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It's All in Your Head: A Solution to the Problem of Object Coincidence

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ABSTRACT: It's uncontroversial that artifacts like statues and tables are mind-dependent. What's controversial is what this dependence entails about the ontic status of artifacts. I argue this mind-dependence entails that the extra-mental world contains no artifacts or artifact joints. In support of this claim I respond to recent arguments proffered by defenders of the mind-independent existence of artifacts, viz. those of Lynne Rudder Baker, Crawford Elder, and Amie Thomasson. I argue the most plausible story about artifacts is that they're in our minds, not the world; they are merely projections onto a world of "indifferent materials". With this established, I show how many cases of object coincidence, the thesis that more than one object may be located in the same exact region of space-time, cannot occur.

KEYWORDS: Material Objects, Coincidence, Collocation, Artifacts, Mind-Dependence, Powers

"How could our speaking and thinking in different ways remove the sameness [in kind]? The very suggestion sounds like an endorsement of magic." Elder (2006, 5)

1. INTRODUCTION

The problem of coinciding objects suggests that two objects, say a lump of gold and a statue, can completely and exactly coincide. That is, a lump of gold *and* the statue it composes can *both* be in the same exact region of space-time. So, if coincidence is true, there are at least two objects in the place you ordinarily take there to be just one. Reactions to the problem are varied. Some embrace the coincidence of objects, others find it absurd, and others claim the problem fails to get off the ground.[1] I take the problem to be real, and a theory of objects that avoids coincidence has at least this much going for it.

Philosophers have pursued various lines of argument to avoid coincidence, or at least make it less unpalatable. Many claim that either the lump of gold or the golden statue does not exist, or that either object at any one time "dominates" the other.[2] Some, mereological nihilists, deny both the lump and the statue exist.[3] Some claim "statue" is

[1] Two-thingers—those who embrace coincidence— as Stephen Yablo and Karen Bennett call them, include Baker (2000); Thomasson (2007a, 73-86); Hughes (1997); Lowe (2003); Fine (2003); Moyer (2006); Thomson (1998); Sutton (2012); Doepke (1992); Johnston (1992; 2006, 664-7); and Crane (2012). See notes 2-6 for some representatives of the "one-thinger" camp. Those who deny the problem is genuine argue there is no fact about the world that properly distinguishes or grounds the differences between the two purportedly coinciding objects. Those who pose this Grounding Problem include Zimmerman (1995, 85-100); Heller (1990, 30-2); Olson (2001); Bennett (2004); Sider (2001, 158-9); and Merricks (2001, 38-46; 130-4). Lewis (1986, 252) claims arguments for coincidence are invalid, even "absurd". van Inwagen (1981, 128) claims simply to "not understand" the problem. See Paul (2010) for a nice synopsis of the debate.

[2] Michael Rea (2001) and Patrick Toner (2008) argue for an Aristotelian substance-based solution which, in a way, eliminates parts when they compose a whole. Crawford Elder (1998) also eliminates lumps and masses to solve the problem. See Michael Burke (1992, 1994) for the "dominance" view.

[3] See Sider (2013); Dorr and Rosen (2003); and Cameron (2010).

simply a phase of the real object, the lump of gold.[4] Others have denied lumps of gold and the golden statues they purportedly coincide with are of the same ontological category, and so may coincide in an unproblematic way.[5] Yet others claim lumps and statues are numerically singular, although non-identical, objects and can both exist without coinciding in a problematic way.[6] Although these solutions proffer interesting, sometimes revisionary, ways of avoiding the coincidence of numerically distinct objects, they have failed to follow an intuitive, promising and metaphysically low-cost line of thought. A brief look at the examples used to demonstrate the problem helps bring out this line of thought.

The standard example called upon to illustrate the problem is that of a statue and the material, let's say gold, it's made of. The statue, let's call it Goliath, seems to have properties the lump of gold it is made of, let's call it Lump, doesn't have. For example, Goliath came into existence sometime after Lump, and so has different historical properties than Lump. Moreover, Goliath has different persistence conditions than does Lump. If an angry museum-goer decided to smash Goliath, they would destroy a statue but not the mass of gold constituting it. Lump can survive smashing, but Goliath cannot. With these differences in properties established, all it takes is the application of Leibniz's Law to show that Goliath and Lump are distinct objects. But the two very clearly occupy the same exact region of space-time. So goes the standard presentation of the problem.

But other examples, importantly different than the case of Goliath and Lump, are called upon to illustrate coincidence. A tree and the mass of tree cells that compose it have different persistence conditions, and so are distinct objects. For example, one and the same tree stays in existence through a metabolic process that replaces some of its parts, leaving behind a different mass of cells. But the tree *and* its cells very clearly occupy the same exact region of space time. A gold atom and the subatomic components it's made of also have different persistence conditions, and so are distinct, coinciding objects. (In fact, in the case of any composite object, it seems the collective parts will coincide with the whole.)[7] But neither atoms of gold nor trees are *artifacts* like Goliath is. And it is a metaphysically important point that neither atoms of gold nor trees are artifacts. For, artifacts are mind-dependent objects. It's incredibly plausible that atoms of gold and trees would continue to exist if no mind existed or was thinking about gold or trees. It's less clear if statues, tables, and other artifacts would exist without a mind. In fact, it's less clear statues, tables and other artifacts exist at all—or at least in much the

[4] See Christopher Brown, (2005, 160-2). Toner (2006), in a similar vein, argues that lumps and statues are different relations one and the same thing, a lump of clay, can stand in.
[5] David Oderberg (1996); David Wiggins (1968). See also Kathrin Kosclicki (2008, 181-3), for an account of radical overlap, but not total coincidence, between an object and its matter or content.
[6] Michael Rea (1998); Jeffrey Brower (2014, 165-73). See also, Rea (1997).
[7] A point recently highlighted by Thomas McKay (2015), who also notes the inevitable coincidence of an object and the "stuff" composing it.

same way that atoms of gold, trees and other non-artifactual objects do. The mind-dependence of artifacts like statues and tables, and the account of how such objects come into existence, should cast doubt on their ontological credentials. I argue the mind-dependence essential to artifacts tells an ontological story that locates artifacts in the mind and not in the mind-independent world populated by atoms of gold, trees, and lumps of clay. With this established I show how Lump cannot coincide with Goliath: Goliath exists in the mind and Lump in the external, mind-independent world.

My goal here is to provide a novel solution to the problem of coinciding objects, especially as exhibited by the case of Goliath and Lump. But, as indicated, coincidence threatens in cases like those of a tree and the cells composing it and an atom of gold and its constituent parts as well. Thus, another account is required for a fully satisfactory solution to the general problem of object coincidence. Providing such a solution demands a theory of composition and material objects more broadly. Here, I'll be satisfied with just a solution to cases of artifact coincidence. But, if my argument against artifact coincidence is true, it will help to explain why cases of coincidence between trees and masses of tree cells are of a different sort, and why they need solutions of their own.

To accomplish my goal, I argue that artifacts don't inhabit the mind-independent world in the way that tress, lumps of gold and other natural objects do. As part of this task, I briefly describe our process of object classification and provide an account of artifacts. Next, I show how artifacts don't fit our paradigm of object classification and so ought not to be counted amongst the furniture of the world. After arguing for what an artifact *is not*—a mind-independent constituent of the world—I provide an account of what an artifact *is*. Artifacts like statues and tables exist, but merely as conceptualizations we, or other suitably intelligent beings, project onto a world of "indifferent materials".[8] Any unique properties or joints artifacts purportedly have ultimately originate and reside in us, and so the objects they characterize may not coincide with the denizens of the mind-independent world. After providing my solution to the problem of artifact coincidence, I raise and respond to objections to my account. In my concluding remarks I suggest why another solution is needed to solve the more general problem of object coincidence.

2. ARTIFACTS AS CITIZENS OF THE MIND

2.1 Some Remarks About Objects and Their Joints

Members of the ontological category of object, I take it, are the usual entities with which we interact in everyday and scientific life. Baseballs, buildings, chemical compounds and sub-atomic particles would all thus count as objects. This much I take as uncontroversial. Ontologists make a living arguing about what makes an entity fall under

[8] I borrow the phrase from Elder (2007b).

the category of object or what entities count as *genuine*, versus *fiat* or *garbage*, objects. My aim in this introductory section is not to provide a definition of what it is to be an object, or even to suggest what the best candidates for such a title are. All I aim to do is make some brief remarks about an obvious, but philosophically important, point: We come to know and identify objects and kinds by what they do, by how they affect us, other objects and instruments in laboratories.

That is, we classify objects, and they fall under the kinds they do, by and because of their external behaviors and capacities. Electrons are those tiny physical particles with a charge of -1.602×10^{-19} coulombs, which bounce between atomic elements and chemical compounds in various ways, and are attracted to positively charged particles. Sodium, for instance, is that kind whose instances have an atomic number of 11 and when placed in an adequate portion of water, explode. Poison ivy, or *Toxicodendron radicans*, is a low-growing, trifoliate plant which contains urushiol, an allergenic oil. If we observed a particle with a mass less than 9.11×10^{-31} kilograms and a positive charge, we wouldn't say we've observed an electron, but rather some other kind of sub-atomic particle. If we tossed a hunk of a shiny metal into a pool of water, and it didn't explode, we wouldn't say the metal was sodium. If we came across a low-growing, trifoliate plant which didn't contain urushiol, we wouldn't identify it as poison ivy. So much is relatively obvious.

The obviousness of these examples needn't cast doubt on the philosophical significance of the point they illustrate though. To repeat: we identify objects by their behaviors and capacities. Objects fall under the kinds they do because of the causally relevant properties they possess.[9] Now, objects might be *more than* just their causally relevant properties, they might be something "over and above" their powers and capacities. For all I know, I truly could have been a poached egg.[10] But the fact remains that poached eggs only count as poached eggs because of certain causally relevant properties and capacities essential to poached eggs. If an object purports to be a poached egg, but is made of carbohydrates exclusively and lacks a yoke, we can rightfully call it an imposter. Objects might be more than their powers and capacities, but the truth of this doesn't make a difference to how we identify objects, nor does it make a difference to how and why objects fall under the kinds they do. If an object has all the powers and capacities of an electron, but we attribute some ephemeral, non-causal properties to it, it's hard to see what the latter have contributed to our ontology.

So what's the importance of all this? Why am I bothering to tell you that sodium has an atomic number of 11, and that if a qualitatively similar metal has some causally relevant difference in properties, say an atomic number of 19, that it isn't sodium, but

[9] Cf. Hawthrone (2001). See also Ellis and Lierse (1994).
[10] The example is borrowed from Shoemaker (1998, 69-70).

potassium? I make these remarks because I think they clearly support a realism about kinds, and help to convince us the world does in fact contain some mind-independent joints.[11] These remarks certainly do not *prove* the world has genuine boundaries capable of being *discovered*, rather than *invented*, but I think such a realism is the most plausible and commonsensical conclusion to draw from them. That a molecule with 11 protons behaves in very strict, predictable ways and an atom with just a single additional proton (and corresponding additional neutron, electron, etc) behaves in dramatically different ways, is pretty good evidence for real boundaries in nature. It is not even close to all the evidence for this conclusion though.[12] But the goal of this paper is not to argue for realism about natural kinds; it is simply an important point to make along the way. So, this much I'll assume from here on: what we ordinarily take to be the world's kinds are split by clear boundaries, exist independently of what we or any non-divine being thinks, says, or wills, and that at least some of these boundaries are discoverable.[13] What is so important about this point though—for the problem of object coincidence and my solution to it—is that not all kinds we ordinarily take to exist behave like the kinds "sodium" and "electron". A whole class of kinds, artifact kinds, representative examples of which include "statue" and "table", don't have clear boundaries. What's more important than the potential vagueness of artifacts though, and essential to my argument, is that their boundaries aren't in the world; they're in us.

2.2 Some Remarks About Artifacts and Their "Joints"

Artifacts are ubiquitous. You're currently looking at one (a paper, a computer screen), and you're likely sitting on one (a chair), in one (a building), and arrived where you are now because of one (a car, a bike, a train). But what is it about an object that counts it as an artifact? A good first take on artifacts is that they're objects intentionally created by humans (or suitably intelligent beings) to serve some function.[14] This would count things like screwdrivers, cars, and computers as artifacts. This is a good first take, but it isn't quite clear it's totally adequate. It is unclear things like works of art, prototypes and "found" objects would count as artifacts on such a conception. My aim here is not to provide necessary and sufficient conditions for counting an object as an

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[11] Alan Sidelle (1989), a conventionalist about essences and kinds, argues that counterfactuals of the sort, "Even if humans didn't exist, the world would still look very much like it does", often relied on by realists, can be true even if the world in fact has no joints. Although I haven't explicitly relied on such a counterfactual argument yet, I will draw on a modal variant below. Happily, Sidelle's claims have already seen a realist rejoinder, and so I'll grant myself use of such counterfactual arguments. See Elder (2006) for a response to such "realist-imitating counterfactuals". See also, Elder (2007a, 2007c).

[12] See Tahko (2012) for other arguments for realism about both objects and kinds.

[13] I'll leave it to philosophers of religion to decide whether or not God can transform me into a poached egg while maintaining my identity.

[14] Hilary Kornblith (1980), Ruth Millikan (1999) and Lynne Ruder Baker (2004) argue artifacts are determined primarily by function or proper function. For opposing views, see Paul Bloom (1996) and Amie Thomasson (2003).

artifact, but I do, in efforts to avoid many cases of object coincidence, find reason to adopt a fully general, working account of artifacts.

It's been argued a fully adequate account of artifacts must go beyond intended functions if it is to countenance objects such as art, prototypes and other entities we'd normally consider to be artifacts as such (Thomasson 2005, 2014). To see why, consider the following. The intended function of a chair is to provide support for a sitting person. But, in some cases, chair-producers make objects qualitatively identical to chairs, but not with the intended function of supporting a sitting person. A chair-producer might make such an object for aesthetic purposes only, perhaps for decorating a home. Perhaps such a chair is never in fact sat upon! Does it still count as a chair? Intuitively, yes; what else could it be? But it clearly wasn't created with the intended function of supporting a sitting person. Or consider a work of art, say a painting. Perhaps the artist had created her painting with the intended function of making people cry. Is the painting now, having learned this information about the artist's intentions, a "cry-maker"? No, it's clearly a painting; just intending it to function a certain way doesn't necessarily make it anything different. Even the artist, fully open about her intentions, would claim she made a painting and not a cry-maker.

But if the joints of artifacts are to be demarcated by something besides intended functions, what might it be? Amie Thomasson (2014, 60) writes that, "In the place of the idea that artifacts must have an intended function, we should generalize the idea: treating artifacts as things that are intentionally made, and which have at least *some* intended features – which may or may not include an intended function." That is, to be an artifact, to count as a member of a genuine artifact kind, is to have at least one *intended feature*, whether that be a function, structural property, or what have you.[15] Thomasson argues such features extend, in certain cases like art and places of worship, to norms of use, treatment and regard. So, what makes a church a church, and not a private home or gymnasium, is that it was intended to be treated and regarded a certain way (by a certain group of people). You *ought* to behave in some ways, but not others, in church. Thomasson concludes:

> [T]he definitive intended properties for membership in public kinds typically include not merely functional or structural features, but also being intended to be subject to certain norms, where this is understood as the object being recognizable (by and intended audience) as to be treated, used, regarded, etc. in certain ways.… To intend to make a work of art, a cathedral, a cheese sauce, or a top hat is (inter alia) to intend to make something that is *to be recognized as subject to certain norms of use,*

[15] For more on the role of *intentions* in artifacts, see Risto Hilpinen (1992, 1993, 2011). See also, Thomasson (2005).

> *treatment*, *regard*, etc. by an appropriate (intended) audience. (2014, 64 [emphasis original])

So, if we're to count objects like paintings, prototypes and places of worship as artifacts, which intuition suggests we should, then something along the lines of Thomasson's suggestion must be enacted. So, for my purposes here, I'll take an artifact to be *an object made by a suitably intelligent being with the intention of instantiating some suitable feature*. The intended property might be to function a certain way, or it might simply be to be regarded a certain way. (I'll also assume, following Hilpinen (1993), Bloom (1996) and Thomasson (2003), that objects purporting to be artifacts of a certain kind have some sort of success criteria. That is, the object in question must have a suitably decent chance of successfully instantiating its intended feature/s. A "screwdriver" made of chocolate cannot *really* be a screwdriver.)[16] I say "suitable" because not all intended features are characteristic of artifacts. For instance, a chemist may intend to create an object with certain features, say, the micro-structural features characteristic of sodium chloride crystals. But clearly sodium chloride crystals are not artifacts, even if said chemist were to have created the first instances of them (like some physicists have created the elements Copernicium and Einsteinium). An easy way of distinguishing cases like this from the creation of genuine artifacts is that the former may be said to have an "internal essence" while the latter lack any such essence.[17] Artifactual essences are not, in the relevant sense, internal to the objects they characterize: a screwdriver is steel *or* iron with a wooden *or* plastic handle. What it is to be a screwdriver is to have an intended function F, and to be crafted of any materials M_1, M_2, ...M_n suitable to carrying out F. But what it is to be Einsteinium has nothing to do with functions, features or materials of a certain sort: Einsteinium can only be of a material with an atomic number of 99; *that is* what it is to be Einsteinium.

So, our revised working definition of an artifact is: *an object made by a suitably intelligent being with the intention of instantiating some suitable, non-natural feature*.[18]

This digression helps to highlight one more important, indeed vital, point about artifacts. Artifacts are in some very important respect mind-dependent. If there were no mind to intend for artifacts to exist, there would be no artifacts. So much is rather intuitive and completely uncontroversial, even among the most strident defenders of the ontological credentials of artifacts. What exactly such mind-dependence amounts to,

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[16] Perhaps we follow Aristotle and say it is a screwdriver "only in name".

[17] Another way of making this point is to say non-artifactual kinds are governed by laws of nature. See Lowe (2006, 156-72). Cf. also Franssen and Kroes (2014).

[18] Natural is to be contrasted with artifactual, not supernatural. I won't take a stance here on the tools of spirits. Note too, the circularity lurking here. I won't worry myself too much with it here because (1) it is not my goal to provide a reductive definition of artifacts, and (2) I take the distinction between genuine artifacts and "pseudo-artifacts" like man-made elements to be clear and obvious enough. See section 3.2 below for more on this.

however, is where philosophers disagree. In the following, I argue it entails that artifacts are constituents of the mind and not the external world populated by familiar objects like trees and lumps of gold.

2.3 The World Contains No Artifact Joints

If artifacts populate the world in much the same way that lumps of gold and trees do, one would expect they and their joints to behave in a fashion similar to the joints of such non-artifactual objects. That is, if tables and statues are to be considered amongst the furniture of the world, they ought to be, metaphysically, a lot like the rest of the furniture we'd ordinarily take there to be (like, for instance, the wood and lump of gold said objects are made of, respectively).[19] What else could it mean to say that statues, tables and screwdrivers are *just as real* as the indifferent materials purportedly composing them? In the following three sub-sections I argue artifacts and their joints are too dissimilar from the joints of natural, mind-independent objects like lumps of gold and trees to be considered ontologically serious. But, for artifacts to be less "ontologically serious" than trees or lumps of gold doesn't obviously entail their non-existence. In fact, as it stands, it doesn't say much. So, in the following section, I provide an account of what this non-serious existence amounts to.

2.3.1 No Powers, No Joints, No Artifacts

Why think artifacts and their joints are less real than those of natural objects like trees and lumps of gold? Precisely because the objects we'd ordinarily take to be artifacts, like our statue Goliath, are nothing but the natural objects purportedly composing them, plus some intention – some *mental* state. To see why this is so, consider the following thought experiment. There are two worlds, w_1 and w_2, identical in every respect except that w_1 contains intelligent life. Imagine that both worlds are very much like our world: full of artifacts like cars, golden statues, and screwdrivers. So, the primary difference between w_1 and w_2 is that the former will contain the requisite intentions to bring artifacts into being (plus the intelligent life needed for such intentions). Now, do what every good philosopher wants to do and take a "God's Eye" view at these two worlds. Besides the existence of intelligent creatures in w_1, what mind-independent difference is there between the two worlds? What joints does w_1 have w_2 lacks? *There is absolutely no difference—their joints are identical.* There has been no "addition of being" in w_1 besides the intentions—the *mental* states—necessary for artifacts to exist. Surely these intentions haven't bestowed upon the natural objects of which they're composed any casually relevant powers that would give us reason to suppose they're something

[19] Again, my aim in this paper is *not* to argue for what the real or most genuine material objects are, whether mereological simples, living beings, conscious beings, or some other objects. Recalling my assumptions in section 2.1 above, I'll take the existence of things like lumps of gold and trees as pre-philosophical data.

besides just these natural objects—lumps of gold and rods of steel connected to portions of plastic or wood.[20] To illustrate with a more concrete example, consider a statue composed of pure elemental sodium. Sodium explodes violently when it comes into contact with water. Perhaps you don't like the smug expression on the statue's face, and you decide to throw it into a lake. What happens? The sodium reacts with the water to produce a relatively good-sized explosion. But did the statue's *statueness*, its belonging to the kind "statue", make any difference whatsoever to the causal structure of the event that transpired? Has the fact that the object thrown into the lake was a statue factored into a genuine explanation of what happened (cf. Lowe 2014, 25)? No, not at all. If someone walking around the lake heard the explosion and ran over asking about what had happened and you responded, "I threw a statue in the lake", they'd respond with a befuddled stare. That the object was a statue, and not just an intricately arranged mass of sodium, explains nothing about the world's causal structure. But if this is so, why say the statue, qua artifact, exists "out there" in the world? Why not admit of just the mass of sodium?[21]

Now, perhaps that the object was a statue didn't make a causal difference in the above example doesn't mean it is so with all examples. For, doesn't a statue have powers, causally relevant properties and capacities, that the sodium lacks? For example, imagine I've commissioned an artist to sculpt for me a statue of my recently deceased grandmother. Now, every time I look at the statue I remember my grandmother and cry. Isn't this proof the statue does in fact have causally relevant properties the mass of material composing it lacks, viz. the power to make me remember my grandmother (Baker 2004, 100-1)? To this I have two responses. First is that the purported power of reminding one of their grandmother is best described as a structural property instantiated by the mass of material. That is, the mass of material instantiates a structure that looks like a human face, a specific human face of great importance to you. But this structural property isn't a unique power "above and beyond" the mass; it isn't anything that would indicate the existence of the artifact kind "statue". Moreover, all sorts of objects remind people of things; but it seems rather odd to say this shows that such a range of objects has *some single power*: the power of reminding you of x. Such a power on the face of it seems to lack credibility. Secondly, one might explain the statue's purported power simply as a manifestation condition for *your own power* of remembering your

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[20] Consider an arithmetical analogy. A K (artifact instance) is an x (lump of gold) and a y (intended feature), so that: K=x+y. To reasonably claim K is mind-independent, we'd want to see y exist without x in the world. For, if all that was mind-independent was x, we'd have no reason to suppose K as the sum of x and y was mind-independent. But, alas, the world tells us that nothing but x is mind-independent. We see no y by itself; we can't subtract x from K and see y. y is in someone's head! So why posit K as a whole as mind-independent? Think on this: have you ever encountered a statue (or any artifact) *simpliciter*?

[21] This is *not* what Thomasson (2006, 353-6) calls a "nothing over and above" objection to statues. The mereological whole in this example, the *mass* of sodium, might be doing something over and above its parts (though I doubt this in the case of masses). Nor is this a causal redundancy argument against *wholes*. It is aimed at just artifacts, qua artifactual, whatever their mereological structure.

grandmother. So instead of attributing a unique power to the statue, the reminding you of grandmother power, the more plausible explanation would be to say the structural property of the mass triggered you, an object with the disposition to remember grandma, to remember grandma. To attribute such a power to the statue is simply to project one's own powers onto the world. If either of these two explanations is right, we've avoided attributing the statue any unique powers that would grant it some real joints in the world.

Now, one might object that even if statues don't have unique powers or capacities "out there" in the world, or even if they don't often factor into the explanations of all events, certainly they're required for *some* explanations. For example, consider a construction worker, Craig, who's having a rather tough day. Craig lost his tool belt last night and on his way into work, his wallet is stolen. Now, without tools, Craig must either show up to work and get fired for losing company property, or somehow find some tools. But, without his wallet, Craig can't purchase any tools. So, against his better judgment, Craig shoplifts a variety of tools from the hardware store. When finally caught by the authorities, Craig is asked to explain why he stole what he did. He confesses, "I needed these *tools* because if I didn't show up with them, I'd get fired." Now, clearly Craig didn't steal a screwdriver because he needed a rod of steel fastened to a plastic handle. He shoplifted the screwdriver because he needed a *screwdriver*, an artifact. In the case of Craig, it seems, we can't just appeal to the indifferent materials the tools are composed of to explain what happened. But, we clearly don't need to posit the extra-mental existence of screwdrivers and other artifacts to explain why Craig did what he did. All we need to explain the case of Craig is to show that Craig takes an object, of such and such materials, arranged thus and so, to be a "screwdriver" and not something else. That is, all we need to explain Craig's actions is to have Craig, and other relevant parties, *believe* that the objects he stole were "tools" and not indifferent materials. So, we could perfectly well explain the case of Craig with, say, an account of artifacts that takes them to be mere mental "projections" onto indifferent materials—though surely indifferent materials of a certain sort, arranged a certain way. Just as we can appeal to the tooth fairy to explain certain actions and phenomena without making it an object of the extra-mental world, we can explain the case of Craig and others like it without making entities to which they appeal, viz. artifacts, objects of the extra-mental world.

2.3.2 Against Proper Function (and Morphology and Historical Placement)

So, if correct, has my attempted extirpation of unique artifact joints wholly done away with arguments for their mind-independent existence? If only I were so lucky! For, some have argued the joints of artifacts are demarcated and set by properties other than those I've targeted above. Specifically, philosophers have argued that the intended *proper functions* essential to artifacts are mind-independent and thus qualify artifacts as respectable citizens of the extra-mental world (Elder 2014). Before fully presenting this strategy, let me briefly explain the notion of proper function.

Crawford Elder (2014; see also 1989, 1998, 2007b) has argued a good realist, which I would count myself as, needs a non-arbitrary way to demarcate the persistence conditions, i.e. the joints, of mind-independent natural kinds and their instances. Otherwise, the amorphous world of the anti-realist reigns supreme: something a good realist should want to avoid. Elder, whom I imagine considers himself a good realist, has argued the essences of natural kinds, and therefore their identity conditions, can be demarcated by certain casually relevant property clusters. These property clusters are "geared together" in such a way that, if you "turn the knobs" on the values of one such property, the others will change in like manner. In the case of natural kinds like gold or water, there is just a single such "master" property, the atomic number 79 or the microstructure H20, which grounds and controls most of the other properties of the kind (Elder, 2007c). This causal-gearing approach to essences applies, says Elder, to certain artifact kinds as well (what he calls "copied kinds"). But, rather than some one particular master property, artifacts are characterized by a group of properties: (1) morphology or structure, (2) historical placement and (3) proper function. Proper function, arguably the closest to a "master" property in artifact essences, is that intended function for which producers of an artifact kind have continuously produced it, and/or that function for which consumers or users have purchased it (Elder 2007b, 35-40; 2014, 33-6). It is what an artifact "is for", "supposed to do"; it is *the* function of that kind. But this proper function, argues Elder, is completely mind-independent, and therefore respectable in a realist ontology:

> That person after person after person has produced an X, or that person after person after person has used an X, often cannot causally be accounted for by adverting merely to intentions harbored in the heads of individuals [of] either group…. The causal efficacy for replication lies in actual past performances, not past intentions or expectations of performance…. The conclusion that I myself am inclined to draw is that even though it is our conscious activities that underlie the characteristic proper functions of artifacts, those proper functions are not "mind-dependent" in a sense that need trouble realists. (2014, 35-6)

So, if I understand Elder correctly, the point is that proper functions, arguably the master properties of artifact kinds, are mind-independent features of the world and thus count the objects they characterize, artifacts, as respectable citizens in the realist's ontology. Proper functions, he says, are not up to the mental activities of any persons, whether they are producers or users. (Nor are the historical placements or morphologies up to the mental activities of any mind.) Doesn't this count in favor of the mind-independence of artifacts? For, if artifacts were just creations of the mind, wouldn't these essential features of theirs be "up to" the minds responsible for their existence? Unfortunately for artifacts, I am inclined to draw a different conclusion than Elder. I am inclined to think (1) proper functions as Elder describes them do not exist mind-

independently (or at all), and (2) that even if they did, they wouldn't be able to bolster the ontological standing of the artifacts they characterize. Let me defend these two claims in turn.

I am disinclined to admit of proper functions for artifacts precisely because I think artifacts may be essentially characterized by features besides functions. As we saw in section 2.2, many artifacts we'd ordinarily take to exist have no function, let alone a *proper* function: they simply have intended *features*. A chair can be created, with the right morphology and historical placement mind you, but lack the intended proper function of supporting a sitting person. We'd countenance such an object as a chair nonetheless. So, Elder's definition is too narrow: he affords too few artifacts the status as such. But, even so, Elder (2007b, 35) acknowledges his defense might not save all artifact kinds, so let us restrict ourselves to those artifacts he takes up the sword for. Let's consider screwdrivers as a representative example. Return now to the original question: Do screwdrivers have a proper function? Again, I say "No". Why? Because the very concept of an artifact having a *proper* function reeks of an ontological authoritarianism no one ought to stand. That is, who made Elder, or similar defenders of proper functions (see n. 14 above), the Czar of artifacts? To see the problem more clearly, consider the following. Two completely disparate cultures, Culture_1 and Culture_2, produce a qualitatively identical artifact composed of, say, a single one inch cube of steel. Both cultures have developed the artifact along "proper" historical lineages and apply the same exact morphology. Producers and consumers, in each culture respectively, make and purchase the artifact for a certain purpose. Thus, the artifact qualifies as a "copied kind". Culture_1 declares the artifact's proper function is that it is to be used while playing a certain board game while Culture_2 deems the proper function of the artifact is that it is to be used as a lure in hunting wild game. Now, imagine representatives from each culture are called upon to help settle an ontological dispute over the artifact. Both groups are asked, "What is this object: a board game piece or a hunting lure?" Predictably, representatives from Culture_1 say the object *truly* is a board game piece, and representatives from Culture_2 say the object *truly* is a hunting lure. Surely, both groups can't be right though. If so, it would entail each culture has a unique and equally legitimate ontology, but that's something good realists like Elder and I want to avoid—and especially so if Elder wants to count said artifacts among the furniture of the world. But, surely neither culture is right either! How could it be the case that either culture is truly *correct* in the dispute? The only reasonable answer to the question of what the object truly is is that it is whatever either culture says it is. But if that is so, there is no such thing as *a* proper function, what an artifact is *really for*, only a *relative* proper function. And surely a relative proper function like this isn't respectable enough to make it into a genuine realist's ontology. Surely it isn't a grand fact about the nature of the world's constituents?

But, even *if* there is such a thing as a proper function, or if a relative proper function is respectable enough, it isn't enough to count the objects such functions characterize as mind-independent in their own right. This is because there is no need to posit the existence of an artifact, let's again say a screwdriver, to which such a proper function belongs. All one needs to say—in fact, what one should say—is that a rod of steel fastened to a handle of wood or plastic has the proper function F. That is, the indifferent materials, $M_1, M_2,\ldots M_n$, arranged thus and so, have the proper function F, and that's it (adding: "That's what a 'screwdriver' is."). It cannot be the case that these materials so arranged having a proper function brings about an addition of being. Just because a rod of steel connected to a piece of wood or plastic *is for* turning screws doesn't mean the artifact kind we characterize it as is real—as something *besides* just these materials out in the world. In fact, I can't see *how it could*. If we assign some proper function, along with some proper morphological and historical lineages, to some indifferent materials, how is it that we've done any ontological work? Even if it is a grand fact about the nature of the world that we've declared these materials so arranged to have the proper function F, even if the proper function F is mind-independent, how is it that such a state of affairs adds anything to the materials? How can all this be object-producing? How do historical, morphological and functional facts produce "object facts"? Again, I simply cannot see how it could be so. So even if certain objects have mind-independent proper functions, this isn't enough to make the artifacts said functions characterize extra-mental constituents of the world. All this tells us is that a group of intelligent creatures has regularly assigned some function to certain materials arranged thus and so; that there is a mind-independent *definition* for "screwdriver". But it isn't an existential argument for the reality of what these creatures *say* the materials are.[22]

Now, perhaps Elder will object that I've missed an important point about artifact essences. Perhaps, he might admit, it isn't quite enough for the extra-mental existence of artifacts that their essences—proper functions, etc—be mind-independent. But, what is enough for the extra-mental existence of artifacts, or at least suggests it, is that their essences are "inductively rich". That is, we can consistently run successful, non-accidental inductions from the essences of artifacts to other properties of theirs (Elder 2007c, 2014). So, for example, if I know an artifact has been produced with proper function F, I'll be able to successfully arrive, via induction, at other properties of it, say its having a certain tensile strength, or being made of a very specific material. But this is just to say copied kinds, artifact kinds, behave in much the same way as do natural kinds, i.e. as inductively rich. Artifact kinds have, says Elder, "hidden necessities" in the terminology of Jim Ross (2008). And certainly I would admit of natural kinds; indeed,

[22] Franssen and Kroes (2014) argue for the mind-independent existence of artifacts in a fashion similar to Elder, but focus on morphology and historical lineage. Since their arguments are of the same kin, I take my response to Elder here to apply to Franseen and Kroes' recent work too.

I've relied on the very reality of such kinds! So, might the clustering of properties around an artifact's essence give credence to their ontological standing?

In short, no. Firstly, this argument is only as strong as the analogy between copied kinds and natural kinds, and it isn't clear that "inductive richness" is a strong enough link to make the analogy work. (Consider whether or not instances of copied kinds, say, a screwdriver, obey laws of nature like instances of natural kinds.) But, more importantly, inductive richness, just like proper function, morphology and historical lineage, isn't clearly object-producing. How is it, I ask, that the non-accidental clustering of properties around the essences of artifacts is a sign of ontological addition? It can't just be the fact that property G non-accidentally clusters around proper function F that counts artifacts of a certain kind as constituents of the external world. As I put it above, it's unclear how property-clustering facts could entail *object* facts—how does property clustering entail that a hunk of steel is a knife and *not just* a hunk of steel? Plus, one can imagine cases where concepts, mental entities, are inductively rich. But we wouldn't want an ontology to count such mental entities as mind-independent constituents of the world. For example, if I'm a clothing designer, some of my pieces will have proper functions that require certain morphologies. And those morphologies might entail that I have to use a certain material, say nylon, for my design. So, in a way, my concept of a certain design, the essence of a copied kind, has built in "hidden necessities". That is, my concept of the design has, *built into it essence*, property requirements for its successful implementation. But surely we wouldn't want this property clustering to count my design, my *concept* of an artifact kind, as furniture of the world? The mere clustering of properties just doesn't seem capable of counting some entity as an object of the external world. So, to conclude, the fact artifact essences may be inductively rich does not, by itself, suggest artifacts are constituents of the mind-independent world; mere resemblance to natural kinds doesn't, so easily, catapult artifacts onto the ontological stage of natural kind instances.

2.3.3 Thinking So Doesn't Make it So

So far I've argued against the mind-independent existence of artifacts on three fronts. First I showed how materials counted as artifacts, like a mass of intricately shaped sodium, are the only objects doing any sort of causal work. The powers of such materials are the only powers we see, touch, experiment on, or draw on to explain events. Next, I argued that, despite the efforts of some artifact defenders, artifacts indeed don't "do anything" their constituent materials don't already do. Artifacts have no unique powers or capacities beyond their constituent materials. Thirdly, I argued that artifacts couldn't be characterized by mind-independent proper functions, and that, even if they could, this would only entail that the indifferent materials composing artifacts have proper functions. So, in sum, I've argued there is nothing in the mind-independent world that artifacts can be supported by to grant them a place in a good realist ontology. But, there is another strategy some have pursued to count artifacts among the furniture of the world: the so-

called "thinking makes it so" or "easy ontology" approach. So, before I close the file on the existence of artifacts, let me address this last approach.

What I'll call here the "thinking-makes-it-so" approach to artifacts goes roughly as follows. If we want to see if an X exists, what we should do is pinpoint the concept of what X is and then look to the world to see if said concept is satisfied. So, for example, if we want to see if screwdrivers exist, we should get a hold of our concept of what a screwdriver is and then see if there exists something in the world that satisfies the concept of screwdriver. Lowe (2014) attributes such a view to David Wiggins (2001), but whether his assessment of Wiggins is in fact correct, one clearly sees a thinking-makes-it-so approach in the work of Amie Thomasson (2001, 2007a, 2007b, 2009).[23] So, here I'll present my reasons for thinking such an approach cannot establish the mind-independent existence of artifacts, interacting with Thomasson, but aimed primarily at the thinking-makes-it-so approach more broadly.

To get a better sense of the approach, consider the following remarks Thomasson makes on determining whether or not we should admit of the existence of some entity:

> Is it at all possible, then, to propose a *non*-question-begging strategy for determining what entities should be accepted into one's ontology? I think it is: for any purported kind of entity, first, determine what it would take for there to be such an entity, then attempt to establish whether those criteria are fulfilled….According to the criteria built into the idea of something being an *artifactual* kind term, what must be the case for there to be artifacts and artifactual kinds? There must, as we have seen earlier, be people with certain intentions to create objects of a given kind, where these intentions are substantive and involve certain success criteria that control their activity, and they must be largely successful in executing their intentions. Do we have reason to think this is ever done? Barring radical conspiracy theories, of course we do. (2007b, 72 [emphasis original])

Do screwdrivers exist? According to Thomasson, yes. But it isn't clear *what* this existence amounts to. On her account here, are screwdrivers constituents of the mind-independent world? Maybe, maybe not. I won't speculate on what Thomasson's ultimate opinion on the matter is here.[24] What I will do though, is show that the thinking-makes-it-

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[23] Lowe (2014, 20) calls the view "Conceptual Realism" and Thomasson describes it as "ontology made easy".

[24] In places, Thomasson seems to indicate she's fine without counting artifacts among the "furniture of the world". For instance, she writes (2001, 157): "Now it might be said that the realist can, perhaps, accept that there are facts of geography…and objects of geographic kinds involved (e.g. national parks), but that in virtue of their mind-dependence the realist must deny that they are part of the 'furniture of the world'. If this is taken to mean that they are not among the mind-independent components of nature, this is fairly unobjectionable…" But, in other places (2003, 605), she seems to suggest things like statues exist mind-

so approach cannot plausibly establish the mind-independent, extra-mental existence of artifacts.

Imagine a physicist named Stephanie. Stephanie has been theorizing about zubers, truly fascinating objects, for some time now. Zubers are very much like electrons except that they are shot out of an electron gun with the intention of creating the imagine of a smiley face on an electron detection device. Thus, there are criteria for whether or not zubers exist; Stephanie has the concept of what it is to be a zuber. Stephanie publishes a paper on zubers, claiming to have discovered a new sub-atomic entity. It doesn't take too long for Stephanie's colleagues to dismiss her work though. And it is very clear to see why Stephanie's work is dismissed. Stephanie's "discovery" of zubers has told scientists *nothing about the way the world is, nothing about what really exists out there in the world*. It has simply retold a story about electrons that we already knew, but under a different title, "zubers". So what moral are we to glean from the story of Stephanie? It's that seeing if concepts are satisfied by the world tells us nothing about the *world*. In fact, it gets the whole ontological enterprise backwards. It is the world that ought to tell us what it contains, and not the other way around: the thinking-makes-it-so approach simply reads what it wants off the world. It then submits its ontological results as genuine, when we can clearly tell they aren't. It is ontology made *way too* easy. But it isn't hard to realize that taking an object to be a K, *seeing* it as a K, doesn't in fact *make* it a K. We have to interview the world to find out if Ks exist. So the story goes with artifacts: if we truly want to know if the world contains artifacts, we need to listen to the world, not see what sort of "objects" we can force it to create for us through "effortless armchair authority".[25] To recall the opening of this paper, the acceptance of the thinking-makes-it-so approach appears tantamount to an endorsement of magic. But good metaphysicians aren't magicians.

2.4 What an Artifact Is

So far I've argued for what an artifact is not: a mind-independent object out there in the world around us. Although I've done my best to ensure the reader understands I *don't* doubt the existence of artifacts *simpliciter*, I've said very little about what their "non-serious" existence amounts to. Thus, I owe an account of what an artifact actually *is*. Here I briefly outline what my arguments thus far entail about the ontological status of artifacts.

In section 2.2 I said an artifact was an object made by a suitably intelligent being with the intention of instantiating some suitable, non-natural feature. If my arguments

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independently inasmuch as the hunks of clay composing them exist mind-independently. Again, I won't speculate on her ultimate opinion, but she doesn't immediately appear committed to screwdrivers, statues and the like populating the mind-independent world in the way I find objectionable.

[25] The pithy phrase is from Elder (2014, 41).

above are correct though, artifacts aren't objects at all; they don't exist *out there* in the world like lumps of gold and trees do. So when a suitably intelligent being creates an artifact, it isn't really creating an object at all. But what remains from the above definition if artifacts aren't *objects*? Intended features: ways indifferent materials are to be treated, regarded, used etc. Now, if my argument against proper functions (and morphologies and historical placements) as mind-independent features of artifacts is right, then it ought to be applicable to any feature of an artifact.[26] If this is so, then any intended feature of an artifact is just a feature of the indifferent materials purportedly composing said artifact. So if intended features aren't really out there *in artifacts*, but just in indifferent materials, and artifacts as such aren't objects beyond or in addition to the materials composing them, what are they? Artifacts are, I think, nothing but intentions, i.e. mental states. More precisely: artifacts are simply *ways* suitably intelligent beings *conceive* of the indifferent materials of the world. So, to say an artifact exists is just to say that some intelligent being intends to treat, regard, and/or use the indifferent materials of the world in a certain way: as an object to open bottle caps, as an object to support a sitting person, or as an object to be regarded as holy, beautiful, or what have you. The deep ontological story about artifacts is that they're in our minds, as conceptions about how we treat, regard, and/or use the real constituents of the world. From an ontological point of view, the mind-independent world is composed of objects and the mental states of some of those objects (viz. suitably intelligent beings). Artifacts *just are* some of those mental states; the concepts about intended treatments, regards, uses, etc. So, do artifacts exist? Yes, they do: suitably intelligent creatures do in fact have intentions to treat, regard, and/or use the indifferent materials of the world in certain ways.

2.5 Solving Artifact Coincidence

Recall the example of Goliath and Lump. Goliath is a statue and Lump is the mass of gold supposedly composing Goliath. Goliath and Lump fill exactly the same region of space-time, but appear to have different persistence conditions: Lump can survive smashing, but Goliath cannot. So it appears we have at least two objects in the same exact region of space-time. So goes the problem of object coincidence.

What's important to notice in the case of Goliath and Lump though, as noted at the outset, is that Goliath is an artifact, a statue. Strangely, only a few philosophers have approached the problem of object coincidence with this point in mind.[27] But what's so important about one of the purportedly coinciding objects being an artifact? What's

[26] That is, there are no Czars of proper norms of regard or treatment, nor do we need to say that if such proper features did exist, that they'd belong to artifacts above and beyond the indifferent materials of the world.

[27] For instance, Patrick Toner provides two distinct solutions to the problem of coincidence: one for artifacts, what he calls "accidental unities" (2006), and one for cases involving, say, a tree and the mass of cells composing it (2008).

important is that if I'm right about the ontological status of artifacts, all instances of artifact coincidence simply fail to get off the ground. That is, if statues and all other artifacts are just ways in which we conceive of the indifferent materials of the world (Lump, the mass of gold, in our example), then we can deny Goliath is really out there in the world. And if Goliath isn't a constituent of the mind-independent world, then he certainly cannot coincide with Lump. And so it will go with all other instances of artifact coincidence: screwdrivers cannot coincide with steel rods and plastic handles, tables cannot coincide with pieces of wood, and homes cannot coincide with cement, timber, and sheetrock. In all cases of artifact coincidence, one of the "objects" will simply be *in us*—in our heads— as a conception about how the real objects, the world's indifferent materials, are to be treated, used, regarded, etc. If this is right, then it is never the case that an artifact coincides with the object(s) "composing" it.

3. OBJECTIONS

It's yet to be seen, however, if my arguments above, and so my solution to artifact coincidence, are on point. So, to test their metal, let me now raise and respond to some likely objections and clarify my position.

3.1 The Clarity of Artifact Persistence Conditions

One might ask: what of the difference in properties, modal profiles specifically, that first allowed the problem of coincidence to get off the ground? If my account is right, how is it that artifacts like Goliath appear to have relatively clear-cut persistence conditions? Where do these persistence conditions come from? That is, why is it so clear to us, if artifacts are just in our minds, when artifacts go in and out of existence? If my account is right, the persistence conditions of artifacts clearly originate and are grounded in us, in our concepts about artifact kinds (Cf. Sutton 2012, 707-19). What makes it such that Goliath cannot survive smashing is that he no longer can instantiate the intended feature he was crafted for when smashed. If statues are created to instantiate some property F, then statues exist just as long as they can, with a reasonable chance, instantiate F. That is, an artifact will exist so long as the indifferent materials it's composed of have a reasonable chance of instantiating the relevant intended feature(s). Catherine Sutton explains:

> Consider two different scenarios, in which the inventor [of an artifact] has different purposes for her invention, and which lead to different answers about persistence. If she invented the widget to prop up heavy windows, then it could *not* survive being hollowed out because hollowing would compromise structural integrity, and part of being a widget is being able to hold open windows. If instead her widget was a representational tool to teach children about family trees… then surely the widget could survive being hollowed out. These

> persistence properties arise in virtue of the purpose of a kind, and purpose is determined by human intentions… (2012, 711-2)

So, even though artifacts are, in ontological strictness, only in the mind, we can still account for their possession of relatively clear persistence conditions. And we can do so without recourse to anything in the external world besides the indifferent materials composing artifacts.

3.2 Artifacts With "Internal Essences"

In section 2.2 I drew a distinction between artifact kinds and natural kinds by claiming the latter have an "internal essence" that the former lack. Another way of putting this is that natural kinds have a nature of their own, a unique "unifying principle of activity" (Lowe 2014, 24). Some philosophers prefer to say such natural kinds obey the laws of nature (again, see n. 17 above). But it has been argued certain artifacts, viz. machines, have internal essences and unifying principles of activity of their own. Machines appear to have internal natures and follow certain laws of nature, engineering laws, and so appear to behave in much the same way as natural kinds.[28] As Lowe argues:

> A Martian, visiting Earth after all human life had been extinguished, could surely recognize in a working piston engine an object that *does something*, by its own very nature – for example, *the pistons turn the crankshaft*, *the valves regulate the pressure in the pistons*, and so on. The Martian would not need to know of any *use* to which humans had put such engines in order to recognize this fact. (2014, 24 [original emphasis])

But my distinction between natural and artifactual joints, and so my reason for denying the world contains any artifact joints (section 2.3), hinges on the former lacking an internal essence or principle of activity. If machines have such an essence, then they might have a claim to mind-independent existence, and so might coincide with the indifferent materials composing them.

One way to respond to this challenge is to cast doubt of the nomic legitimacy of the "engineering laws" Lowe draws on. He (2014, 25) writes, "Nonetheless, [machines] do have a real 'nature' of their own, because their creators endow them with a unifying principle of activity that is governed by mind-independent laws of action, specific to their sort or kind: *engineering laws."* But are engineering laws really laws of nature, the ones scientists try to uncover and elucidate, ones that might help machines stand on ontological par with trees and lumps of metal? Perhaps, but I think the metaphysician of science has good *prima facie* reason to say "No". For, engineering laws seem to operate

[28] Lowe (2014, 25) does *not* argue that machine kinds are ontologically tantamount to natural kinds, but he does say their similarity, their having unifying principles of activity, may count machines as constituents of the mind-independent world.

at too high of a level to count as natural, fundamental laws. Generally, laws of nature are thought to be those laws which govern fundamental particles, massive bodies, and electric charges. Engineering laws just seem too convoluted, too emergent to count as real scientific laws of nature; a law of nature needs to be more than just any old regularity or rule of thumb. And if engineering laws aren't genuine laws of nature, then the objects they govern aren't genuine either, and so may not coincide with the indifferent materials they're made of.

But, engineering laws could turn out to be genuine, so another response is in order. Consider the following. Imagine all life is extinguished on Earth and the planet is visited by Martians. These Martians walk into the kitchen of a restaurant and find a pot of spaghetti on the stove with a wooden spoon in it. Now, according to Lowe, machines are obviously *for something*, they have unifying principles of *activity*. As he says, the pistons turn the crankshaft, the valves regulate pressure, etc. Might one easily suppose the pot of spaghetti on the stove is for something though, that it has a principle of activity? For, the Martians could *just see*, without human consultation, that the wooden spoon *is for stirring the spaghetti* so that it doesn't burn, and that the stove is for *heating the spaghetti*. The Martians wouldn't need to know that the *intended use* of the pot of food was to feed people to see this though. And perhaps the pot of food is governed by "Culinary Laws"? (Perhaps *ceteris paribus* laws that require a cook to be present?) Might these laws count it among the furniture of the world?[29] Clearly it would be an embarrassment to Lowe's theory to count the pot of spaghetti as a machine. Surely Lowe and other machine defenders wouldn't think a pot of spaghetti has a unifying principle of activity? But if the pot of spaghetti is analogous to a machine, it seems Lowe would be committed to the pot counting as a machine, and so as a constituent of the mind-independent world. I suggest this embarrassment warns the metaphysician against counting machines as genuine objects, and so as entities capable of coinciding with the indifferent materials of the world.

But, perhaps Lowe would joyfully accept pots of spaghetti into his ontology. So, briefly, let me provide one more response to Lowe's account. Lowe claims engines, for instance, have a unifying principle of activity, or, nature. A nature is, traditionally, conceived as the locus of an entity's powers and capacities. It not only governs what an object is, but what an object can do. Now imagine we have two qualitatively identical engines, but one is made of steel and the other pig iron (iron with more than 2% carbon). Although these two engines carry out their "engine" activities identically, they clearly don't have all the same capacities. For instance, if we were to let these engines sit out in

[29] My focus is not on laws of nature, and so I won't cast doubt on the potential legitimacy of "Culinary Laws". My point is simply that if such laws were to exist, according to Lowe, they'd count certain objects, e.g. pots of spaghetti, as constituents of the mind-independent world. *That's* what's supposed to be embarrassing, *not* "Culinary Laws" per se.

the rain, the one of pig iron would rust much faster than the one made of steel. Or if we melted down a non-essential piece of both and added, say, chromium, one of the resulting portions of metal would be stainless steel while the other just polluted pig iron. So, in short, even though the engines carry out some processes identically, they still have substantial differences in their powers and capacities. That is, there still seems to be a difference in natures between the two engines. (To recall another example, from antiquity: if you bury a wooden bed in the ground, it will sprout a tree, not a bed.)[30] I take this to suggest that something besides what Lowe calls "unifying principles of activity" are at work in objects. If this is so, perhaps engines aren't to be counted amongst the furniture of the world, or, at least, more argument is needed to establish such a conclusion.

3.3 Artifact Discourse?

If my account is correct, one might wonder if artifact discourse is meaningless, or at least always false. For, when we engage in talk about artifacts, we clearly aren't referring to concepts in peoples' heads; we're talking about objects out in the world. So when I say, "We'll need a screwdriver to hang that door," am I saying something truth-apt? And, if so, is the sentence I utter one which has a chance to latch onto anything out in the world? The answers to both questions are "yes". The former is clearly true because we have an account of what it is to be an artifact. So, we can look to the world and see if that account if satisfied.[31] As I said above, there are in fact minds intending objects to instantiate some features, so there are artifacts. Artifact discourse is truth-apt. But what then, are the referents of artifact discourse? The indifferent materials arranged thus and so which have been intended to instantiate some feature. Why is this so? Why are the referents not the concepts in peoples' heads? Because our artifact intentions are about, *projected onto*, the indifferent materials of the world. This rod of steel fastened to a wooden handled is a "screwdriver". The indifferent materials arranged thus and so are what instantiate the features necessary, according to our artifact concepts, for the existence of artifacts. Concepts and intentions clearly can't drive in screws. Concepts can't satisfy the features essential to artifact kinds, so they can't be the referents of such terms. So, just because, ontologically speaking, artifacts are in the mind, it doesn't entail that the referents for artifact terms must too be in the mind.

Now, there are other issues in the literature on artifact discourse that I have no intention of contributing to here. Such issues include whether or not speakers without artifact concepts can refer to instances of artifacts (Kornblith 1980), and if certain producers or groups are in positions of epistemic privilege to artifact kinds and their ranges (Thomasson 2003). My point in this brief section is simply to dispel worry about

[30] See Aristotle, *Physics* II.1.
[31] Note that this doesn't entail the object exists mind-independently out in the external world.

the possibility of genuine artifact discourse on my account. If my points above are correct, then the non-serious existence of artifacts need not threaten the efficacy of ordinary talk including artifact terms.

4. CONCLUSION

To sum up, I've argued for the thesis that the mind-independent, extra-mental world isn't populated by artifacts. My goal in doing so was to show how many cases of object coincidence, the thesis that more than one object can occupy the same exact region of space-time, cannot occur. For, if artifacts aren't in the mind-independent world, then they cannot coincidence with the "indifferent materials" composing them. To reach this conclusion I first outlined how we come to identify objects and object kinds. Then I briefly sketched an account of artifacts. In the third section I provided several arguments showing how artifacts and artifact kinds aren't at all like natural objects and kinds we'd ordinarily take to exist, e.g. trees, lumps of gold, etc. In doing so, I cut off the most plausible routes to mind-independent, extra-mental existence for artifacts. I then briefly provided an existential assessment of artifacts, and showed how that assessment solved cases of object coincidence.

But, at the outset, I suggested that my solution here couldn't serve as a general solution to the problem of object coincidence. For, coincidence threatens not just in cases between an artifact and the indifferent materials composing it, but also between two natural objects, say, a tree and the mass of cells composing it. But, even if my account here is correct, I can't seriously try to apply it to cases like this; neither trees nor masses of cells are artifacts or mind-dependent in any clear way. Trees and masses of tree cells would exist even if no minds did. So, we can't treat all object terms or sortals, and their referents, alike. "Chair" is an artifact term that picks out an intended feature of *an object(s)* (wood, metal, etc); it isn't *itself* an object! But "tree" picks out a mind-independent organism and "mass of cells" another object filling the same exact space-time region as the organism. So, the cases of coincidence between two natural objects are of a very different kind than the ones between artifacts and indifferent materials. The former requires a theory of composition, while the latter may be solved by an account like the one provided here. Although that isn't news to material object metaphysicians, my arguments and proposed solution here surely are.

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