

The Metaphysics of Artifacts and Artifact Kinds

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Abstract: Artifacts, things like chairs, cellphones, and rotary engines, are of central importance to our daily lives, yet only recently have they received sustained attention in analytic metaphysics. This essay critically surveys the main views of artifacts and artifact kinds. We consider neo-Quinean, neo-Aristotelian, and neo-Carnapian approaches, realist views, functionalist and intentionalist approaches, and hylomorphic and dual-nature theories. We then survey more recent social accounts and recent forms of anti-essentialism and pluralism. After surveying these clusters of theories and raising critical concerns and challenges with them, we conclude by highlighting two upshots from our critical overview, one methodological, the other political, and draw connections between the metaphysics of artifacts and issues in other philosophical subfields where discussions of artifacts arise.

Key Words: artifacts, artifact kinds, metaphysics, functions, intentions, norms

1. Introduction

Artifacts have traditionally received little attention from metaphysicians in the analytic tradition. Insofar as they are discussed at all, it is as an illustration of highly general problems (e.g., the Ship of Theseus as an illustration of the problem of Material Composition) or as a contrast class to the main topic of interest (e.g., organisms or objects that feature in the natural sciences). Prior to the 1990s, discussions of artifacts were often restricted to subfields such as the philosophy of art and the philosophy of technology. These discussions concerned the nature of specific classes of artifacts (e.g., artworks or the products of engineering) rather than artifacts as such and proceeded independently of any discussions in analytic metaphysics. Since the 1990s, artifacts and artifact kinds have come into their own in analytic metaphysics, in that they have become the focus of analysis and sustained discussions.

Questions about the metaphysics of artifacts include whether artifact kinds have an essence, whether artifacts are metaphysically on a par with natural kinds, how to individuate artifact kinds, what the identity, persistence, and existence conditions are for artifacts, how new artifact kinds are created, and in general what the nature of artifacts and artifact kinds is.

There is now a broad variety of views on offer that address some or all of the above questions, for all or some restricted class of artifacts. Most of the literature reviewed here takes mid-sized material artifacts that are the products of human activities – chairs, boats, cellphone models – as paradigmatic examples. Some accounts are deliberately restricted to such ‘technical’ artifacts; other analyses include or at least do not deliberately exclude software, artworks, artificial processes and events, socio-technical systems, and still other aspects of what Hannah Arendt calls ‘the human artifice’.

In what follows, we review and critically evaluate central contributions to the metaphysics of artifacts and artifact kinds. These contributions present partly overlapping clusters of views. Our discussion is organized by clustering views together that share similar core commitments in their first-

order accounts of artifacts and artifact kinds. In Section 2, we survey neo-Quinean, neo-Aristotelian, and neo-Carnapian approaches, in Section 3, we discuss realist views, while Section 4 discusses functionalist and intentionalist approaches. Section 5 surveys hylomorphic and dual-nature theories, while Section 6 turns to more recent social accounts. Finally, Section 7 is an overview of recent forms of anti-essentialism and pluralism. Section 8 concludes with a discussion of two upshots of our review, while also pointing to connections with other subfields of philosophy in which artifacts figure prominently.

2. Neo-Quinean, Neo-Aristotelian, and Neo-Carnapian Approaches

Some approaches to artifacts proceed via antecedent methodological or substantive assumptions, often discussing artifacts as marginal cases or as one class of entity amongst many to which the methodology may be applied. For some approaches, these antecedent assumptions seem to be at odds with general features of (ordinary discourse on) artifacts, leading to doubts about the ontological status of artifacts. Kathrin Koslicki (2018, Ch.8) reviews several such doubts: (a) artifacts are typically characterized through reference to maker intentions, which aren't sufficiently fine-grained to answer questions of numerical identity, (b) common proposals for the essential properties of artifacts are extrinsic, such as their origin or function, (c) artifacts don't seem to be governed by lawlike generalizations, and (d) artifacts are strongly mind-dependent. Neo-Quinean and neo-Aristotelean approaches tend to draw on these reasons to argue for eliminativism concerning artifacts or downgrading of ontological status. Neo-Carnapian approaches are more permissive, but likewise proceed from antecedent assumptions.

Neo-Quinean views are the most zealous in rejecting the existence of artifacts and thereby clearing what has been called a "breeding ground of disorderly elements" (Quine 1950: 4). Thus, some authors have defended an extreme metaphysics on which artifacts, among many other supposed entities, don't exist: we merely describe the world in terms of artifacts, they are not things that exist in it (Zimmerman 2002). Some of the arguments given mention artifacts, although their intended scope is much broader. Peter van Inwagen (1990), for example, argues that artifacts don't satisfy his answer to the Special Composition Question, on which some things x compose another thing y if and only if the activity of x constitutes a life (1990, 81-82). Since artifacts don't have such life-constituting activity, artifacts don't exist. Rather, what we normally think of and treat as cars or desk chairs are merely 'simples' arranged car- or chair-wise. Artifact makers rearrange the furniture of the world without bringing anything into existence (ibid. 126ff.). Trenton Merricks (2001) develops a similarly eliminativist metaphysics based on a (modified version of) Alexander's dictum that to be is to have causal powers. Since all effects that seem to be caused by, say, a baseball can be fully explained by the causal powers of the baseball parts, the baseball itself has no causal powers on pain of overdetermination. Hence, there are no such things as baseballs (2001, 56ff.).

Eliminativist views depart radically from our ordinary beliefs and practices about artifacts and other medium-sized dry goods. This might explain why they are uncommon in the literature but criticizing them on this basis alone merely reveals disagreement with their aim. More pertinent is that all forms of eliminativism depend on commitments that are contentious irrespective of any departures

from ordinary practice that they entail. Thus, Van Inwagen's eliminativism relies on the interest of and a specific answer to the Special Composition Question, either or both of which can be contested (e.g. Eklund 2002), while Merricks' version relies on an already qualified version of Alexander's Dictum that has still received widespread criticism (e.g. Sider 2003). In these discussions, artifacts and many other 'disorderly elements' are treated as 'spoils to the victor' (Juvshik 2025a): their ontology, including their very existence, is determined by the outcome of discussions that hardly focus on them.

Other contributions lead to less extreme positions that are also more directly targeted to the metaphysics of artifacts. Rather than eliminating artifacts altogether, some authors lower or qualify their ontological status compared to other entities. Here, 'ontological status' is determined by a set of prior tenets which fit at least one other class of entities. Thus, David Wiggins (2001, 86-90) argues on Aristotelian principles that, to have a real essence, entities require "a principle of activity founded in lawlike dispositions and propensities that form the basis for extension-involving sortal identification(s) which will answer truly the question "what is x ?" (2001, 89). According to Wiggins, organisms meet this criterion, but artifacts don't. Therefore, they merely have a functional nominal essence: answering 'a clock' to the question "What is x ?" does not reflect any lawlike dispositions, since clocks can be made from many different materials and have different structures; rather, the answer reflects how these diverse entities serve our interests through their time-keeping function.

Other neo-Quinean and neo-Aristotelian arguments lead to selections rather than qualifications or outright elimination: they accept as real, but unqualifiedly so, only some artifacts among those that appear to play a role in everyday practices. Some of these views again start from the idea that real kinds are characterized by a unified principle of activity governed by laws of nature. Michael Losonsky (1990), responding to Wiggins, argues that at least some artifacts have the requisite principle of activity: unlike clocks generally, mechanical clocks exhibit clear regularities in their behavior and would thus have an essential nature composed of their internal structure, purpose, and context of use. Similarly, E. J. Lowe (2014) argues that most of our everyday artifact kinds like chair and car don't have determinate identity, persistence, and existence conditions. These he calls *utensils* whose nature is 'up to us' and distinguishes them from *machines*, such as combustion engines or steam engines, which exhibit a unified principle of activity which is governed by 'laws of engineering'.

These views are selective about which, if any, of our everyday categorizations reflect real artifact kinds. The precise principle of selection is, however, difficult to articulate and to apply in a principled manner. This leaves these supposedly real kinds open to charges of conventionalism. There is no generally accepted set of 'laws of engineering' in which some artifacts would feature: even for machines, fields such as mechanical engineering state no laws other than those of Newtonian physics. In terms of unified principles of activity, some types of engines or clocks intuitively embody a distinctive mechanism. However, it is not clear at which level of organization or degree of specificity principles of activity are best sought, e.g. that of (motor) cars, car engines, or carburetors; mechanical clocks, pendulum clocks, or gridiron pendulum clocks. Finally, an appropriate conception of unity needs to be articulated, either for artifacts or for the principles of activity governing them (e.g., Koslicki 2018, Ch. 7). These complications make it difficult to sustain any selection of real artifact kinds without at least some qualification of their ontological status.

Not all approaches that start from antecedent assumptions also question the ontological status of artifacts. Neo-Carnapian ‘easy ontologies’ (Thomasson 2015) answer questions of existence and identity through determining which terms are applied and co-applied in linguistic practices. Discussions based on substantive metaphysical tenets like those in neo-Quinean views constitute a separate linguistic practice – sometimes called “Ontologese” – that has no bearing, directly or indirectly, on ordinary (co-)application conditions. Easy ontology indicates a metametaphysical approach or set of methodological assumptions and it has been widely discussed and criticized (e.g. Sider 2011). A specific obstacle for applying this approach to develop a metaphysics of artifacts is to find a suitable *linguistic* practice rather than some more immediately practical context. One example might be found in patent legislation, which features questions regarding the identity conditions of artifacts: drafting a patent or establishing a patent infringement requires determining whether an allegedly new artifact kind is sufficiently different from the ‘prior art’ of existing kinds (Houkes 2022). This is a narrow and specialized linguistic practice that is also susceptible to strategic presentations. It is therefore questionable whether it is governed by a consistent set of ontological commitments and, if it is, whether these commitments extend to more everyday, lower-stakes categorizations of artifacts.

3. Realist Views

Another cluster of contributions discusses the metaphysics of artifacts against the background of a commitment to metaphysical realism: the idea that objects, their properties, and relations exist independently of our beliefs about and conceptions of them. Methodologically, these contributions are similar to the neo-Quinean and neo-Aristotelean approaches discussed above: an antecedent assumption leads to doubts when combined with apparent features of artifacts, now their dependence on maker intentions and characterization in relation to human purposes and practices – in short: their ‘mind-dependence’. Realist accounts directly target these features. Marzia Soavi (2009a, 2009b), for instance, argues that real artifact kinds are constituted by an intentionally imposed function, which involves an ordered-triple of input-output, system of interaction, and object structure. The input-output notion of function is how we normally categorize artifacts (e.g., chairs support a single person trying to sit on them); the system of interaction is the context the input-out is supposed to work in (e.g., chairs require an even surface for being functional); and the object structure is the material and formal properties of the artifact indicated by the designers that enable it to perform its function. Similarly, Maarten Franssen and Peter Kroes (2014) advance the view that artifact kinds are structural-historical kinds; that is, artifact kinds are determined by their design blueprint and are made to perform a specific function as a result of a particular history of design and production. Finally, Crawford Elder (2007, 2014) argues that artifact kinds are constituted by a particular shape, proper function, and historically proper placement. Other properties will cluster around these three, including a particular material composition, a design solution and structure that enables the artifact to perform its function, and a propensity to shift its shape in response to changes in its historical placement.

All three realist views characterize real – or ‘realism-compatible’ – artifact kinds through functions. The resulting kinds meet very strict and narrow criteria, such as specific shapes, design and production histories, or systems of interaction. Consequently, artifacts cannot be said to be chairs,

cars or watches; rather, they are members of real kinds such as *Eames 1957 desk chair*, *Plymouth Valiant 100*, and *Pasha Seatimer grand modèle automatique Cartier watch*.

A central challenge for realists is to specify in positive terms the antecedent commitment to realism rather than start from general concerns about ‘mind-dependence’. Many entities that most philosophers would have no trouble accepting as real – such as mental states or domesticated animals – are mind-dependent in the straightforward sense that they require human minds for their existence. It is therefore underspecified what, if anything, is particularly problematic about artifacts from a realist perspective. One might suspect that any such problem arises from extending to the realm of artifacts criteria developed for the kinds featuring in the natural sciences, without any justification for why such an extension would be warranted (Thomasson 2007). Moreover, as the brief review above makes clear, a commitment to realism is still compatible with conflicting construals of artifact kinds. This raises the question what has been gained other than arguments that, whichever version of realism one adheres to, some categorizations of artifacts correspond to real kinds. Finally, even the members of the various narrowly defined real kinds still vary in their form, function, and material constitution. If the goal is to find determinate identity, persistence, and existence conditions, realists would need to specify even narrower criteria or resort to stipulating that their chosen features are inflexible (Juvshik 2025b).

4. Function-essentialist and Intentionalist Views

The realist views discussed above assign a central role for functions in their accounts of artifacts. This aligns with everyday categorizations of artifacts, e.g., as corkscrews, containers or particle accelerators. A prominent set of contributions takes artifacts to be essentially functional objects. Specific artifact kinds are then determined by a particular function, e.g. chairs are essentially for seating a single individual. Jesse Hughes (2009), for instance, takes function to be the single defining characteristic of artifacts. More recently, Kathrin Koslicki and Olivier Massin (2025) have developed a capacity-based approach to the metaphysics of artifacts that resembles function-essentialist views in some respects. Tim Juvshik (2021) distinguishes between two components of function essentialism: the artifact condition (all artifacts have a function) and the kind membership condition (artifact kinds are individuated by a shared function that all and only their members have).

Function-essentialist approaches are very widely held in some form or another. Yet despite the apparent alignment with everyday categorization practices, it isn’t clear that all artifacts have a function, especially artworks and toys (but see Declos 2026), nor is it clear that members of artifact kinds all share a function: a particular chair could just be for show, say, and not for sitting on (Bloom 1996). It is also debatable whether functions qualify as essences, given how artifacts can gain or lose functions. Many artifacts – individually or collectively – gain new functions, often supplanting their original function. One example is the telephone, first designed to aid the hearing-impaired rather than for long-distance communication (Carrara and Vermaas 2009). Explaining how this happens has been a challenge for essentialist views (Koslicki 2018, Ch. 8; Raven 2025). Failure to perform a function or losing it altogether may also affect an artifact’s kind membership, but the conditions are difficult to articulate and dependent on capabilities and costs of repair (Houkes and Vermaas 2010, Ch. 6). Phantom functions, ascribed to artifacts that are physically incapable of performing them, present a

particularly puzzling case (Preston 2009). Function-essentialist accounts of artifacts are remarkably resilient (or at least popular) in the face of these challenges, often (e.g. Grandy 2007) by supplementing an appeal to functions with the very mind- or intention-dependence that concerned realists.

Intentionalist contributions, which constitute another influential cluster of views, put this dependence center stage: they take maker's or sometimes user's intentions to determine the nature of an artifact and its specific kind. One immediate challenge for these views is to distinguish kind-determining intentions from mere whims and wishes. Risto Hilpinen (1993) argues that makers intend to make something that satisfies some type-description, such as 'small ceramic container for holding foodstuffs' to make a bowl and that they need to accept that the thing they made satisfies their intended type-description (1993, 160-162). Paul Bloom (1996) argues that we categorize artifacts by inferring that they were successfully made with the intention of belonging to that kind, appealing to Jerrold Levinson's (1993) intentional-historical theory of art. For Bloom, something is a chair if it is the successful product of an intention to make a chair. Amie Thomasson (2003, 2007) combines elements from Hilpinen and Bloom's accounts. For her, something is an artifact of kind *K* only if it's the product of a largely successful intention to make a *K*, where a maker intends to make a *K* only if they have a substantive concept of the nature of *K*s that largely matches that of some group of prior *K* makers and they intend to realize the concept by imposing *K*-relevant features on the object (2003, 600). This substantially restricts maker's authority over their creations: kind-determining intentions involve more than mere acceptance, as they do for Hilpinen, and require knowledge about relevant features and prior art, unlike for Bloom. However, Thomasson's view has been criticized on the grounds that it gives makers privileged epistemic access to the things they make (Kornblith 2007), that it is overly permissive (Evnine 2016, Section 3.5.2), and that maker intentions, even with the conditions imposed, aren't sufficiently discriminating to provide determinate identity conditions (Koslicki 2018).

Not all characterizations of artifact kinds appeal to functions or intentions. In one example, Jeffrey Goodman (2021) argues that artifacts are just hunks of matter whose configuration is the result of human activity and that this configuration disposes them to participate in other human activities. Artifacts may then be characterized entirely based on their structure, without appeal to function or intention. Goodman's view is an outlier in the literature, which underlines how central functions and (maker's) intentions are to the metaphysics of artifacts as well as to ordinary categorizations of artifacts.

5. Hylomorphism and The Dual-Nature Theory

The views reviewed so far focus on articulating identity, existence, and persistence conditions for artifacts and their kind membership. Other approaches center on analyzing how artifacts may be distinct from the matter out of which they are made. For this, some views center again on functions, often in combination with maker's intentions. For Lynne Rudder Baker (2007, 51-53), an artifact is essentially intention-dependent and essentially has a proper function. The proper function is the artifact's intended function, which results from the intentions of the artifact's makers and their arrangement or selection of an aggregation of matter to serve that proper function. By contrast, Simon Evnine (2016) focuses on maker intentions alone. In making, "minds impress themselves on matter

... through the process of working on that matter with certain intentions” (2016, 69-70). For Evnine, artifact functions don’t determine kind membership. Instead, artifact functions are kind-dependent, with each artifact kind having a kind-associated function. Moreover, artifacts have a *metabolism* – the ability to change their matter over time yet remain the same artifact because of their dependence on their historical origin, i.e. their maker’s intention. This creates an interesting connection to recent philosophical discussions of maintenance and repair practices. Mark Thomas Young (2022), for instance, distinguishes between maintenance as conservation and maintenance as transformation, arguing that the latter suggests that it isn’t just the maker’s intention that bears on the nature of the kind. Young (2024) further argues that maintenance has an important role to play in understanding longstanding metaphysical puzzle cases like the Ship of Theseus and the Statue and the Clay. These same puzzles feature in Evnine’s discussions of the ‘metabolic’ nature of artifacts.

Another set of contributions that focuses on the relation between artifacts and their constitutive matter is the dual-nature theory. The central idea of this theory is that, in everyday and engineering descriptions, artifacts are conceptualized as physical structures with a particular form and as designed objects with an intended function (Houkes and Vermaas 2004, 2010; Kroes and Meijers 2006, Reydon 2014). Both conceptions are needed to fully understand the nature of technical artifacts, since unlike so-called ‘social’ artifacts like laws and money, their function crucially depends on their physical structure and engineering design crucially involves specifying which physical structure may serve specific functions.

These views enjoy considerable popularity, but face many challenges related to the identity, persistence and existence conditions that they entail. Baker’s view, for instance, entails that conventions or beliefs may suffice to bring artifacts into existence, e.g. a piece of driftwood can become a wine rack merely by thinking of it as such. Even if this would reflect ontological commitments in everyday practices, thinking things into existence is taken to be metaphysically problematic (Zimmerman 2002), raising doubts about the cogency of such hylomorphic approaches. Cultural appropriation and contexts of creative use raise problems about the conditions under which artifacts may be said to change without any change in their physical matter. Similarly, Evnine’s claim that artifacts are “essentially the products of the right kind of making” (2016, 70) suggests that conditions should be imposed on acts of creation, shifting the analysandum and raising the question of how creative practices can be demarcated and evaluated (see Evnine 2022). Finally, the dual-nature theory emphasizes the difference between the two conceptualizations of artifacts to such an extent that it does not present artifacts as sufficiently unified entities – again raising doubts about the cogency of its underlying metaphysics. It has also been criticized for overemphasizing technical artifacts and contexts of engineering, at the expense of artifact use and design as a social phenomenon (e.g. Schyfter 2009).

6. Artifacts as Social Kinds

While the previously surveyed views tend to focus on intentions, functions, and/or material structure, various recent contributions have brought out how artifacts are distinctly social entities whose nature is not strictly dependent on a single maker’s or user’s intentions. Marcel Scheele (2006) and David

Pearce (2016) have argued that artifacts sometimes depend on collective intentionality, either for function ascription (Scheele, 2006, 29-32) or in cases of team production involving multiple, coordinating agents (Pearce, 2016, 10ff.). Dipert (1993, 29-33) argues that artifacts are intentionally modified tools which are intended to be recognized by other agents as the artifact kind that they are, thereby including a social element in the content of the maker's intention.

By contrast, Maarten Franssen (2006), Amie Thomasson (2014), and Tim Juvshik (2024, 2025a) have variously argued that artifacts depend on social norms and historically contingent social practices which govern their creation, use, and treatment. Articulating these views in more detail requires further analysis of their appeal to collective intentionality, norms, and social practices, debates about which are far from settled. Furthermore, at least for Thomasson and Juvshik, the appeal to social norms and practices makes artifact kinds highly contingent and sometimes arbitrary. Criticisms that intentionalist accounts fail to provide determinate identity and existence conditions apply with equal or greater force to accounts that appeal to social factors. Still, these accounts provide an opportunity for analytic metaphysics of artifacts to align with views in the philosophy of technology and science and technology studies, where the inherently normative and political dimension of artifacts is emphasized (e.g. Radder 2009).

Many accounts have widened their scope not only by their increased attention to social factors. They have also gradually become more inclusive of which practices they take as a basis for developing their metaphysics of artifacts. Earlier accounts focus, as we have seen, on artisanship or engineering and take these creative practices and the consequent 'end use' as a basis for their analysis. Recent efforts include a far greater variety of practices. Above, we touched upon creative use, counter-use, repair and maintenance, and patent legislation. Other contributions mention or analyze copying (Hick and Schmücker 2016, Part 2), recycling (Preston 2009), and automated mass production (Paek 2022).

7. Cluster Accounts and Pluralism

The widening of scope and variety of fundamental concepts in the metaphysics of artifacts have led some to doubt whether a singular account of 'artifact' can be given. Recently, Nurbay Irmak (2024) has argued that artifact kinds do not have an essential property that determines kind membership. Rather, to be a member of a particular artifact kind at a time is for something to instantiate some subset of an associated cluster of properties: functional, intentional, historical, structural, and material. This anti-essentialism may take approaches that aim to accommodate our disparate practices to their natural conclusion: we might do best to acknowledge that artifact kinds are vague, conventional, or even arbitrary rather than continue to articulate determinate existence, identity and persistence conditions. It is, however, not clear what has been gained by describing and accepting "the mess we make", other than rejecting various unduly restrictive or (re)constructive views. Irmak's anti-essentialism doesn't provide principled ways of determining kind membership since it introduces an ineliminable element of arbitrariness to kind membership conditions and may entail a certain form of conventionalism that some find objectionable.

Alternatively, the messiness of our artifact practices has led some to argue for pluralism about 'artifact'. Functional, intentional, material, structural, and other properties pick out distinct senses of

‘artifact’. Preston (2022) argues for pluralism about artifact concepts by analogy with pluralism about species concepts, but she thinks that pluralism undermines the theoretical usefulness of artifact concepts and we would do better to talk of ‘material culture’. Alper Gungör (2023) argues that both essentialist and anti-essentialist accounts of artifacts fail because they rely on the tacit assumption of artifact concept monism, i.e. if artifacts have an essence, then there is only a singular account of what that essence is. Gungör defends artifact concept pluralism, also by appeal to biological classifications of species, though unlike Preston he argues pluralism is theoretically useful as shown by how archeologists and anthropologists actually classify artifacts from other cultures. Houkes and Vermaas (2013) argue that pluralism coheres with experimental results from cognitive science regarding the context-dependence of our classificatory practices. However, pluralism faces a semantic challenge: why is it pluralism about a single concept, rather than distinct concepts denoted by a similar referring term? Without an answer to the semantic challenge, pluralism looks little different from anti-essentialist cluster views, while also inviting a perhaps objectionable charge of linguistic conventionalism about the nature of artifacts.

8. Conclusion

Metaphysicians working in the analytic tradition have realized that there is more to artifacts than the Statue and the Clay and the Ship of Theseus. There is by now a variety of views on the existence, identity and persistence conditions of artifacts and the criteria for artifact-kind membership. As our survey made clear, there is strong divergence as well. One type of divergence is in the metaphysics of artifacts and artifact kinds. Some authors deny the existence of artifacts altogether or severely regiment or reconstruct ordinary categorization of artifacts based on prior metaphysical commitments, e.g. to metaphysical realism. Others present accounts of artifacts and their kinds that are much closer to everyday categorization, e.g., in terms of functionality. Our survey of these first-order views of artifacts also suggests a second-order or methodological divergence between approaches that prioritize prior metaphysical tenets, assumptions, or methodologies and those that seek to describe or accommodate our ordinary beliefs, intuitions and practices involving artifacts. We can call these views *revisionist* and *descriptivist*, respectively. This distinction is a matter of degree, with eliminativist and easy ontologies sitting at opposite methodological ends of this continuum, and the majority of views we considered sitting somewhere in the middle. Both metametaphysical approaches face difficulties, the degree to which depending on where they are located on the continuum between revisionism and descriptivism. Most generally, revisionist approaches need to warrant their proposed revisions, by finding sufficient clarity in and independent support for their prior tenets; and descriptivist approaches need to avoid arbitrariness by justifying any selection of practices and finding sufficiently determinate identity and existence conditions in the selected practices. Our review revealed disagreement not just about the best answers to stock metaphysical questions concerning artifacts, but also about the very aim and method of doing metaphysics. This metametaphysical disagreement is of course hardly specific to the metaphysics of artifacts. Yet it might be especially salient for it because the human artifice is so rich, variegated and central to our concerns.

This centrality to human concerns makes discounting or accommodating various aspects of our artifact practices more than a metametaphysical matter. A metaphysics of artifacts that takes as a basis only some creative practices, e.g., automated mass production, rather than others, e.g., counter-use, implicitly privileges some metaphysical commitments and some ontological categories over others. This may be said to constitute a form of ‘ontic injustice’ (Jenkins 2023): a failure to acknowledge the categorizations of some community, not only of themselves but also of their material culture. This reveals at least one underexplored aspect in the analytic metaphysics of artifacts, namely their normative and political dimensions. In the philosophy of technology and science and technology studies, these dimensions have long been recognized. For example, Langdon Winner’s (1980) seminal paper “Do Artifacts Have Politics?” argues that material artifacts can embody political values through deliberate design choices, such as anti-homeless spikes under an overpass, while other artifacts, especially large sociotechnical systems, inherently necessitate certain political organizations, such as the top-down management structure needed to operate a nuclear power plant. Analyses in terms of functions or maker intentions can only capture this embodiment of political values to a very limited extent. The recent turn to social views of artifacts and interconnections between the metaphysics of artifacts and social ontology can make further inroads, for instance through highlighting the central role of norm-governed social practices (for this, also see Liao and Huebner 2021).

Our review has only covered part of the richness of artifacts and of the philosophical literature concerned with it. We have focused on analytic metaphysics, where artifacts are routinely and mostly implicitly taken to be mid-sized material objects that are the products of human activities. Discussions often cross over into philosophical subdisciplines that are not specifically concerned with artifacts, such as epistemology (e.g. Kornblith 2007) and philosophy of language (e.g. Olivero and Carrara 2021). They also lead to or thematize cross-connections with subdisciplines concerned with specific classes of artifacts, such as aesthetics (artworks; e.g. Levinson 2007 and Terrone 2024), philosophy of technology (technical artifacts; e.g. Kroes 2012), philosophy of information and computation (e.g. Floridi, Fresco and Primiero 2015), and social ontology (institutions and other social objects; e.g. Passinsky 2024). One emerging concern is which, if any, fundamental metaphysical differences exist between these classes and to what extent metaphysical accounts can be applied across categories. Regarding the latter, the notion of ‘abstract artifact’ has for instance been posited to explain repeatable artworks, technical designs, and algorithms (see Friedell 2021 for an overview).

Despite artifacts playing a central role in our everyday lives and an increasingly central role in many philosophical subdisciplines, the ‘human artifice’ remains a rich source of unresolved metaphysical issues.

References

- Baker, Lynne Rudder. *The Metaphysics of Everyday Life*. Cambridge: Cambridge University Press, 2007.
- Bloom, Paul. “Intention, History, and Artifact Concepts” *Cognition* vol. 60 (1996): 1-29. [https://doi.org/10.1016/0010-0277\(95\)00699-0](https://doi.org/10.1016/0010-0277(95)00699-0)
- Carrara, Massimiliano and Pieter E. Vermaas. “The Fine-Grained Metaphysics of Artifactual and Biological Functional Kinds” *Synthese* vol. 169 (2009): 125-143. <https://doi.org/10.1007/s11229-008-9339-1>

- Declos, Alexandre. "Toy Stories: A Metaphysics of Playthings" *The Philosophical Quarterly* vol. 76 no. 2 (2026): 489-509. <https://doi.org/10.1093/pq/pqag009>
- Dipert, Randall R. *Artifacts, Art Works, and Agency*. Philadelphia: Temple University Press, 1993.
- Eklund, Matti. "Peter Van Inwagen on Material Beings" *Ratio* vol. 15 no. 3 (2002): 245-256. <https://doi.org/10.1111/1467-9329.00189>
- Elder, Crawford L. "Artifacts and Mind-Independence." In *Artefact Kinds: Ontology and the Human-Made World*, ed. Maarten Franssen et al., 27-43. New York: Springer, 2014. https://doi.org/10.1007/978-3-319-00801-1_3
- Elder, Crawford L. "On the Place of Artifacts in Ontology." In *Creations of the Mind*, ed. Eric Margolis and Stephen Laurence, 33-51. Oxford: Oxford University Press, 2007.
- Evnine, Simon. *Making Objects and Events*. Oxford: OUP, 2016.
- Evnine, Simon. "The Historicity of Artifacts: Use and Counter-Use" *Metaphysics* vol. 5 no. 1 (2022): 1-13. <https://doi.org/10.5334/met.74>
- Floridi, Luciano, Nir Fresco and Giuseppe Primiero. "On Malfunctioning Software" *Synthese* vol. 192 (2015): 1199-1220. <https://doi.org/10.1007/s11229-014-0610-3>
- Franssen, Maarten. "The Normativity of Artefacts" *Studies in History and Philosophy of Science* vol. 32 (2006): 42-57. <https://doi.org/10.1016/j.shpsa.2005.12.006>
- Franssen, Maarten and Peter Kroes. "Artefact Kinds, Ontological Criteria and Forms of Mind-Dependence." In *Artefact Kinds: Ontology and the Human-Made World*, ed. Maarten Franssen et al., 63-83. New York: Springer, 2014. https://doi.org/10.1007/978-3-319-00801-1_5
- Friedell, David. "Creating Abstract Objects" *Philosophy Compass* vol. 16, no. 10 (2021): e12783 <https://doi.org/10.1111/phc3.12783>.
- Goodman, Jeffrey. "On Inadvertently Made Tables: A Brockean Theory of Concrete Artifacts" *Acta Analytica* vol. 36 (2021): 1-9. <https://doi.org/10.1007/s12136-020-00438-w>
- Grandy, Richard. "Artifacts: Parts and Principles." In *Creations of the Mind*, ed. Eric Margolis and Stephen Laurence, 18-32. Oxford: Oxford University Press, 2007.
- Günger, Alper. "Artifact Concept Pluralism" *Dialectica* vol. 77, no. 2 (2023): 123-151. <https://doi.org/10.48106/dial.v77.i2.01>
- Hick, Darren Hudson and Reinold Schmücker, eds. *The Aesthetics and Ethics of Copying*. London: Bloomsbury Academic, 2016.
- Hilpinen, Risto. "On Artifacts and Works of Art" *Theoria* vol. 58 (1993): 58-82. <https://doi.org/10.1111/j.1755-2567.1992.tb01155.x>
- Houkes, Wybo. "What are Technical Artefacts in Patent Practice? A Practice-Based Ontology." In *Being and Value in Technology*, ed. Enrico Terrone and Vera Tripodi, 1-23. New York: Springer, 2022.
- Houkes, Wybo and Pieter Vermaas. "Actions versus Functions: A Plea for an Alternative Metaphysics of Artifacts" *The Monist* vol. 87 no. 1 (2004): 52-71. <https://www.jstor.org/stable/27903855>
- Houkes, Wybo and Pieter Vermaas. *Technical Functions*. Dordrecht: Springer, 2010.
- Houkes, Wybo and Pieter Vermaas. "Pluralism on Artefact Categories: A Philosophical Defence" *Review of Philosophy and Psychology* vol. 4 (2013): 543-557. <https://doi.org/10.1007/s13164-013-0149-0>
- Hughes, Jesse. "An Artifact is to Use: An Introduction to Instrumental Functions" *Synthese* vol. 168 (2009): 179-199. <https://doi.org/10.1007/s11229-008-9335-5>

- Irmak, Nurbay. "The Mess We Make: On the Metaphysics of Artifact Kinds" *Erkenntnis* vol. 90 no. 5 (2024): 2003-2019. <https://doi.org/10.1007/s10670-024-00789-5>
- Jenkins, Katherine. *Ontology and Oppression: Race, Gender, and Social Reality*. Oxford: OUP, 2023.
- Juvshik, Tim. "Function Essentialism about Artifacts" *Philosophical Studies* vol. 178 no. 9 (2021): 2943-2964. <https://doi.org/10.1007/s11098-020-01594-w>
- Juvshik, Tim. "On the Social Nature of Artifacts" *Theoria* vol. 89 no. 6 (2024): 910-932. <https://doi.org/10.1111/theo.12506>
- Juvshik, Tim. "What Makes a Kind an *Artifact* Kind?" *Synthese* vol. 205 no. 66 (2025a): <https://doi.org/10.1007/s11229-025-04914-x>.
- Juvshik, Tim. "Why Be Realists about Artifact Kinds?" *Acta Analytica* (2025b): <https://doi.org/10.1007/s12136-025-00659-x>.
- Kornblith, Hilary. "How to Refer to Artifacts." In *Creations of the Mind*, ed. Eric Margolis and Stephen Laurence, 138-149. Oxford: Oxford University Press, 2007.
- Koslicki, Kathrin. *Form, Matter, Substance*. Oxford: OUP, 2018.
- Koslicki, Kathrin and Olivier Massin. "Artifact Functions: A Capacity-Based Approach." In *Special Objects: Social, Fictional, Modal and Non-Existent*, eds. Garcia-Encinas and Martinez-Manrique, 31-51. Dordrecht: Springer, 2025.
- Kroes, Peter. *Technical Artefacts: Creations of Mind and Matter*. Dordrecht: Springer, 2012.
- Kroes, Peter and Anthonie Meijers. "Introduction: The Dual Nature of Technical Artefacts" *Studies in History and Philosophy of Science* vol. 37 no. 1 (March 2006): 1-4. <https://doi.org/10.1016/j.shpsa.2005.12.001>
- Levinson, Jerrold. "Artworks as Artifacts." In *Creations of the Mind*, ed. Eric Margolis and Stephen Laurence, 74-82. Oxford: Oxford University Press, 2007.
- Levinson, Jerrold. "Extending Art Historically" *Journal of Aesthetics and Art Criticism* vol 51 (1993): 411-423. <https://doi.org/10.2307/431513>
- Liao, Shen-yi and Bryce Huebner. "Oppressive Things." *Philosophy and Phenomenological Research* vol. 103 (2021): 92-113. <https://doi.org/10.1111/phpr.12701>
- Losonsky, Michael. "The Nature of Artifacts" *Philosophy* vol. 65 no. 251 (1990): 81-88. <https://doi.org/10.1017/S0031819100064263>
- Lowe, E. J. "How Real are Artefacts and Artefact Kinds?" In *Artefact Kinds: Ontology and the Human-Made World*, ed. Maarten Franssen et al., 17-26. New York: Springer, 2014. https://doi.org/10.1007/978-3-319-00801-1_2
- Merricks, Trenton. *Objects and Persons*. Oxford: OUP, 2001.
- Olivero, Irene and Massimiliano Carrara. "The Semantics of Artifact Kind Terms" *Philosophy Compass* vol. 16 no.11 (2021): e12778. <https://doi.org/10.1111/phc3.12778>
- Paek, Chaeyoung. "Making Things Collectively" *Metaphysics* vol. 6, no. 1 (2022): 1-12. DOI: [10.5334/met.91](https://doi.org/10.5334/met.91)
- Passinsky, Asya. "Artifacts, Artworks, and Social Objects." In *The Routledge Handbook of Essence in Philosophy*, eds. Kathrin Koslicki and Michael Raven, 261-275. New York: Routledge, 2024.
- Pearce, David. "Collective Intentionality and the Social Status of Artifactual Kinds" *Design Science* vol. 2, no. 3 (2016): <https://doi.org/10.1017/dsj.2016.3>
- Preston, Beth. "Philosophical Theories of Artifact Function." In *Philosophy of Technology and Engineering Sciences*, ed. Anthonie Meijers, 213-233. Amsterdam: Elsevier, 2009.

- Preston, Beth. "The Artifact Problem: A Category and Its Vicissitudes" *Metaphysics* vol. 5, no. 1 (2022): 51-65. <https://doi.org/10.5334/met.86>
- Quine, Willard V.O. "On What There Is", in: *From a Logical Point of View*, 1-19. Cambridge, MA: Harvard University Press.
- Raven, Michael J. "Dynamics of Artefacts" *Mind* (November, 2025): <https://doi.org/10.1093/mind/fzaf037>.
- Reydon, Thomas A. C. "Metaphysical and Epistemological Approaches to Developing a Theory of Artifact Kinds." In *Artifact Kinds: Ontology and the Human-Made World*, ed. Maarten Franssen et al., 125-144. New York: Springer, 2014. https://doi.org/10.1007/978-3-319-00801-1_8
- Scheele, Marcel. "Function and Use of Technical Artefacts: Social Conditions of Function Ascription" *Studies in History and Philosophy of Science* vol. 37, no. 1 (2006): 23-37. <https://doi.org/10.1016/j.shpsa.2005.12.004>
- Schyfter, Pablo. "The Bootstrapped Artefact: A Collectivist Account of Technological Ontology, Functions, and Normativity" *Studies in History and Philosophy of Science* vol. 40 no. 1 (2009): 102-111. <https://doi.org/10.1016/j.shpsa.2008.12.006>
- Sider, Ted. "What's So Bad about Overdetermination?" *Philosophy and Phenomenological Research* vol. 67 (2003): 719-726. <https://www.jstor.org/stable/20140640>
- Sider, Ted. *Writing the Book of the World*. Oxford: Oxford University Press, 2011.
- Soavi, Marzia. "Antirealism and Artifact Kinds" *Techné* vol. 13 no. 2 (Spring, 2009a): 93-107.
- Soavi, Marzia. "Realism and Artifact Kinds." In *Functions in Biological and Artificial Worlds*, eds. Krohs and Kroes, 185-202. Cambridge: MIT Press, 2009b.
- Terrone, Enrico. "Are Works of Art Affective Artifacts? If Not, What Sort of Artifacts Are They?" *Topoi* vol. 43 (2024): 737-746. <https://doi.org/10.1007/s11245-024-10045-8>
- Thomasson, Amie. "Artifacts and Human Concepts." In *Creations of the Mind*, ed. Eric Margolis and Stephen Laurence, 52-73. Oxford: Oxford University Press, 2007.
- Thomasson, Amie. "Public Artifacts, Intentions, and Norms." In *Artifact Kinds: Ontology and the Human-Made World*, ed. Maarten Franssen et al., 45-62. New York: Springer, 2014. https://doi.org/10.1007/978-3-319-00801-1_4
- Thomasson, Amie. *Ontology Made Easy*. Oxford: Oxford University Press, 2015.
- Thomasson, Amie. "Realism and Human Kinds" *Philosophy and Phenomenological Research* vol. 67 no. 3 (2003): 580-609. <https://doi.org/10.1111/j.1933-1592.2003.tb00309.x>
- Van Inwagen, Peter. *Material Beings*. Ithaca: Cornell University Press, 1990.
- Wiggins, David. *Sameness and Substance Renewed*. Cambridge: Cambridge University Press, 2001.
- Winner, Langdon. "Do Artifacts Have Politics?" *Daedalus* vol. 109, no. 1 (1980): 121-136. <https://www.jstor.org/stable/20024652>
- Young, Mark Thomas. "Maintenance." In *The Routledge Handbook of the Philosophy of Engineering*, ed. Diane Michelfelder and Neelke Doorn, 356-367. New York: Routledge, 2022.
- Young, Mark Thomas. "Technology in Process: Maintenance and the Metaphysics of Artefacts." In *Maintenance and Philosophy of Technology: Keeping Things Going*, eds. Mark Thomas Young and Marc Coeckelbergh, 58-85. New York: Routledge, 2024.
- Zimmerman, Dean. "The Constitution of Persons by Bodies: A Critique of Lynne Rudder Baker's Theory of Material Constitution" *Philosophical Topics* vol. 30 (2002): 295-338. <https://www.jstor.org/stable/43154389>