



The Nature of Ordinary Objects

Edited by

JAVIER CUMPA

Universidad Complutense, Madrid

BILL BREWER

King's College London



CAMBRIDGE
UNIVERSITY PRESS

9

Mass Production

SIMON J. EVNINE

1

A while back, I was in a gallery looking for something to liven up my office and I came across a very interesting piece of art. On a heavy, good-quality piece of paper (with a small triangular metal hook ingeniously worked into the top) the artist had drawn what looked like a square panel from a comic book. It depicted Batman slapping Robin. The viewer sees Robin from behind and Batman face on, his left hand having just connected with Robin's cheek, its motion indicated in typical comic-book style. They have speech bubbles. Robin is saying "A table is just a classical mereological fusion of momentary table-like entities at successive times." Batman answers, "Are you even listening to yourself?"¹ I thought it was pretty cool, and after checking out the other stuff for sale I decided to buy it. (It wasn't cheap, but how much art do you come across in which the Caped Crusader and Boy Wonder discuss mereology and the metaphysics of persistence?) When I came to hang it on the cork board in my office, I realized I needed a thumbtack, so I went to the departmental supply closet, found the container full of thumbtacks, and picked one out at random. I pushed the thumbtack through the hook and into the cork board. Sorted!

In this vignette, I acquired two objects: a drawing and a thumbtack. These two objects are different from each other in many important ways. The drawing was, the gallery owner assured me, lovingly produced by the artist, who thought about what she was doing and acted carefully and with consideration on the basis of her intentions. She

¹ A meme matching the description of the image, with its associated text, appears as M.47 in Evnine (in preparation).

implemented those intentions only once, so the drawing is, in that sense, unique, a one-off. The thumbtack was machine-produced, the result of a system of mass production involving the nearly mindless contributions of many interchangeable people, itself indistinguishable from hundreds of thousands of similar thumbtacks. Those differences are reflected in the different ways I came to acquire them: in the one case, deliberately and thoughtfully, after careful comparison of it to the alternatives on offer, having discussed it with the gallery owner; and in the other, carelessly picked at random, likely without even looking at the tacks as I grabbed, not at all concerned over which of the many tacks I ended up with. The thumbtack is closely tied to a function or use that is proper to it. It has the purpose of securing things such as pieces of paper to things such as cork boards. The drawing either has no function or, if it does, it is a strange, narcissistic function like *being looked at* or *being experienced*. Largely as a result of these differences, the two objects differ in other ways. The drawing is valuable, the thumbtack very nearly worthless (the university buys them in bulk and leaves them around for people to take as necessary). The drawing is likely to generate interest, be the topic of conversation, the envy of friends and colleagues; the thumbtack will almost never be noticed, never coveted. In one sense, we could say that the drawing is an *extraordinary* object, extraordinary in its craftsmanship, its wit, its verve; the thumbtack, by contrast, is a sadly ordinary object, humdrum and mundane. Yet, in another sense, both the drawing and the thumbtack are ordinary objects. They are both ordinary in the sense that they belong to kinds – *drawing* and *thumbtack* – that are recognized as kinds of objects by ordinary people in ordinary contexts. In this respect, they stand together against the extraordinary objects of scientists (quarks, electrons) and philosophers (incars, mereological fusions of random objects, possible worlds).

Some ontologists deny the existence of artifacts altogether and would therefore not accept the existence of either the drawing or the thumbtack.² I shall not be engaging with this view and shall simply assume that these objects do exist. Among most ontologists who accept the existence of both the drawing and the thumbtack, there is agreement that, notwithstanding the differences between such things canvassed in the previous paragraph, the two items are not, from an

² Peter van Inwagen (1990) is the most prominent exponent of this view.

ontological (as opposed to social or aesthetic or economic) point of view, different at all.³ In this essay, I wish to argue that there is an important ontological difference between the drawing and the thumbtack, an ontological difference that derives from the fact that the drawing is not, while the thumbtack is, mass-produced.⁴ Mass production, if I am right, has serious ontological consequences!

2

It is uncontroversial that the defining difference between mass-produced objects and what I shall call artisanal artifacts (things made on a one-by-one basis) is a difference in their origins, in how they come to exist. If this difference makes, as I allege, an ontological difference in the nature of the objects so produced, then that implies, more generally, that the way something comes to exist is an ontologically significant fact about it. And this, not just in the obvious sense that without there being some way in which an object comes to exist, it would not exist, but in the deeper sense that a way of coming to exist inscribes itself, so to speak, into the essence or nature of the object that comes to exist in that way. Thus, ontology has an important historical dimension to it. This is the background against which I shall explore the difference between mass-produced and artisanal artifacts, and although I shall not give a complete account and defense of the position, it requires some consideration here which, I hope, will help to clarify and motivate it.⁵

³ For example, I find no basis for a significant ontological distinction between these objects in any of the following friends of ordinary objects: Baker (2007), Fine (1999), Korman (2015), Koslicki (2008), Thomasson (2007), Thomson (1998), or Wiggins (1980).

⁴ It will become apparent that the difference between the drawing and the thumbtack in my example does not derive essentially from their belonging to the kinds *drawing* and *thumbtack*, since it is possible for drawings to be mass-produced (with a little ingenuity) and thumbtacks to be made artisanally. As a matter of fact, though, membership in these kinds is a pretty good indication of the relevant ontological features. Many other kinds, however, give much less indication of the ontological status (in the respect I am interested in) of their instances. For example, chairs may well be either artisanal or mass-produced. Although in general I take the role of substance sortals quite seriously, the moral is that there are aspects of the ontology of objects that are not settled even by their falling under a given substance sortal. I think this is a significant point of some general interest, but I cannot pursue it here.

⁵ I deal with these issues at much greater length in my 2016. The present essay can be seen as a development and amplification of 3.4.2 of that work.

On many prominent views, the way objects come to exist has nothing to do with the nature of those objects themselves. In the artwork I described above, Robin is proposing a conception of things like tables that is advocated by David Lewis (1976). On such a view, a table is a mereological fusion of successive instantaneous fillers of some spatial region that is shaped like a table. This says nothing about how appropriate material comes to be in those regions at those times and hence nothing about the origins of a table. Essentially the same view is found in Quine, though without explicit concern for the mereological aspect: “a physical object, in the broad sense in which I have long used the term, is the material content of any portion of space-time” (1985: 167). Compare an ordinary table and a swamp-table (something that is a molecule for molecule replica of a table but that comes into existence when some lightning strikes some wood in a swamp and randomly rearranges its molecules). On the Lewis–Quine view, the nature of a table and a swamp-table is exactly the same, despite the fact that they had very different ways of coming into existence. The nature of the objects is exhausted by their both merely being the material contents of a region of space-time (as it happens, similarly shaped). This fundamental sameness of the nature of a table and swamp-table is consistent with the fact that our concept *table* is such that it will not correctly apply to an object unless that object came to exist in the right way and hence a swamp-table will not be correctly classified as a table. This fact about the concept provides a *de dicto* sense in which it is essential to tables that they have certain kinds of origins. In no possible world will an utterance of the English sentence “this accidentally table-shaped thing is a table” be true. But the nature of the object in question, be it table or swamp-table, is what it is, on the Lewis–Quine view, independently of whether it is a table. Being a table (and so having to have certain origins) is an accidental property of those objects that have it. We might say that, on such an approach, whether an object is a table or a swamp-table is not an ontological question but a conceptual one.

Perhaps surprisingly, views that differ greatly from the Lewis–Quine picture may also have the consequence that an object’s origins are irrelevant to understanding its essence. Richard Grandy (1975) proposes a view on which an ordinary object (his example is a gold ring) is a function from times to quantities of matter. He takes functions as sets of ordered pairs. So, a particular gold ring will be a set of the following kind: $\{ \langle t_1, G_1 \rangle, \langle t_2, G_2 \rangle, \langle t_3, G_3 \rangle \}$, where the *ts* are times and the *Gs*

are quantities of gold. Such an account of what a gold ring is will take the issue of how the ring comes to exist to be irrelevant to its nature. A ring and a swamp-ring will look just the same. Each will simply be a set of ordered pairs of times and quantities of matter. Again, there may be further constraints, including facts about manufacture, that make it correct to apply the concept *ring* to some sets and not others, but the nature of the objects themselves is unaffected by such conceptual matters.⁶

A view that takes the origins of things to be inscribed in their natures will have to see the ontological nature of tables and swamp-tables as being quite different. That will rule out all views that locate the natures of such objects in something that objects of those different kinds share. It will be committed to the position that if something is a ring or a table then it is one essentially. There is no single object, of whatever nature, that might itself *be* a ring or a swamp-ring. Such a view, I suggest, is especially appropriate for artifacts (and hereafter, my claims are all restricted to artifacts). Artifacts are not just quantities of matter that are arranged suitably for various purposes and to which, therefore, we apply a certain concept – quantities that, generally speaking, have to be arranged by human artifice, since nature is not sufficiently generous. Rather, an artifact is an externalized or concretized expression of a maker's purposes and goals. A maker brings into existence a special, *sui generis* kind of object that, in its essence, not just by accidental description, is the imposition of mind on matter. The ideas behind this view are beautifully expressed in a paragraph from Neal Stephenson's novel *Cryptonomicon*:

How can he walk across a field salted, by the retreat of the last glacier, with countless stones, and pick out the arrowheads? Why can the human eye detect a tiny artificial form lost in nature's torn and turbulent cosmos, a needle of data in a haystack of noise? It is a sudden, sparking connection between minds, he supposes. *The arrowheads are human things broken loose from humanity, their organic parts perished, their mineral forms enduring – crystals of intention.* It is not the form but the lethal intent that demands the attention of a selfish mind. (1999: 287–8; italics mine)

⁶ About some views, it is less obvious or less clear-cut that they do not take the way something comes to exist to have any ontological significance. I discuss the views of Lynne Baker and Kit Fine on these matters at some length elsewhere (2016: 2.2, 2.3). I shall not repeat the discussion here.

If what an artifact is is the imposition of the maker's mind onto matter, this suggests that the action of making whereby mind is imposed on matter is both necessary and sufficient for determining the individual essence of an artifact. When we go from a situation of actual making, with all the attendant details replete, and consider the counterfactual possibilities for an object made, it will be necessary and sufficient to ensure that the counterfactual situation involves *this* object: that the object in the counterfactual situation is made by the act in that world that is the act by which it is actually made. Of course, this now pushes back questions of the identity of an object to the identity of an action of making. Under what counterfactual circumstances is an act this very act that I actually perform? This is a question that has not been much asked in philosophy.⁷

Here are some dogmatic theses I propose. Actions have the intentions with which they are performed essentially and, in the case of artifacts, those intentions feature the kind to which the artifact being made is to belong. (From this it will follow that a table is a table essentially. It could not have been a chair, though of course the wood out of which it is made could have been used to make a chair.) Actions have their agents essentially but not their exact times. (So, a given table might have been made a bit earlier or later but could not have been made by a different agent.) Absent a general account of the identity of actions across possible worlds, all I will rely on (except in one example, to be noted) is the following weak Sameness of Act Principle:

(SAP) Consider a particular action *A* in a world *W*. If an action *A'* in a world *W'* is such that it is performed by the same agent as *A*, at the same time as *A*, with an intention that is the same in content as that with which *A* is performed, and if the narrow content of the agent's doxastic state is the same in *W* and *W'*, then $A = A'$.

Rather than make this more precise in the abstract, I shall leave it to the examples that follow to indicate the purport of this condition. I intend it to be so innocuous that the only reason for rejecting it would be a general antipathy to accepting the cross-world identity of particulars at all.

One point at which my view about the individual essences of artifacts runs up against a commonly accepted view, and hence is likely to

⁷ I discuss it at somewhat greater length in (2016, ch. 7).

encounter opposition, is that in holding the act of making to be sufficient for the identity of the artifact made, I imply that the matter out of which the artifact is made is not necessary to it.⁸ The same action of making implies that the same object is made, regardless of which matter is used to make it. This seems to me to be right and not just an embarrassing and unwanted consequence of my view. The idea of artifacts as, in Stephenson's phrase, "crystals of intention" relegates the role of the matter to a tool, a tool for externalizing our intentions and making them concrete. It should no more be seen as necessary or essential to the identity of the object made than the identity of the other tools (hammers, saws, screwdrivers) used to make it. It is true that *sometimes* our intentions in making an artifact are focused on the identity of the matter out of which we will make it. Some people, for example, make jewelry out of the ashes of their cremated loved ones. Here, it is very clear that the identity of the matter is essential – but it is essential not because of some general connection between artifacts and their matter but because of the relevant intentions involved in the process of the object's coming into existence. But mostly, our intentions with respect to the matter out of which we make things are not like this. Even the sculptor who very carefully picks the stone out of which to carve and who lets the carving be guided by the features of the marble is still responding to general features that happen to be found in a particular block of stone, and it would be a matter of indifference to her if the marble were replaced, by a mischievous demon, with one qualitatively the same.

Just to help along the reader's intuitions, think of a case like this. I melt some silver in order to cast from it a bullet with which to kill a werewolf. Not being a good judge of these things, I melt more than

⁸ Two comments: (1) My view will imply the essentiality of the matter out of which something is made *if* actions involving the working on some matter are themselves individuated, in part, by the identity of the matter. I don't think this is a plausible or attractive view about the individuation of actions, but if one does think it plausible or attractive, one could still go along with some of what I say in the following; (2) The necessity of the matter out-of-which for an object's identity is contradicted by my holding that the action of making is sufficient. But I should add that my view that the action of making is *necessary*, while itself not inconsistent with the necessity of the matter-out-of-which, does undermine a prominent argument in favor of that necessity, namely, that propounded by Guy Rohrbaugh and Louis deRosset (2004, 2006). I argue this at length in (2016: 3.4.1).

enough. I pour off some of the silver into the mold and thereby make a bullet. When the silver cools and I extract the bullet from the mold, do we really want to say that which bullet I made is dependent on which subportion of the silver happened to run into the mold, so that if I'd held the pan a bit differently and different silver had run out, I would not have made this bullet, but a numerically different (though perhaps qualitatively indistinguishable) one? Is it not more plausible to think that this bullet might have been made of different silver, that which silver it, this very bullet, is made out of is accidental to it? Some may respond by saying that it is necessary only that the bullet be made out of some of the silver I melted and, as long as it is that portion of silver from which I run off a subportion, a version of the necessity of origin-as-matter is satisfied. But that is quite arbitrary. Suppose I had a chest of bits of silver and obtained the molten silver by randomly picking a handful of those bits and heating them. Does the identity of the bullet depend on the exact silver I happened to put into the pan? Well, perhaps the necessity of origin-as-matter demands only that the silver be taken from that chest . . . Obviously this strategy is no good. Either the necessity of origin-as-matter means that I only make this bullet if I use the actual matter, and hence in my example, I would not make the same bullet if different silver ran out first, or we should give up on the necessity of origin-as-matter.⁹

3

We can now return to the comparison of the drawing and the thumb-tack. The view I have gestured at applies, if it applies at all, quite comfortably to the drawing. As a work of art, it is not implausible to see it as the concretization of the creative intentions of the artist. The artist is indeed imposing her mind onto matter, shaping something that is expressive of her vision, that renders her vision perceptible to others. Nor is it implausible to hold that the identity of the artist herself is integral to the identity of the artwork produced (a necessity of

⁹ In some sense, this problem is already conceded when advocates of the necessity of origin-as-matter insist that it is essential to a given object not that it be made out of exactly the matter out of which it is actually made, but only by some sufficiently overlapping quantity. If not the exact matter, what motivates the thought that any of the original matter is essential? See Rohrbaugh and deRosset 2004: 720.

authorship position); this will be entailed by, though it is not equivalent to, my view that the action of making is necessary to the identity of the artwork, if it is coupled with my view that an agent is essential to the identity of the action she performs.¹⁰ And finally, it does not seem wrong to hold that the identity of the artwork is not dependent on which piece of blank paper the artist started with or which particular quantity of ink happened to come out first from the pens she used.

It will be readily apparent, however, that the view that applies to the artwork in a not unattractive way looks quite different in the context of mass production. The nub of the problem is that, in mass production, we have situations where a single individual essence-bestowing action of making results in more than a single object made. We thus face a situation of scarcity. To put it somewhat figuratively, there will be insufficient individual essence to go round to all the objects that need it! Take first a simple case in which, by folding a piece of paper in a certain way and then cutting across it, I produce two paper decorations. Let A be the one that falls to my left and B be the one that falls to my right. Let the case be a standard one where the individual identity of the piece of paper is utterly irrelevant to me. I just pick the piece at random out of a packet of origami paper. My embrace of the necessity and sufficiency of the act of making for the identity of artifacts means that if I had made a single decoration out of the paper, I would hold that I could have made that very decoration out of an entirely different piece of paper. The pieces of paper in the packet are like the molten silver in the pot when I make the bullet. What I am doing is making concrete my intentions, and the piece of paper is simply a tool that I use to do that. Similarly, I hold that where I make two decorations out of a piece of paper, I could have made those very two decorations, A and B, out of an entirely different piece of paper. But, in the counterfactual situation, which of the two decorations would have been A and which B? There seems to be no good way of answering this. Or, to consider a variant, suppose I used the original piece of paper, but it had

¹⁰ See Rohrbaugh (2005) for support of the necessity of authorship. I suggested in a previous footnote that holding that the action of making is necessary to the identity of the object made, while not itself inconsistent with the view that the matter it is made out of is essential to it, does undercut the Rohrbaugh/deRosset argument for the necessity of origin-as-matter. I argue (2016: 3.4.1) that Rohrbaugh's claim about the necessity of authorship has a similar undercutting effect on his argument for the necessity of origin-as-matter.

been put into the packet rotated by 180 degrees. I make the same two decorations, A and B, but have I now made A out of the paper I actually made B out of? Or have I made A out of the same paper but now on my right instead of on my left? Again, there seems no reason to accept one of these answers over the other, though it seems there is a good reason to think I have made A and B.¹¹

This may appear alarming when one considers things so close to the artisanal model as the two handmade paper decorations. But now let us think about more familiar situations of mass production. Let us suppose that, in a factory, there is a form with a thousand thumbtack molds. A worker performs a certain action or sequence of actions and molten steel pours into the molds. She has thereby, with one action, made a thousand tacks.¹² She could have made those very same tacks if different steel had poured into the molds; the identity of the steel is irrelevant, just as that of the silver is in my bullet example. But suppose the very same steel had poured differently into the molds. Would she have made the thumbtack actually made in slot #1 now in slot #945? Or would she have made in slot #1 the one she actually makes there, but out of different steel? Here, the idea that there is any way of lining up the tacks actually made and the tacks made in the counterfactual case is absurd. And yet, again, I find it very plausible to hold that the worker has made the same thousand tacks in both cases.

Given the insufficiency of actions to bestow individual essences on each of the mass-produced items in a way that determines, in these hypothetical situations, which one would be the one made out of the bit of paper that was actually on the left, or the one made out of the steel

¹¹ In fact, the situation is even more dire! For suppose, in another possible world, I make the same two decorations by the same act and the paper is *not* rotated at all. There is still no reason to identify the one that falls to the left in one world with the one that falls to the left in the other. No way, in other words, to say that in this other possible world, it is still A that falls to my left and B to my right. This cuts against a quite strong intuition that we can, after all, identify the one on my left in the actual world, namely A, with the one on my left in some other world where the paper has not been rotated. I have nothing clever to reply – here is one place where my view has counterintuitive implications. But it is, after all, harmless to identify the left-hand decorations in each world. Nothing, except in the most rarefied theoretical contexts, will be upset if we do, illegitimately, make the identification.

¹² I shall problematize the action of making in this situation in Section 5, but for now just assume that this worker is the creator and her act of pulling a lever (or whatever) is the action of making.

that actually went into slot #1, I suggest we describe things in this way. The co-produced products in an act of mass production have a collective essence. There is something it is to be *those* things. It is necessary and sufficient for being *those* things that things be created by the act by which *those* things were actually created. Thus, *those* things might have been made out of different matter from their actual matter, just as my single silver bullet might have been created out of different matter from that out of which it was actually made. These features of the collective essence also carry down to the individuals in that group. If those tacks could have been made out of different matter, then this tack could have been made out of different matter. If it is essential to those tacks that they are the results of this particular act of creation, then it is also true of this tack. In this way we can discern essential differences between many individuals belonging to the same kind. If T1 is tack produced by an act A1 and T2 a tack produced by a distinct act A2, then we can say that T1 and T2 have different individual essences. They are distinguished in this way because there is something essentially true of one individual (that it was produced by A1) that is essentially false of the other. They differ in their essential properties, because each is associated with a different act of creation and the act of creation by which something comes to exist is essential to it. But, and this is the feature characteristic of mass-produced objects, such essential differences will not distinguish objects made by the same act – batch-mates. Where T1 and T2 are batch-mates, there is nothing that is essentially true of T1 that is not equally essentially true of T2. T1 is essentially a thumbtack, it is essentially the product of A1, the act by which it is created; but both of these features are true of T2 as well.

Note that this in no way implies that the tacks produced by the same act are not distinct from each other. Of course they are! They are two (or a thousand), not one. They are distinguished by a host of properties. Each tack has a spatio-temporal trajectory that it shares with no other tack, not even its batch-mates. It is made out of one quantity of matter that is, at any one time, unique to it. Tacks may bear, either originally or as acquired, distinguishing marks: nicks, scratches, discolorations. Under all normal circumstances, there is no theoretical problem in distinguishing one from another, and nothing in the situation I have described depends on the members of a single batch being indiscernible. But none of the properties by means of which they may be distinguished are essential to them. Having a particular spatio-temporal location is

an accidental property of a tack; it, that very tack, might have been somewhere else at a given time. Having a distinguishing scratch is not essential. Nor, as I have argued above, is it essential to each tack that it have been made out of whatever portion of matter it was actually made out of.

I have said that the batches of which mass-produced objects are members have collective essences and that this, in turn, allows us to attribute certain properties to the individuals that will distinguish them essentially from objects of the same kind that are members of other batches but not from their batch-mates. This is susceptible to two forms of description. We can either say that mass-produced objects have collective essences but no individual essences, meaning thereby that each such object has only those essential properties that it shares with its batch-mates and none that it has individually. Or we might say that each such object has an individual essence, which it derives from the batch to which it belongs, but that this individual essence is, in some sense, "incomplete", since it does not distinguish batch-mates from each other. As far as I can tell, these two ways of putting things are equivalent.

However exactly the situation is described, it may seem to some too wild a bit of metaphysics. I shall discuss some of its further ramifications below, but it is worth pausing here to reflect on why one might be alarmed at this picture. I said at the outset that my view is that there is an important metaphysical difference between artisanally produced artifacts and mass-produced ones. This is the difference. Mass-produced entities do not have essential properties that distinguish them from all other objects (or do so only accidentally, if all of its batch-mates have been destroyed). They have essential properties that distinguish them from most other objects but not from objects of the same kind produced by the same action. Artisanal, one-off artifacts have an essential property that distinguishes them from all other objects. We can, as it were, track such objects through possible worlds in ways in which we cannot track the objects of mass production through all possible worlds (though we can track the batches of mass-produced objects to which each belongs as well as we can track the artisanal one-off objects). One feature of this that might seem alarming is the very idea of objects that do not have individual essences, or have only incomplete ones. If one accepts a framework (as I have uncritically done here) according to which objects can have individual essential

properties at all, it might seem as if every object must have them (or have enough of them to distinguish it from all other objects). But why should that be? Granted, the conception of collective essence that I have proposed here might turn out to be fatally flawed, but regardless of the details, why should not even the friend of essentialism allow that some objects do not have individual essences? Furthermore, denying individual essences to mass-produced objects seems to get something about them right. Insisting on a necessity of origin-as-matter position and tying each of the millions of nuts, bolts, screws, tacks, etc. to its own largely adventitiously determined original matter seems to inflate these objects and miss what is distinctive of them taken *en masse* – which is, precisely, their interchangeability, their lack of individuality. The position I am arguing for here gives a (relatively) precise ontological explanation of a deeply held intuition that many people have about such objects.

Perhaps it will be alarming to some that even within the category of material artifacts, we must have a multi-sorted ontology, never mind what the details are of the two sorts in question. Any view, such as a necessity of origin-as-matter view, that posits fewer sorts might be thought to be preferable. But simplicity should not be pursued beyond the limits of fidelity to the phenomena being theorized about. Again, I say, it seems to me that there is a significant difference between mass-produced and artisanal artifacts. One may disagree with me about the existence of that distinction, but if one accepts it, my approach gives a deep and interesting account of it. An alternative approach that took the individual essences of things to be tied to their original matter would either ignore this distinction or give it a shallower (and in my estimation, less satisfactory) explanation.

Finally, there may be concern over the fact that even within a given artifactual kind, say the kind *chair* (instances of which may either be artisanal or mass-produced), we cannot fully discern the metaphysical nature of instances without knowing something about the history of how they came to exist. Of course, for those who take artifacts to be ontologically distinctive at all, there is already an important appeal to history implicit in even thinking of something as a chair. To give a more realistic example, imagine at an archeological dig finding several pieces of flint that look as if they might have been arrowheads. One cannot know of one that it is an arrowhead and of another that it is not without knowing their histories. If one was a piece of flint that had been

accidentally shaved off a larger piece, it would not be an arrowhead.¹³ One could not tell just by looking, except to the extent that discernible features might provide good evidence of the stone's history. My approach here to mass-produced artifacts turns out to be historical in a stronger sense. One might know enough of some object's history to know it belongs to an artifactual kind and yet not know whether it was mass-produced or not. Again, some discernible features of it, or general knowledge about the methods of production for objects of that kind at the time it was made, might produce excellent evidence regarding this issue, but its nature (as possessing, or lacking, a fully determinate individual essence) would not be logically fixed by those general facts.

4

It seems possible that an act which in fact produces some number of objects of a certain kind might have produced some other number of objects of that kind. I shall say a bit more at the end of this section about the range and nature of such cases, but just to have something in mind, suppose that the very act by which I fold and cut a piece of paper to make one decoration might have been performed in circumstances that led to the production of two decorations. In that case, it seems we should say "this one decoration might have been two decorations." I think we should say this, but can such claims be made sense of? On the standard Kripkean view of modality, which countenances trans-world identities, claims like "A might have been F" are true just in case there is a possible world in which A itself is F. If we apply this model to the case at hand, we will obtain the result that "this one decoration might have been two" is true just in case, in a possible world in which the act I actually perform results in two decorations instead of one, that one decoration exists and is those two decorations. But, on standard views (which I accept), it is impossible for one thing to be two things (though, of course, not impossible, on the view I am defending here, that it might have been two things). So, all claims to the effect that one thing might have been two would be necessarily false if we insist on understanding modal predication in this way.

¹³ In my opinion, this would be true even if it had been used as an arrowhead. But let us suppose that it had not been so used.

David Lewis's take on the metaphysics of modality (1968 and 1986b) is in some ways more congenial to what I want to say. His counterpart-theoretic understanding of *de re* modal claims means that, unlike the Kripkean, he does accept that statements of the form "this one thing might have been two" can be true. In the actual world, I make a single decoration. In another, relevantly close world, I make two decorations each of which is very like the one I make and such that nothing in that world is more like the one I make than it. So, my actual decoration has two counterparts in this world, and the sentence "this one decoration might have been two" will be true. So far, so good. But Lewis thinks that, in such cases, we should also say that the one decoration might have been distinct from itself. (And, more jarringly to my ears, in the converse case, where two actual decorations both have a single counterpart in another world, Lewis will say that the two distinct objects might have been identical.) I resist these further glosses and don't think they are in any way implied by my view. To see how unappealing such Lewisian modal identity and distinctness claims are, think of something like the paper decoration case in the context of real mass production. I actually make 500 tacks in a single action in which either of two forms, one for 1,000 smaller tacks and one for 500 larger tacks, might be randomly put in place without my knowledge. So, I might, with the same action, have made 1,000 smaller tacks. Let us agree that each of the actual 500 tacks has all 1,000 of the smaller tacks as counterparts. That (I think) will lead Lewis to agree with me that the 500 tacks might have been 1,000 tacks; but how on earth could one go on to make the corresponding modal identity claims here? Is each of the five hundred distinct from itself in this other world? Might some of the 500 have been distinct from themselves and others identical to ones from which they are actually distinct? I suggest that we cannot make sense of any of these questions and so we should not embrace Lewis's view about the relation of counterparts to claims of possible identity and distinctness.

Nor will Lewis's view be guaranteed, by my lights, to yield the correct verdicts about whether one thing might have been two or not. For example, suppose I actually make one decoration out of a white piece of paper at t . Now consider another possible world W where I perform that very action, but a bit earlier at t' , and I use two pieces of red paper, one on top of the other. Later, at t , I perform another action

in *W* in which I make a single white decoration.¹⁴ On my view, this world shows that the one white decoration I actually make might have been two red decorations. Will those two red decorations be Lewisian counterparts in *W* of my actual white decoration? Surely the single white decoration I make in *W* is a better candidate to be the counterpart of the one I make in the actual world. It is made at the same time, it has the same color, it is a unique product of my making. The only way Lewis can ensure that the two red decorations were counterparts, in his sense, of my one actual white decoration is if he takes the fact that they are the products of the same act of making to outweigh the respects in which the possible solitary white decoration more resembles the decoration I actually make.

Although there is not much discussion of the modal issue I am dealing with here, there has been quite a bit of attention paid to a temporal analogue of it. Looking briefly at this will be illuminating, both for its similarities and its dissimilarities. Consider an object that undergoes a fission that results in two objects of the same kind. In this case, one object gives way to two. Ted Sider (2001) is one of those who have developed a theory of temporal counterparts, analogous to Lewis's theory of modal counterparts, to deal with issues of temporal predication (among other things). On Sider's account, ordinary sortals are true of momentary stages. A temporal predication about a current (momentary) *K* will be made true by stages at later times that bear the (*K*-relative) temporal counterpart relation to the current stage. In a case of fission, we want to say, "this one *K* will be two *K*s." This will be true, on Sider's account, because the current stage has two concurrent future counterparts. None of the problems that, I argue, afflict Lewis's treatment of the modal case will arise in the temporal case, because the counterpart relation can include relations of spatio-temporal continuity and causal connection that do not obtain across possible worlds. If 500 tacks become 1,000, that will be because of 500 events of fission, each event relating two of the thousand to one of the 500 in terms of causal history and spatio-temporal location. Nor can facts about origin be trumped by greater qualitative resemblance, as

¹⁴ Here I assume something a bit stronger than SAP above since I claim a single action is performed at *t* in the actual world and at a distinct time, *t'*, in another possible world. Also, of course, for Lewis, talk of the sameness of the action in each world will have itself to be expressed in counterpart-theoretic terms. For ease of exposition, I shall ignore that here; I don't think anything turns on it.

they can in the modal case. If one white decoration becomes two red ones, by fission and color change, the fact that there may be a later single white decoration that more greatly resembles the pre-fission one will not undermine the claims of the two red post-fission decorations to be the relevant temporal counterparts of the pre-fission one: they are spatio-temporally and causally connected to it while the later single white decoration is not.¹⁵

Lewis, as is well known, does not himself treat the fission case, and temporal matters in general, on the model of his modal counterpart theory. Instead, he treats the temporal case in terms of four-dimensional continuants, so-called space-time worms. Objects exist in time by having temporal parts. In fission cases, two continuants share an initial (pre-fission) part but differ in their later (post-fission) parts. Two distinct things overlap in their earlier parts as two roads may overlap in some places but not others. If we extend this approach, as Lewis does not, to the modal context, we will now be dealing with five-dimensional entities that may overlap in some worlds but not others. So, where one decoration might have been two, this five-dimensional approach would have us say that, in this world, where I make only a 'single' decoration, there are actually two decorations, but the two share their this-worldly parts. They diverge, however, in other worlds where I make, by the same action, two decorations. This is implausible as an account of what goes on in the cases I am interested in for two reasons. First, in the fission case, a given stock of matter (the matter of the pre-fission temporal part shared by the two objects) divides so that each of the two objects has, post-fission, only a portion of the matter they shared prior to the division. But the modal case I have been focusing on involves, in the actual world, a single piece of paper, and in the relevant other possible worlds, two pieces of paper. Although the story of five-dimensional objects sharing their actual world parts might be complicated in some way to allow for the presence of the second sheet of paper in the story as I have told it, it is not obvious how this would work, and the role of the extra matter makes the comparison with Lewis's account of the fission case much

¹⁵ I do not mean to imply that for Sider the causal and spatio-temporal relations will always suffice for temporal counterparthood; but for appropriate kinds, they will be necessary, and hence a later stage, however much it resembles an earlier stage, will not *trump* candidates for counterparthood that are spatio-temporally and causally linked to the earlier stage.

less compelling. Secondly, the five-dimensional account does no better than Lewis's original modal counterpart view with versions of the case in which 500 larger tacks might have been 1,000 smaller tacks. If, in a case of mass fission, 500 tacks were to become 1,000 smaller tacks, it would be by a process in which each of the individual tacks undergoes its own fission into two, and we could easily (in theory) match up pairs of the smaller post-fission tack segments with individual larger pre-fission tack segments. No such matching could work in the modal case, and so the conceptual apparatus of sharing actual parts would seem to get no purchase at all here.

Finally, the analogue of the Kripkean view about modality in which the very same object can exist at different possible worlds for the temporal case is so-called endurantism, according to which the very same object exists in its entirety (i.e., not by having a temporal part or a counterpart) at different times. How should we think of the fission case in this context, and does it have anything to offer us in the modal case? The pre-fission object cannot be identical to both of the post-fission objects without implying they are identical to each other and it cannot be identical to one of them only without a brute metaphysical arbitrariness that it is very unappealing. Rather, we must say that, in dividing, the original object ceases to exist and two new objects come into existence.¹⁶ It is because of the way they came into existence, 'out of' the original object, that we describe the case not just as one in which there is first one thing, and then two different things, but as one in which one thing *becomes* two. "Becoming" is the name of a distinctive and metaphysically significant process. So now we have a true sentence: "One thing will become two". Unlike a sentence such as "one thing will become yellow", which requires the one thing itself to be yellow at some future time, "one thing will become two" does not require the one thing itself to be two at a later time for its truth. So ordinary understandings of predication in a temporal context will not carry over, for the endurantist, to this troublesome kind of phrase, the applicability of which is tied to this special, metaphysical notion of becoming. This is

¹⁶ The fission example is most discussed in the context of personal identity. In that case, the natural response (saying that fission destroys the original object) is undercut by the great temptation to assert its continued existence on the grounds of the psychological relations between each of the post-fission persons and the pre-fission person. In cases that lack any psychological dimension, as here, fission is interesting but less seemingly paradoxical.

a complication with respect to temporal counterpart theory, which does not require treating temporal predications of the form “this one thing will become (or be) two” differently from “this one thing will become (or be) F” in general. But it is not an unmotivated complication since, as I have argued, the counterpart-theoretic approach does not work well for the modal analogue of fission according to which “this one thing might have been two” can be true.¹⁷

The modal case involves a relation between objects in different worlds that is analogous to the becoming relation in the temporal, intra-world case. Unlike becoming, it is not a relation that relies on causal dependence and spatio-temporal continuity. The two decorations that this one might have been are not spatio-temporally or causally linked to the one. But unlike Lewis’s modal counterpart relation, which is purely qualitative and developed in a framework that denies that a single thing can exist in more than one world, there is a relation between the two and the one that is mediated by the presence, in both of the relevant possible worlds, of a single thing, namely, the action of making. This action ‘throws forward’ an essence that is realized, in the actual world, by a single thing and, in another world, collectively by two things. I use the language “throws forward” in preparation for introducing the term “projection” to describe the relation of the two decorations to the one that might have been them.¹⁸ Where a given act of making actually produces one decoration, but might, in a possible world *W*, have produced two, those two are *projections* of the one in *W*.

I have introduced a contrast between artisanal and mass-produced artifacts. The former, I have said, have individual essences but the latter do not (or have individual essences that are incomplete); they are distinguished by essential properties from all other objects except their batch-mates. In this section, I have argued that we should accept

¹⁷ The deeper reason why it is not unmotivated to treat differently “this one things will become (or might have been) two” and “this one thing will become (or might have been) F” for standard instances of F (e.g., “yellow”, etc.) is that the first kind of predication involves situations in which the domain of objects involved in the semantics itself changes (over time or across possible worlds), while in the latter kind of predication it does not. I cannot follow this up here, though.

¹⁸ “Counterpart” would have been an excellent term had it not already been taken. In my 2016, I used the unexciting “counterpart*”. I offer “projection” here as an improvement on that.

that a given single artifact might have been two (or two, one; or three, a hundred, etc.). This raises two related worries. First, can we not, by exercising our imaginations, think of ways in which *any* given creative act could have eventuated in a different number of objects produced? So, will it not be the case that every artifact has multiple projections in various possible worlds? Second, will this not undermine the qualitative distinction that I set myself to make sense of in this essay between artisanal and mass-produced objects? For if a given artisanal, singly-produced object has multiple projections in some world, then will it not, in effect, be a limiting case of a mass-produced object, in which the batch is actually just one? Will it have an individual essence not because it is somehow ontologically different from a mass-produced object but only because the mass production of which it is a part happens only to produce one object in this case?

If we are forced to say that singly-produced artifacts are really just always batches of one, that will be at odds with the distinction that I began this essay with. But I do not think (though I admit I am not entirely certain) that we should hold that every singly-produced artifact has multiple projections. Suppose, in the actual world, I take a single piece of paper out of a packet of origami paper and fold it into a single decoration. Now suppose, in some other possible world, I perform exactly the same action (by SAP) but, unbeknownst to me, what I pull from the packet is two pieces of paper lightly stuck together. Should we then say, of the single decoration that I actually make, that it might have been two decorations? If my intention is to make a single thing, then I do not think in this possible world I have made two decorations; hence it will not be true that there are two projections of the decoration I actually make, or that the one I make might have been two. The reason I have not made two decorations in this possible world is that I have not imposed my mind on the matter which is the hidden paper stuck underneath the one I think is the only one I am working on. In that case, the 'second decoration' seems to me like a by-product of my creation of a decoration out of the intended piece of paper. It is a mere piece of paper that comes, by accident, to be arranged, to use van Inwagen's locution, decoration-wise. It is scrap, something like the sawdust I produce as an unintended by-product of making a chair.¹⁹

¹⁹ For the use of the term "scrap" in cases like this, see Hilpinen (1993) and my 2016: 4.1.2.

There is no further, *sui generis* 'crystal of intention'.²⁰ On the other hand, suppose I intend only to make decorations out of however many pieces of paper are handed to me. As it happens, I am handed a single piece. But in another possible world, I might have been handed two pieces together and so, with the same action (and, crucially, with its same intention) have made two. In that case, it seems to me that the one I actually make might have been two; it is not an artisanal artifact but merely a batch of one.

I understand that, for many people, the idea that these subtle differences in intention will have ontological consequences of the kind I am suggesting will appear preposterous. But recall that we are dealing with artifacts, which I have characterized as impositions of mind on matter, or 'crystals of intention'. If one takes seriously the idea of artifacts as entities of this kind, then it will not be strange that differences in the mind may have consequences in the nature of the objects created. I don't think one can really do justice to the nature of artifacts without this approach and hence without embracing some of the kinds of consequences that are evident here (even if I am wrong about the details).

5

Above, when I considered the notion of mass production not just in the abstract but in the context of the modern factory production of things like thumbtacks, screws, nails, and automobiles, I treated it in a highly

²⁰ The converse case is interesting. Suppose I actually intend to, and do, make two decorations by folding two pieces together. Now think of the possible world where my action and intention are the same but, unknowingly, I only grab one piece of paper. In this case, the two decorations I actually make might have been one. And although there is a very strong temptation to say that if I actually make the two out of pieces of paper M and N, but I might, with the same action, have made only one, out of piece M, then the one I would have made would be numerically the same as the one I actually make out of M, this temptation should be avoided, for reasons given above. The two pieces of paper may have individual essences that distinguish them from each other (though of course, they may not, if they are batch-mates from the same process of mass production), but that does not mean that the two decorations I make are distinguished from each other by any essential properties. Hence, we cannot identify the one I make out of piece M in the actual world, where it is one of two I make, with the one I make out of M in the possible world where it is the only one I make. The one, in this case, is an accidental batch of one.

simplified way. Specifically, I assumed that a single person, by means of a single action, is responsible for the creation of multiple objects. For example, she pushes a button and the result is that molten steel pours into tack molds for the creation of 1,000 tacks. Her pushing the button is the creative action, and it results, more or less directly, in the coming into existence of multiple objects. There are two problems with this over-simplification. First, my conception of the nature of artifacts should be shown to apply to the more realistic situations that occur in which there are likely to be multiple agents working on an assembly line, each of whom does a job the relation of which to the finished products is much less direct and clear-cut. Secondly, the over-simplified picture might suggest that there are other scenarios which are equally cases of mass production but where the problem of insufficiency of individual essence would not arise, in which case, the problem I am identifying would not be appropriately described as pertaining to mass production as such. In fact, these two problems are connected, as we shall see.

Regarding the second problem, the kind of mass production that might be thought not to lead, on my account of the nature of artifacts, to a dearth of individual essence would look like this. Instead of the solitary worker performing a single action that results in the simultaneous creation of a thousand tacks, she stands by a conveyor belt and, as a thousand different molds pass before her, she presses a button a thousand times to fill each mold with molten steel. Now it might be thought that each tack has its own essence-bestowing creative act. However, if I have succeeded at all in making the reader doubt the essential individuality, relative to their batch-mates, of the tacks that are produced simultaneously by a single act, she might now feel perplexed at the thought that each of the successively produced tacks has its own individual essence relative to its predecessors and successors on the conveyor belt. Are the details of the processes of mass production in the two cases so different as to result in such ontologically different products – the simultaneously produced tacks sharing a collective essence but not distinguished essentially from each other, the successively produced ones, by contrast, like mini-artisanal productions? This does not seem right.

The answer lies in considering the first problem I mentioned: the need to apply the theory of artifacts to more realistic scenarios of mass production. Situations of industrial mass production typically involve

the actions of many people, no single agent being the maker of the resulting product and no single action, the action of its making. If we think about artifacts as *sui generis* impositions of mind onto matter, as 'crystals of intention', whose mind is it that is being imposed, whose intentions crystallized? The answer is surely that it is not the minds and intentions of the many laborers who collaborate in situations of mass production. The problem is not that they are many and that my account requires a single creator. I am quite happy to allow that there may be many creators of an artifact. The problem with seeing the factory workers as the creators is that their intentions with respect to their actions and the outcomes of those actions are entirely dependent on the original intentions to create of the person or persons who design and control the production process.²¹ My point here is one way, I believe, of making precise some of Marx's thoughts about alienation. The workers in a factory are alienated because they are involved in the production of objects that are not expressive of their own intentions and minds. Their actions, therefore, are not the actions that are determinative of the essences of the objects produced because they are not the genuinely creative actions. The workers' actions, if you like, become tools used by whoever controls and designs the production process and are no more determinative of the essences of the produced objects than are the literal tools used (hammers, saws) or the matter out of which the objects are made, which I have likewise characterized as a tool used by a maker in the expression of her mind and intentions. Consequently, the artifacts, the products produced by the worker in the context of mass production, are estranged from her, because while she is instrumental in their being made, the objects are not the externalization of her mind and activity. So, even if the situation of mass production is one where a single worker pushes a button a thousand times to produce a thousand tacks, we still have objects that share a collective essence, determined by the intentions and actions of those who 'put in motion' the whole process of production, and not a thousand tiny artisanal objects.

In this context, I would like to add one further remark to the worries I raised at the end of Section 4. I have described cases where it is, on my

²¹ In 2016, ch. 7, I argue that actions are themselves artifacts and in situations like the one described here, we have the equivalent of mass-produced actions, actions that are not essentially distinguished from each other. I do not rely on that view here.

view, correct to say that one actual decoration might have been two, and in these cases, the one I actually make is really a batch of one rather than a single, artisanal product. It is essentially distinct from all other actually existing objects, but only accidentally so, as it were. But I also cautioned that not every case in which I make a single thing, but might have appeared to make two such things, is one where I really might have made two with the same action with which I actually make one. This was important, because it seemed as if we might end up being able to imagine possible circumstances where any act by which I make a single thing might have apparently resulted in two (or more) such things. A case where I make a single thing but might have appeared to make two such things is where I actually take a single sheet of paper and make a decoration but might (accidentally) have grabbed two sheets together. In that case, I said, my mind is not imposed on the sheet that I did not know I was folding, and what results is 'scrap', a mere decoration-shaped piece of paper and not the genuine imposition of mind onto matter. A case in which I do think that I make one but might have made two is where I decide to make decorations out of however many sheets someone hands to me, not knowing whether they will hand me one, two, or more. I would like to offer the following conjecture. Cases where I make one thing but might have made two will all involve a certain kind of alienation in the making process. This is clearly involved in the factory case, where an individual worker may have no knowledge of, or control over, which forms, say, the molten steel she pours will flow into. It is also involved, it seems to me, in the case where I hand over to another, or to chance, the supply of paper that I will impose my mind on. Perhaps there are cases where I actually make one, but might have made two, in which there is no funny business like an intention to impose my mind on (i.e., make decorations out of) however many pieces of paper you hand me; but I cannot think of such cases.

6

I began this essay with a contrast between two objects. On the one hand, there was a work of art: a drawing in which Batman slaps Robin by way of reaction to Robin's Lewisian view of how objects persist through time. On the other hand, there was a humble mass-produced thumbtack that I used to hang the drawing. I have argued here that

there is a genuine ontological difference between these objects. One has a fully determinate individual essence, and we can track it through other possible worlds by tracking the action by which it is made. The other has a collective essence, or an incomplete individual essence; we can track its batch and hence distinguish it by essential features that it does not share with members of other batches. But we cannot distinguish it by any essential features from its batch-mates. It is interchangeable with them. As strange as some of the metaphysical consequences are of this view (which I have tried to draw out here), I believe it gets right the distinctive nature of mass-produced objects and their striking difference from artisanally produced objects.