle automatique Cartier watch* (Franssen, 2014, p. 78) or a coarse-grained classification such as *flat-bodied-with-protruding-legs* (Kelly and Thomas, 2013, p. 100). Counter-intuitively, as the !Kung bushmen case exemplifies, the morphological concept might admit accidentally created or unmodified objects as artifacts, granted that they share a similar morphological structure to members of a certain artifact kind and show a cultural significance. The intentionalist functional concept provides a stable taxonomy used both in folk classification and engineering practices, however, it leaves out artifacts that lack function (e.g. artworks). The purely intentional concept performs better in the case of artworks compared to the other two concepts. Given that none of the concepts can single-handedly capture the plurality of artifacts, then this can give us a reason to challenge the monistic framework itself.

4.2 Pluralism and Artifact anti-essentialism

Before moving any further, it should be noted that throughout this thesis I assumed artifacts are necessarily mind-dependent and I used this feature to criticize anti-essentialism about artifact kinds (see sub-chapter 3.2). What does it mean for artifacts or artifact kinds to be dependent on minds? Muhammad Ali Khalidi lists four ways of formulating mind-dependence (Khalidi, 2016, p. 227). One promising way to formulate mind-dependence is in modal terms. According to Khalidi, artifact kinds “could not have been instantiated without the presence of human minds” (Khalidi, 2016, p. 232). Thus, simply following Khalidi I assume that the existence of artifacts depends on beings with certain cognitive capacities.

So far I only hinted in what sense artifacts are dependent on minds. This is important. Because taking mind-dependence as a necessary feature of artifacts means that pluralism is not entirely an anti-essentialist position as there is at least one property shared by all artifact kinds. However, it would also be a mistake to classify pluralism as an essentialist position. The reason is that, as it will be clear below, pluralism does not end up with strict necessary and sufficient conditions for kind membership which artifact essentialism requires. Pluralism I advocate in this thesis assumes that all artifact concepts share a necessary feature, that artifact kinds are necessarily mind-dependent. Following Juvshik (2021a) I use mind-dependence distinctly from intention-dependence. The latter requires agents to create artifacts with intentional attitudes, whereas the former allows unintentional creation. To illustrate this difference, assuming that *village* is an artifact kind consider the case of an unintentionally made village. A village, say Village U, can come into existence as a result of some people individually deciding to settle on a certain location. The important point is that Village U seems to come into existence without anyone *intending* to form a village. If the result is a member of the *village* kind, then Village U is an example of unintentionally created artifacts. Note that Village U is not intention dependent, where intention dependence is understood as creating objects by having an intentional attitude. However, its coming into existence seems to be dependent on minds. More precisely, this is a case of general existential dependence, the existence of Village U depends on beings with certain cognitive capacities.

Having said that, the difference between the artifact anti-essentialists and pluralism becomes clear. Since an anti-essentialist position based on the HPC view denies that there are necessary or essential features of artifact kinds, on that view, artifact kinds seem to be contingently dependent on minds. In other words, their

existence does not necessarily require the presence of the relevant agents with certain cognitive capabilities. Whereas pluralism claims that the existence of artifact kinds necessarily depends on minds. Back to the case of Village U, it seems obvious to me that without people deciding to settle on a certain location Village U would not come into existence. Thus, I suggest that Village U is mind-dependent without being intention-dependent. If that is the case, then Village U, under the morphological artifact concept, can be grouped under the village kind because its coming into existence depends on the relevant minds and it is morphologically similar to the other members of the village kind.

Accommodating mind-dependence enables pluralism to discard the swamp artifact cases and modal artifact cases discussed in Juvshik (2021a). Swamp artifact cases are cases in which an entity structurally similar to paradigm cases of artifacts comes into existence by sheer luck. Modal artifact cases are artifact cases occurring in a possible world that lacks agents with cognitive capabilities (Juvshik, 2021a). Any theory that denies artifact kinds are necessarily mind-dependent commits to such counter-intuitive cases. Consider that an anti-essentialist account based on the HPC view seems to classify both a swamp telephone and the telephone on my desk under the *telephone* kind since both devices instantiate relatively stable properties from the set of properties the *telephone* kind has. Similarly, the anti-essentialist view based on the HPC view seems to admit modal cases too. Consider a possible world in which there are no minds but there is an object structurally similar to the telephone in front of me (Juvshik, 2021a). The existence of such an object is not dependent on minds, however again, the modal telephone instantiates a subset of the set of properties that the *telephone* kind has. Thus, the HPC view seems to classify a modal telephone as an artifact. Modal and swamp cases show that an anti-essentialist

view based on the HPC view cannot distinguish mind-dependent unintentional artifact cases (e.g. twilight cases) from the mind-independent objects that are structurally identical to the mind-dependent artifacts (e.g. swamp cases).

Having said that, I think pluralism has at least two advantages over the anti-essentialist views currently at play. Firstly, pluralism secures the mind-dependence condition as a necessary aspect of artifact kinds. By accommodating mind-dependence, pluralism eliminates the unnecessary proliferation of counter-intuitive artifactual cases as exemplified by swamp and modal cases. Secondly, Reydon's epistemological approach fails to acknowledge that both ordinary talk and epistemic practices largely agree on how to group artifacts. Neither a full epistemological turn nor an "anything goes" approach is informative. Given the problems surrounding monism, pluralistic metaphysics that adopts responsible pluralism shows a more promising route.

4.3 Pluralism and artifact essentialism

Now let us see how artifact concept pluralism stands in comparison to essentialism regarding the problems of extension and definitional complexity briefly discussed in chapter 2. The main drawback of the essentialist accounts I presented in this thesis is that each essentialist formulation seems to exclude an important part of our artifactual world. By this fact I wanted to show that the artifact world is not homogenous but heterogeneous. As a reminder, since function essentialism takes functional properties as essential for artifact kinds, it leaves out certain works of art that lack functional properties. For similar reasons, intention essentialism leaves out unintentionally created objects (e.g. accidental creations, twilight cases).

To account for the extensional problem, some proponents of function essentialism limit the domain over which the artifact concept ranges. Recall that one way to restrict the domain of artifacts is by making a distinction between technical and non-technical artifacts. This leads to a further problem, namely, the definitional complexity problem: How can we distinguish technical artifacts from their non-technical counterparts? It seems hard to give an answer. Even if we can make a distinction based on practicality, that's to say, based on objects that have practical use and objects that do not have, we are left with various counter-examples. For example, religious paintings have a practical use (e.g. *to heighten the religious experience*) yet they are considered as works of art (Thomasson, 2014, p. 48; Juvshik, 2021b, p. 6). Also, consider the case of bug zappers.²¹ Bug zappers are technically (however understood) sophisticated, yet they notoriously do not perform their intended function, in other words, they fail to get rid of mosquitos (Preston, 2013, p. 138). Still, people buy bug zappers in the hope of getting rid of the mosquitos on their porch. As Preston points out, in fact, bug zappers attract more mosquitos from neighboring areas because of the light it emits (Preston, 2013, p. 138). Therefore, considering the practical artworks and non-practical works of engineering, it is not easy to draw a line between technical and non-technical artifacts.

On the contrary, artifact concept pluralism does not need to definitionally restrict the artifact domain. Recall that the issue is not finding an answer to “what concept of artifact can best capture all cases.” Rather, it is to answer, “what specific artifact concept can best capture the specific problem cases.” As indicated by several

²¹ Bug zappers are discussed in Preston (2013, p. 138) to illustrate the phenomenon of phantom function. Phantom functions are the intended functions an object cannot perform.

examples from different fields of inquiry (e.g. philosophy of art, archeology, engineering practices) in sub-chapter 4.1, we see that there may be certain dominant ways of classifying given objects into artifact kinds. For instance, since the properties associated with works of art are best understood through intentional properties and not through functional properties, approaching the philosophy of art with the purely intentional concept at the backdrop provides a better result than functional or morphological artifact concepts. Similarly, the normative properties surrounding engineering objects are best understood through their functional and morphological properties. Thus, classifications in engineering practices predominantly require a functional artifact concept or a combination of functional and morphological artifact concepts. Archeologists as well use both morphological and functional concepts depending on the level or type of inquiries. For instance, a morphological concept is needed for debitage analysis conducted by archeologists which in turn provides an enormous source of information regarding the past cultures. As archeologists Alan Sullivan and Kenneth Rozen note, “[d]ebitage analysis -the systematic study of chipped stone artifacts that are not cores or tools- provides important information for reconstructing prehistoric lithic technology and patterns of human behavior” (Fish 1981, p. 374 as cited in Sullivan and Rozen, 1985, p. 755). The importance of morphology is noted further in Sullivan and Rozen (1985). Sullivan and Rozen (1985) write, “One of the major differences between tool debitage and nontool debitage categories is that while the latter are generally defined on the basis of a single nonmorphological variable (cortical variation), the former are based on several morphological variables” (p. 757). As this quote shows, in archeology, depending on the inquiry at hand there are certain categories of artifacts

that require prominently a morphological artifact conception rather than a functional or intentional concept.

Compared to the essentialism about artifacts, pluralism's greatest advantage seems to be its scope. Pluralism aims to bridge the gap between epistemic (e.g. engineering practices, art practices, archeology) and non-epistemic (e.g. folk classification) practices by taking metaphysical considerations as a guide. Thus, by not limiting "artifact" to its philosophical term of art, pluralism addresses the extensionally problematic cases through the lenses of distinct inquiries. These inquiries are not limited to the ones explicated above. For instance, pluralism can be developed to adopt classifications such as "classification by the name of the designer of the artifact" in a highly specialized artistic or engineering context (Houkes and Vermaas, 2013). The three main candidate concepts I discussed in this chapter are the ones that can substantially inform us about artifacts.

However, adopting context relativity is not uncontroversial. First of all, it is not easy to draw a line between contexts. Does context relativity commit pluralism to the same problem artifact essentialism faces, namely the definitional complexity problem? Recall that based on the counter-examples purport to show that some works of art and cases of phantom function (e.g. bug zappers) are technically complex while without being practical, I deny that technical and non-technical distinction is principled. For many philosophers technical artifacts are objects that are made to serve a practical purpose, in this way they aim to exclude artworks from their discussion (Baker, 2004 as cited in Koslicki 2018, p. 225; Houkes and Vermaas, 2013; Juvshik 2021b, p. 17) However, even if we reframe this distinction in terms of practicality, still, there are works of art that have practical use (e.g. religious paintings). Given that it is not easy to divide the artifactual world into

technical and non-technical artifacts, a similar consideration seems to arise for pluralism as well. On what grounds can we make a distinction between different domains of inquiries? In what respect, say, an engineering object is different from an art object?

To answer these questions we should look more closely at the relevant purposes and inquiries these distinct fields conduct. Throughout this thesis, I tried to point out certain inquiries and domains. However, an in-depth analysis of these domains is needed to fill out the details. Still, it should be noted that demarcating a clear line between contexts might not be possible as these practices are highly intertwined. On the one hand, engineering knowledge is entrenched in aesthetic practices, on the other hand, as Sven Ove Hansson points out design processes in engineering often require a kind of artistic vision and creativity (Ove Hansson, 2020). Similarly, archeological findings mostly consist of these aesthetic and designed objects of past cultures. Even though it is not easy to draw a clear line between contexts, perhaps this is not a major concern. Consider that species pluralism does not require clear-cut boundaries between different domains of biology. Similarly, art concept pluralism does not seem to require clearly demarcated domains of art. Thus, I believe this does not constitute a definitional complexity problem for artifact concept pluralism as well.

In short, pluralism has two advantages over essentialism about artifacts. Firstly, compared to the functional essentialist accounts pluralism does not leave artworks out of the discussion as pluralism treats functional and purely intentional artifacts under different concepts. Also, compared to intentional essentialist accounts pluralism does not leave out accidental creations and twilight cases as the morphological artifact concept allows for mind-dependent objects morphologically

similar to the other members of a given artifact kind. Secondly, pluralism avoids the definitional complexity problem by not limiting the scope over technical artifacts. Pluralism aims to account for all items that are culturally significant. Considering its advantages, I think pluralism can direct us to a workable alternative to monism. The problems essentialism and anti-essentialism face mainly stem from the background assumption of artifact concept monism. A responsible form of pluralism is needed if we want to account for the cases and domains left out by monism. However, pluralism I outline in this chapter currently is not a fully detailed solution, many details are yet to be fulfilled. For now, in order to make pluralism more convincing, I will defend it against some further possible objections.

CHAPTER 5

OBJECTIONS

Pluralism seems to avoid the problems monism faces with relative ease. As we see in the previous chapter, pluralism shifts the focus from providing the best possible overarching artifact concept to retaining the merits of three individual artifact concepts. By shifting the focus pluralism offers a greater scope. Furthermore, pluralism does not need to appeal to definitional restrictions to which essentialist accounts commit. However, due to the general worries regarding the nature of pluralistic approaches and metaphysical issues surrounding them, pluralism is not a problem-free alternative to monism. In this chapter, I consider three types of objections one can raise against pluralism. Two are methodological and one is metaphysical.

First, one may object by arguing that adopting pluralism or any disjunctive supplementation brings its own complexities (Houkes and Vermaas, 2003, p. 275). For example, instead of clarifying the concepts used pluralism might end up adopting the “disadvantages of those concepts” (Houkes and Vermaas, 2003, p. 275). Furthermore, Occam’s Razor dictates us to eliminate the murkier senses of a notion, not to propagate them. Thus, as the argument goes, the feasibility of a simpler unified account should deter us from pluralistic strategies. However, the artifactual world is not less divergent than the art world and the biological world. Considering the heterogeneity of the artifactual world, I think, a unified account is possible only in the case of ad hoc domain restrictions. Even in the case of domain restrictions (e.g. technical artifacts), there is a considerable amount of evidence from

psychological research and engineering practices that led Houkes and Vermaas (2013) to argue for pluralism in the categorization of technical artifacts.

Houkes and Vermaas (2013) argue that certain classificatory practices in engineering coincide with psychological findings presented in Malt and Sloman (2007) briefly explicated in chapter 4. Recall that Malt and Sloman's experiment shows that there are, roughly, three major features that play significant roles in artifact classification: form (i.e. shape), functions, intended category membership. Correspondingly, from their experience in the philosophy of technology Houkes and Vermaas formulate three types of categorization principles: id made-product categorization; functional and goal categorization; use plan and make plan categorization (Houkes and Vermaas, 2013). Even though there are certain similarities worth mentioning, still I will not get into details of Houkes and Vermaas's (2013) account since here I attempted to motivate pluralism not only for technical artifacts but artifacts in general and across different disciplines. Each artifact concept I briefly pointed out provides partial partitioning, in other words, the success of a concept is not constrained by its scope, as each concept can only range over a certain portion of artifacts depending on the inquiry.

Second, one may doubt the accuracy of the analogy between species/art concept pluralism and artifact concept pluralism along the following lines: Our aim with artifact classifications is not primarily inferential or explanatory, whereas taxonomy for species and art concept is provided by the relevant specialists (Koslicki, 2018, p. 239). Thus, our artifact classifications need not be based on specialists' vocabulary. I agree that in the case of artifacts, folk classifications are not ultimately determined by the relevant "sciences" (whatever scientific practices they may be). For instance, I would not wait for archeologists' validation for calling

my favorite sitting device a “chair”, nor do I think I would be in error if that device turns out not to be a chair in some engineers’ classifications. However, pluralism explored in this thesis aims not only to describe folk classifications but give a more encompassing picture across different domains in which the term artifact plays an important role. Pluralism aims to provide distinct concepts for different inquiries and hence be an alternative to the arbitrary domain restrictions that stem from artifact concept monism. By changing the question from “what concept of artifact can best capture all cases?” to “what specific artifact concept can best capture the specific problem cases?” we need not approach a urinal, Duchamp’s *Fountain*, a toast, archeological woodchips, and nuclear reactors under an overarching artifact concept (Mag Uidhir and Magnus, 2011, p. 92). Otherwise, as Preston (2014) points out, the gap between metaphysicians’ and other disciplines’ classificatory practices will continue to widen. This, in turn, would result in the philosophical term of artifact having no informative use outside of philosophy.

Third, artifact concept pluralism can raise at least two serious metaphysical concerns. Since different concepts impose different identity and persistence conditions on a given object, pluralism ends up admitting spatiotemporally coincident objects. In basic terms, identity conditions are the conditions that inform us whether a given object is the same as or different from another object. Persistence conditions are the conditions that inform us under which conditions the same object can sustain its existence without losing its identity. Under the pluralistic framework, different artifact concepts sort objects according to distinctive features. For instance, according to the morphological artifact concept, mind-dependent objects are sorted in virtue of their displayed similarities in shape. Whereas according to intentionalist functionalist artifact conception mind-dependent objects are sorted into artifact kinds

in virtue of their intended function. In the former conception, a chair needs to share a certain morphological structure with other chairs to be a member of the same kind, and to sustain its shape so that it can keep its identity through change. In the latter conception, a chair needs to share a functional property (e.g. *seating a single individual*) with other chairs to be a member of the same kind and to sustain its function so that it can keep its identity through change. If we admit that both artifact concepts work at the same time, then in the above case we are left with a single spatiotemporal entity having two distinct sets of identity and persistence conditions relative to the concept used. In the first case, the same entity survives losing its function, but in the second case, it does not. If we deny that there are two objects sharing the same spatiotemporal location, then how can one and the same object have different, even in some cases contradictory, modal profiles under different concepts? One solution would be to deny the assumption and admit that there are at least two different objects sharing the same spatiotemporal location relative to the artifact concept used.

However, if we accept that there are at least two different objects that have at least two distinct sets of identity and persistence conditions, then we are left with a metaphysical problem. Daniel Korman names this problem “the problem of material constitution” (Korman, 2015, p. 9). The problem of material constitution is raised mainly in the constitution monism/pluralism debate as a puzzle to the material constitution. It is related to the most discussed grounding problem.

[T]hose who say that Athena is distinct from Piece face what is called the grounding problem: the putative modal and sortal differences between Piece and Athena seem to stand in need of explanation and yet there seems to be no further difference between them that is poised to explain, or ground, these differences. (Korman, 2015, p. 10)

What grounds the difference between two coincident objects that have different modal (e.g. *the time they are created at*) and sortal properties (e.g. *being a statue* and *being a hunk of clay*)?²² Consider that some material constitution theorists are constitution pluralists with respect to the statues (e.g. Athena) and hunks of matter (e.g. Piece) that constitute them.²³ They admit that there are both Athena and Piece share the same spatiotemporal existence without being identical to one another. It is generally accepted that while Athena survives losing, say, one of its arms, since Piece is identical to its aggregate of atoms Piece cannot afford to lose the matter that constitutes it. If this is the case, then by Leibniz Law we are left with two (numerically) distinct objects with two different sets of persistence conditions. This is because Athena and Piece do not share all of their properties (e.g. modal properties), hence they are not identical (Korman, 2015, p. 10). Philosophers are puzzled by this result mainly due to the general acceptance of the principle that there cannot be numerically distinct coincident objects. In response to the problem of material constitution, constitution pluralists deny this principle but do not agree on the ways how to deny it (Korman, 2015, pp. 204-16). One can leave this as a brute fact as well, yet for many, such a move would seem undesirable (Korman, 2015). So the main problem is not that there are coincident objects, but rather finding an explanation for the differences between these two coincident objects. However, here I shall admit that I do not have a satisfactory explanation for the putative differences between two coincident objects under distinct artifact concepts. This will have to wait for another project.

²² Following Korman, I use “coincident” to mean that two objects are “sharing all of their parts”, which means that the statue and the hunk of clay are “composed of the same bits of clay” (Korman, 2015, p. 10).

²³ I use the term “constitution pluralism” to distinguish it from the term “concept pluralism” I used in this thesis.

Until then, I can at least point out that crosscutting cases are in fact ubiquitous, and these cases seem to raise a similar concern to the problem of material constitution. There are many cases in natural sciences in which the same spatiotemporal entity hosts at least two different species or kinds. For instance, consider the following example Ian Hacking (2007) points out:

It has been repeatedly argued that natural kinds must, as a matter of logic, be arranged in a tree-like hierarchy. Not so. Bosons, isotopes, and elements are commonly regarded as natural kinds. But since rubidium-47 is a species both of boson and of rubidium, but rubidium is not a species of boson or vice versa, you cannot put these on a branching tree. (p. 214)

Cases like *rubidium-47* show that a given entity can belong to two or more kinds at the same time. This, in turn, might assign distinct modal properties or persistence conditions to the same entity. Similarly, consider the following cases of albumin, renin, and hairpin ribozymes pointed out in Emma Tobin (2010b):

For example, albumin and renin can be classified together as proteins. Renin and the hairpin ribozyme can be classified together as enzymes. However, the hairpin ribozyme and albumin cannot be classified together as either enzymes or proteins. Enzymes are not a subkind of the kind proteins and proteins are not a subkind of the kind enzymes. Such cases of crosscutting make it impossible to provide a neat hierarchical account of these kinds.

The main motivation for essentialism about artifacts in denying crosscutting objects comes from the concerns regarding the hierarchical classification. However, counter-examples are vast in number both in chemical kinds and biological taxa. If such is the case with natural kinds, I do not think that it is simple to come up with a neat hierarchical classification for artifact kinds.

Lastly, consider Ereshefsky's (1998) discussion of hierarchical classification in the case of the species concept. According to Ereshefsky (1998), the desire for the Linnean form of a hierarchical classification of species stems from adopting Aristotelian essentialism:

According to that [Aristotelian] essentialism, each entity belongs to a single least inclusive kind, what might be called a 'fundamental kind'. By knowing an entity's fundamental kind we know its real essence, and in turn, we can explain and predict its necessary properties. (Ereshefsky, 1998, p. 109)

Similarly, in the case of artifacts, those who hold neo-Aristotelian views argue that artifact kinds are primary kinds (fundamental kinds in Ereshefsky's sense above). According to these views, without knowing which artifact belongs to which primary kind, it is hard to distinguish the allegedly substantial kinds such as *coin* from the phasal kinds such as *coin-in-a-pocket* (Baker, 2004, p. 100).²⁴ Baker argues that there is a crucial ontological difference between objects essentially belonging to primary kinds (e.g. *coin*) and merely conventional groupings (e.g. *coin-in-a-pocket*) (Baker, 2004, p. 100). The former kinds are real, but our ontology cannot accommodate adding the latter. Because adding the latter would result in the proliferation of all sorts of imaginary entities. Pluralism by adopting context relativity seems to disrupt this hierarchy. A single artifact (e.g. an arrowhead) may fall under more than one artifact concept (e.g. morphological, purely intentional, intentionalist functional) or a single spatiotemporal entity, depending on the concept used, can host different artifact kinds without any of them being primary.

Given that pluralism is not compatible with hierarchical classification, does this commit pluralism to some form of anti-realism about artifacts or artifact kinds? It certainly commits pluralism to a form of anti-essentialism at least in the sense that there is not a unifying essential structure that applies to artifact kinds. I think for those who assume artifact concept monism the result is worrying. The reason is that artifact concept pluralism leads to the non-existence of overarching artifact concept. However, I believe that pluralism requires one to be anti-realist neither about artifact

²⁴ The distinction between substantial and phasal kinds comes from Evnine (2016).

kinds nor individual artifacts. Consider that, in the case of species pluralism advanced by Ereshefsky anti-realism targets only the “category” of species (Ereshefsky, 1998, p. 114). Here, category means “the class of all species taxa,” where species taxa are groupings of organisms (e.g. *Homo sapiens*) (Ereshefsky, 2007, p. 404). Ereshefsky remarks that biologists and philosophers discuss the definition of the species category when they discuss the definition of “species” (Ereshefsky, 2007, p. 404). Thus, species pluralism only rejects that there is a species category without eliminating species taxa. Similarly, I think artifact concept pluralism needs only to reject that there is an artifact category without eliminating artifact kinds out of the picture. Pluralism I outlined in this thesis modestly suggests that there are at least three ways of grouping entities into artifact kinds.

CHAPTER 6

CONCLUSION

Artifact essentialists focused on finding an artifact essence. Artifact anti-essentialists claimed that there is none. However, in this thesis, I challenged the monistic assumption that pervades the debate. I argued against artifact concept monism first by showing that the prominent essentialist proposals currently at play suffer from major extensional and definitional problems. Second, I aimed to show that current anti-essentialist accounts suffer from eliminating all necessary properties which results in the proliferation of cases as shown by the modal and swamp cases. Metaphysical literature on artifacts is a productive field. There are both compelling essentialist and anti-essentialist proposals yet to come. Adopting a pluralistic framework, regardless of the background realist/anti-realist debate, can motivate a new focus on the neglected aspects of the artifactual world. In this thesis, I attempted to point out some of those aspects. Obviously, artifact concept pluralism invites many questions that I could not touch upon or give a detailed answer to. It requires a greater elaboration to properly flesh out the details, however, considering the significantly diverse roles artifacts play in our lives, I believe such effort is both needed and fascinating.

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