

Organisms, Artifacts and Eliminativism

Introduction

There is a long, though not very popular tradition, in which artifacts are viewed as the poor cousins of organisms - i.e., the former are ontologically suspect in a way that the latter are not.¹ This paper is a contribution to the ontological demotion of artifacts. Positing the existence of artifacts gives rise to a number of intractable metaphysical puzzles. Organisms can evade such quandaries for they are unlike artifacts in two significant ways. First, their existence and their nature are not essentially dependent upon the intentions of others. Secondly, they possess the internal power to acquire, assimilate, maintain, and remove matter.

An eliminativist stance towards artifacts commits me to maintaining that the reader is not seated in a chair, near a table, perusing a paper. In fact, the reader is not wearing any clothes. This might lead you to suggest that the clothes I should be wearing are a hospital gown and straightjacket. Before you have me committed or medicated, let me say I do believe that this room contains atoms arranged chair-wise, atoms arranged table-wise, atoms arranged paper-wise and atoms arranged clothes-wise, it is just that these do not compose any chairs, tables, papers or clothes.² In other words, in a spatial region where there are only X number of atoms arranged chair-wise, there wouldn't exist X+1 number of things - those atoms *and* a chair.³

Some readers may recommend not my institutionalization but just that I obtain a stronger

¹See Aristotle's *Metaphysics*, Peter van Inwagen's *Material Beings* (Cornell University Press, 1990) and Trenton Merricks's *Objects and Persons*. (Oxford University Press, 2001), Joshua Hoffman and Gary Rosenkrantz's *Substance: Its Nature and Existence*. (Cambridge University Press, 1994).

² It would be a mistake to identify the chair with atoms arranged chair-wise. Identity is a one to one relationship, not one to many. And if readers identify the *sum* of the atoms arranged chair-wise with the chair, then the chair of the folk ontologist disappears and is replaced by one that has all of its parts essentially.

³ "Atoms" is used as a placeholder for whatever are the metaphysical simples. My thesis is actually indifferent to the possibility that the world lacks simples and is composed of atomless gunk, i.e., everything has proper parts.

prescription for my glasses. However, the visual impressions such a reader takes to be evidence in favor of folk ontological objects such as chairs provide just as much evidence for there being only atoms arranged chair-wise. The visual impressions would be the same whether or not there were any composite objects. The unimportance of perception to these matters can be better understood by noting that there is the same sort of visual evidence for the gerrymandered objects posited by the advocates of unrestricted composition (classical mereology.) Unrestricted composition is an ontological position to which most readers will not be sympathetic. Its advocates believe that any number of objects have a sum. For example, they assert that there is an object composed of the reader's left shoe and my right hand. Call this alleged object a "shoehand." Few readers will think that seeing things arranged shoehand-wise warrants the claim that there are shoehands. Their attitude should be the same to atoms arranged chair-wise. So the existence of objects such as chairs is not going to be settled empirically, i.e., by just looking, but by the better philosophical argument.

My argumentative strategy in this paper is to present a number of problems for those who believe in the existence of artifacts that don't plague those who believe in the existence of only organisms. These problems strike me as intractable. Their alleged solutions appear more counterintuitive than the elimination of the objects in question. The first two sections of this paper are dedicated to showing that the believer in artifacts is committed to our thoughts having God-like powers that they do not in fact possess. If there were artifacts, then their coming into existence and going out of existence would depend upon our decisions.⁴ This dependence would not be at all objectionable if such decisions were causally responsible for actions that *subsequently* rearranged some matter in the world. But the believer in the existence of artifacts is committed to craftsmen and artists bringing things into existence merely by deciding that they exist. And at the time of their

⁴I am following Randall Dipert in considering artworks to be a kind of artifacts. *Artifacts, Art Works and Agency*, (Philadelphia: Temple University Press, 1993).

existence-granting decisions, they were just as free to have decided that the very same arrangement of matter did not compose that artifact. If one tries to avoid granting the mind such powers by insisting that the artist's decision merely determines the object's completion rather than brings it into existence, this will actually entail backward causation thus giving the mind even more unwelcome powers. This will be true of representational and non-representational works. The alternatives to such unwelcome backward causation appear to be to accept an explosion of spatially coincident objects or to deny that anything was made, neither of which will be attractive to the defenders of an artifact ontology.

In the third section I will show that it is not a solution to the forementioned puzzles in the production of artifacts to claim that nothing has been made and then to only later grant that some matter composes an artifact when it comes to be treated in a way akin to what has been called Found Art. I show that puzzles similar to the above arise for Found Art. I also argue that the role that intentions allegedly play in determining the parts and functions of Found Art, or the broader category of Found Artifacts, will entangle them in difficulties of determining when an artifact undergoes substantial change and when it has just acquired a contingent property. To avoid this problem will result in the threats of having to countenance vague identity or very sharp and seemingly arbitrary breaks where one substance supplants another. I end the section by arguing that organisms avoid the problems shown to plague artifacts.

In the fourth section, the problematic nature of the intentions essential to artifacts will be further explored by considering creative enterprises that are joint projects but the intentions of the co-creators diverge. These lead to bizarre cases of intentional overdetermination which make it difficult to say what has been made and whether more than one thing has been. And it will be shown in the fifth section that even in the absence of intentional divergence there is the danger that artifact theory will be committed to spatially coincident entities of the same kind. My contention is that artifact elimination is preferable to such unwelcome co-location. I'll explain why the same problems don't befall organisms. Living beings

aren't dependent upon intentions of others for their nature or number. The organism's independence of intention stems from its possession of essential properties that are intrinsic rather than relational. Its persistence is determined by the internal unifying self-maintaining forces that we know as life processes.

The problems that will be examined in the sixth section arise because artifacts lack the organism's internal power to render matter part of itself. The parts that an artifact has are the results of the intentional actions of others. The organism, on the other hand, can assimilate matter, maintain the resulting parts, and then expel those elements which no longer function in the service of the whole. The organism thus solves for us the puzzles of part replacement which trouble the defenders of artifact existence. For instance, there is no biological analogue of the Ship of Theseus. I will argue that most judgments about the degree of part replacement that an artifact can survive are better explained as a result of what readers are accustomed to rather than an actual discovery on their part.

We shall see in the final section that this internal unifying power of organisms also enables them to avoid certain puzzles about the essentiality of an entity's original matter. Assuming both that identity cannot be indeterminate and that some but not all of an entity's original matter is essential to it, then there must be a limit to how much of its original matter could have been different. The only plausible criterion for determining this limit is one that the believers in organisms can avail themselves of, but the proponents of artifact existence cannot.

PART I. PROBLEMATIC INTENTIONS

Section I. Puzzles about the Origins and Endings of Artworks.

Consider an artifact such as an abstract/nonrepresentational modern sculpture. The making of the sculpture may involve the artist's hands pressing against a lump of clay three times or three hundred times. Why isn't there a new sculpture appearing each time the sculptor exerts some pressure upon the soft clay?⁵ The most likely response is that it is up to the sculptor to decide when her efforts have brought

⁵ If one accepts that each movement of clay brings a new sculpture into existence, an unattractive choice

a statue into existence.

Assume that a sculptor decides at a certain time that the creative process is over and her sculpture is finished. It appears as if a *mere* decision has brought it about that the sculpture is then complete and fully existing. Before the decision was made, the sculpture was not finished and did not exist - or didn't determinately exist. This description gives the impression that the artwork has come into existence sometime *after* the last physical addition or change to the lump of clay has been made. It passed from not existing, or indeterminately existing, to determinately existing without undergoing any physical change. It was merely a decision by the sculptor that brought it into existence. And she was free to have decided the work did not yet exist. The existence or nonexistence of the objects appears to be at her discretion.

Wary of granting the mind the power to transform something from not existing to fully existing without there occurring any physical change in the interval, readers might prefer it to be said that the sculpture was already completed and existing and the sculptor's recognition of this was just belated. That is, there was an already existing fact about the artwork's completion which the artist's judgment reflects. Perhaps readers who are resisting the idea that the sculptor's whim has such ontological significance are assuming a dispositional account is tenable: the sculpture was disposed to elicit a certain judgment from the sculptor. To see why this won't work, consider a scenario where the condition of the sculpture is such that it would *not* have induced in the sculptor a judgment of completion. She is then distracted by the phone or doorbell. When the artist returns to her studio after the distraction, there has been a slight change in her mood and outlook. This change leads her to consider the artwork complete. When was the sculpture completed? The dispositional analysis will still have the art work becoming completed and thus fully existing some time *after* it was last touched or underwent any noticeable physical change. I hope the

must be made between each slight rearrangement of the clay destroying the previous sculpture (mereological positionalism) or there coming to exist a great number of spatially coincident sculptures.

reader finds something ontologically queer about this scenario. The power of mere thinking to bring things into existence without rearranging any existing matter is God's provenance, not men's.⁶

It seems as if the artist's decision is decisive in determining when a sculpture exists. If the thought that she just finished bringing a nonrepresentational artwork into existence suddenly flashes before her mind, is it then too late for her to reconsider? Can she renounce the earlier claim as premature? Perhaps it will be claimed that a decision about an artwork's existence and completion is accurate only after a certain period of rational reflection. This would avoid the earlier dependency on changing attitudes of the artist that plagued the dispositional account. But I'm not optimistic about any attempts to spell out those conditions of ideal rational reflection. And what if the artist disagrees with the judgment that her existential decision was too hastily made? I don't think many people are going to be comfortable asserting the abstract artwork is unfinished in the face of the artist's protests to the contrary.⁷

But nor are they going to like the idea that a sudden passing thought about the artwork's existence can tie the sculptor's hands, making any further clay shaping an addition to an existing sculpture or the cause of a new abstract artwork. The eliminativist, of course, avoids these tensions, though readers may think the eliminativist's answer only as attractive as the nominalist's solution to the set paradoxes.

⁶ An anonymous reviewer pressed me to make clearer what is problematically God-like in the human creation of artifacts. Admittedly, the alleged human creation of artifacts doesn't involve anything like God's *ex nihilo* creation. Nor does it involve miraculous (telekinetic-like) powers where the parts of existing things are rearranged into new composite artifacts without any physical mediation. The God-like powers involved in artifact creation are more akin to those involved in the Christian consecration of the bread and wine which involves transubstantiation (or consubstantiation). Compare the artist only having to think (or say) the right thing and a (very suspect) artifact comes into existence to the priest merely having to say the right things which elicits a divine response resulting in the miraculous appearance of a new substance, the blood and body of Jesus Christ. It is true that in artifact creation - as an anonymous reviewer points out in an attempt to downplay or properly balance the role of thought in creation - there must be other necessary conditions that have to be in place as well as the artist's thought to bestow existence. However, that is also true for the consecration - there has to be bread and wine. Only certain things can become the flesh and blood of Christ (transubstantiation) or co-located with the bread and wine (consubstantiation). See also my response to Lynne Baker's attempt to downplay the creative process of thought at note # 11.

⁷ I don't mean to imply that the artist can *never* be wrong. Consider the possibility that the artist has bad vision and insists that she has fulfilled the blueprint she has in mind when she hasn't. But in the absence of such perceptual failures, we are likely to defer to the creator, especially in cases of nonrepresentational art.

Readers might have been tempted to object earlier that the artist's decision doesn't bring a sculpture into existence, but merely determines that an already existing object is completed. However, if one's response is to stress the distinction between already *existing* and being *completed*, what will one say when the sculptor decides her abstract work is done after just once putting her hands to the clay? Here the first moment the statue exists is also the first moment it is finished. And even if the more common occurrence is for an abstract artwork to exist before it is finished, when this existence threshold is reached appears to be determined by the extent to which the sculptor is going to further transform the clay's shape. Our practice is to claim that something already exists but is not finished only if a considerable amount of the finished product is already made. If an artist has pushed about the clay three times and is going to do so an additional one hundred times in ways that drastically change its shape, we wouldn't say the sculpture existed after the third touch and was finished after the one hundredth and third. So it is still up to the artist when the sculpture comes into existence because this depends upon her choice about how much additional sculpting she will do. Thus even if the abstract sculpture comes into existence before it is finished, when the former threshold is crossed depends upon the sculptor's later decision.

There is a major problem with this position that may not be evident as long as we assume the sculptor is following an extremely detailed, preexisting blueprint. Then we may think that we can know when it was completed and when it earlier came into existence, or at least maintain that there are facts of the matter about the timing of such events. But there is nothing to prevent the sculptor from working without a blueprint, ceasing her efforts only when she likes what she sees. The conventions of the art world are that (virtually) any decision by the sculptor would be decisive, whenever it occurs and for whatever reason. As mentioned earlier, we wouldn't display an artist's nonrepresentative work, insisting it was a finished statue when she maintained that it was not. But if the sculpture's coming into existence is determined by how much of the finished product is already made, and when it is finished is at the

artist's discretion, then this account will be plagued by *backward causation*. A later decision about the completion of an abstract art work determines at what earlier point the sculpture first existed - though in an unfinished state. So if the time that something comes into existence and comes to be complete aren't the same, then an artist could make a decision today that would cause an object to come into existence a week earlier! This is a more unwelcome consequence than the earlier account in which the work's being completed and its coming into existence coincided. My contention is that to accept either of these views is to adhere to a kind of ontological voodoo - and no more plausible than killing someone by sticking needles into their toy likeness.⁸

I maintain that backward causation is to be avoided at nearly any cost and that positing the existence of artifacts commits one to it, hence one should be an eliminativist about artifacts. However, where I diagnose backwards causation, readers might hold that nothing has been made because there wasn't even a vague plan and goal directed activity. It may be held that there isn't backward causation in my example but what there is actually is more like Found Art or treating a naturally occurring object that looks like a sculpture as if it was a sculpture. My response is that if we consider examples in which a vague plan is in place, we can see that backward causation still threatens artifacts.

I don't think readers will deny that artists, sculptors, musicians and writers can begin creating works with only a sketchy plan that gets filled out later.⁹ So someone can start writing a

⁸A similar charge of occult powers and backward causation can be leveled against believers in scattered artifacts. See the author's discussion ... (info withheld for purpose of blind reviewing) of why there isn't a satisfactory account of distinguishing the allegedly still existing watch whose parts are spread across the repairman's table from qualitatively similar pieces in the craftsman's wastebasket that do not compose a scattered object. If the scattered parts compose an object in the interim period depend upon what happens later, then a future decision determines whether some things in the present compose an artifact. And if the existence of the scattered object doesn't depend upon future action but just the contemporary intentions of the repairman or others, what is to stop him from changing his mind numerous times causing the object to come into existence, then go out of existence, then reemerge only to again cease to be and so on?

⁹ If it is denied that art works or functional artifacts can emerge from vague plans, many of what we think are finished pieces of art or works in the process of being made will turn out not to be. For example, if an artist

literary work with a vague plan, sometime later have created enough of the final structure that we would say it had been brought into existence though isn't finished, and then at an even later time can complete the work, and throughout was producing the same object. I assume short stories and novels don't come into existence at the same time even if both were started simultaneously. The reason they don't both begin to exist at similar times is due to the later differences in their final sizes. That is, not as much has to be written to compose an existing but unfinished short story as has to be written for there to be an existing but unfinished novel. An author may decide to explore a theme, say death or betrayal, but may not be initially sure how long the exploration will be. We would say she was writing the *novel* from the first word even if she didn't know then that she would explore the themes and characters for hundreds of pages rather than just a few dozen. And since novels come into existence at different times than short stories, the same problem of a later decision determining the earlier origins would arise. When they each first came into existence would be determined by when they were later completed – or when a later decision was made whether to soon bring the writing to an end with a short story as the result rather than to continue writing and produce a lengthy tome. In either case there appears to be backward causation.¹⁰

It is worth considering the possibility that *any* artwork made from a detailed blueprint could have been made from less explicit intentions than it actually was. Assume that the artist in both the actual and merely possible scenarios wanted every part of the work to end up the same. But in the first scenario, the developed (explicit) intention is in place prior to the beginning of the actual physical process of creating the artwork, while in the other there is at the beginning only a vague notion of what the artwork would end up looking like and expressing. But during the making of the artwork, the artist came to have the very same aims in the second scenario as in the first. However,

working from a vague plan came to believe it was finished today and tried to sell the result, it would not be an artwork which she put up for sale or, at least, it wouldn't be true that the work being sold today is the same one she was making the last few weeks.

since the thought of the final form came later in the second scenario, there wasn't the same earlier point where it could have been said that a sufficient amount of the final structure and detail was in place so the art work had come into existence. This point wasn't reached at the same moment because at the time in question there was no *fact* about what the final sculpture would look like in the second scenario since the artist had not yet decided upon the final plan. If all artworks could have been made from vaguer, later developing plans, this means the possibility of backward causation lies within each artwork. This would place a major problem in the nature of any artifact. Of course, the response may be that this hidden metaphysical dilemma should be met by denying that artifacts could have been started from less determinate plans than they were. But I question whether one should abandon such a seemingly obvious belief. Would it really have been a different novel if the same idea for a scene in chapter eight came to the author later than it actually did? Dropping the belief that the same novel could have emerged from a less detailed initial plan strikes me as akin to avoiding certain metaphysical problems about fictional objects by identifying them with actual people's counterparts. It might be better to deny the existence of fictional objects than to save them by so reconstruing them.

Section II. Puzzles about the Origins and Endings of Representational Artifacts

Readers should not think the solution is to exclude only nonrepresentational artworks like sculptures or written or musical works whose words and sounds don't resemble their referents from their ontology, while maintaining that the rest of the artifact world that deals in representations is in good standing. It is just as possible in the case of a representational sculpture for the sculptor to proceed from a vague intention and this will still give rise to the threat of backward causation. The sculptor may only have in mind a vague plan that he will celebrate WWII veterans, but the size and detail and number of pieces (soldiers, weapons, vehicles, landscape etc.) could be decided upon later. A vague plan still leaves room for a decision about when something is finished and thus when it came into existence. It doesn't

¹⁰ The same type of account of backward causation can be given for a musical composition.

seem at all obvious to me that the artist's intention can't be so imprecise as to allow later a decision about the final size. The celebration of soldiers could have been much larger in one possible artwork than another. And we would be reluctant to say that at the time in the creative process that the sculptor determined it would be a larger work rather than a smaller one that he had changed plans and a new work then popped into existence or at that time started then to come into existence. Even if the two possible sculptures are not identical, there is no reason we shouldn't say the work done so far had been the early stage of creating whichever ends up being completed. But once we admit that the vague plan allows considerable room to develop, then as long as we stick to the formula that something comes into existence when a certain percentage of its final structure is completed, artifact creation will suffer backward causation. There is no need for me to declare how much final structure (components, size, detail) that there must be for something to exist in an incomplete form since most readers will agree that there is some amount. But the vague intention doesn't determine at what point all of the various completions that are compatible with it will come into existence. The vague initial plan is compatible with variations in the objects, their size, details etc. For instance, the statue of the soldiers could be just clay lumps of barely recognizable humanoid shapes, or perfect duplicates down to the last external detail, or certain features could be exaggerated and others undeveloped to make a point. The artist can start his sculpture celebrating soldiers without having decided these matters. And his later decision about adding life-like details will determine when sufficient structure and features are in place for the object to first exist. Since the decision will come later than at the start of the creative process, the first moment of existence will be determined by a later event, hence backward causation plagues representational as well as non-representational artwork.

Many other representational artifacts are confronted by similar intention-caused metaphysical quandaries. Imagine a craftsman whittling away on a piece of wood in order to produce a toy sports car as a gift for his nephew. Halfway through his task, he realizes that his partially constructed toy sports car

looks just like a complete toy truck. Recognizing that the toy truck would be a fine gift, he abandons his earlier plan of further whittling away the wood necessary to produce the smaller, sleeker, sports car. One description of what has happened is that his mere decision creates the artifact, what had been a partially made artifact (toy sports car) is replaced by a different fully made artifact (toy truck). But this account allows the human mind too much creative power. This deference to the creator's intentions would seem to imply in the case of the carving that it became a toy truck as a result of the craftsman's decision. The problem is that such a decision came after the wood was last physically altered, just as the abstract artwork came into existence sometime after it was last physically altered.

Yet if we try to avoid granting the mind such powers by claiming the toy van existed unintended by and prior to the craftsman's recognition of it, then he could have unknowingly made and perhaps destroyed countless objects during the process of making the sports car. His whittling could have produced a number of functional objects such as a key to a weird shaped lock, a plug to an odd shaped liquid container, a religious altar, a paper weight, a foot stool, a cat scratching post, a weapon etc. And maybe his carving at one time resembled a domicile on the far side of a distant planet, or an alien creature that lived there.

If readers think this treatment of the carving is acceptable, they will probably have a hard time reconciling it with their attitude to works of sculpture. Will they accept that Michelangelo has made not only a sculpture of David but everyone else whom the statue resembles? I expect readers to be reluctant to admit this because they believe the intention or decision of the sculptor determines what the sculpture represents.

If readers still insist that the craftsman has unintentionally made the key, plug, truck, altar, alien vehicle, distant domicile and all the other things, they must tell us whether there is only one thing with the contingent properties of being a key, plug, truck, altar and so on that has been made, or if there has been carved a multitude of spatially coincident artifacts. The latter would be true if the key, plug, truck,

altar etc. all have different persistence conditions. For example, if the key would be destroyed by shaving off additional wood that merely reduced but didn't destroy the altar or truck, then the key can't be identical to the latter entities. If readers accept spatially coincident objects have been made, they will be confronted with the difficult task of explaining how physically indistinguishable things standing in the same relations to their maker have different sortal and dispositional properties. If two things are atom for atom alike and have the same history, how can they differ in kind? And why is one entity destroyed by further carving and the other physically identical one is not? Contrast this with the standard account of dispositions in which underlying physical differences explain why say a tree is disposed to go up in flames and out of existence and a rock is not.

If the reader resists the multiplication of spatially coincident but distinct entities, then should the key, truck, sports car, paper weight etc. be understood as all identical to each other in the way in which the reader was once a child and then later an adult, teacher and spouse, though always one and the same human being? But what is this one more fundamental substance in the case of the artifacts? That is, which kind of thing determines the persistence conditions of the one object in question - as human being does for the creatures on the other list? It seems arbitrary that it should be the truck and not the key. Perhaps it will be claimed that the key, truck, altar, paper weight and so on are all just modes of the piece of wood. In the language Wiggins popularized, "piece of wood" is the substance sortal and "key" and "van" are phase sortals. This is still quite problematic for while we are receptive to saying that the child is identical to the later adult, we are more reluctant to pronounce the toy truck to be identical to the rest of the wooden objects on the above list. That would be like saying that a bronze statue of King George at T_1 is the same statue as that of George Washington at T_2 because they are composed of the same lump of bronze. It doesn't seem at all compelling to treat them as one and the same statue undergoing changes. Instead, it seems more plausible to claim that the statue of King George ceases to exist when its constituting bronze matter is hammered into the shape and likeness of George Washington. So

identifying the unintended truck, key, plug and altar doesn't seem any more attractive than accepting the existence of countless spatially coincident entities unknown to their maker.

The eliminativist avoids arbitrarily choosing that the key, truck, and piece of wood has the persistence conditions of one and not the others. The eliminativist also doesn't have to explain away the mystery of how spatially coincident entities could be different kinds of things with different dispositions. If readers reject both versions of the position that there can be artifacts unknown to and unintended by their maker, then their noneliminativist options about what was made become: 1) that the craftsman could not decide to give his nephew a toy van because this was *not* what he ever intended to make, rather, he gave him a partially made sports car that looked like a van; 2) that his mere decision could make the half completed sports car into a toy van sometime after it was last physically altered. I find all of the surveyed options to be unpalatable. I think what is wanted is an ontological account in which the nephew receives only one completely existing artifact, a toy van. But the account that delivers this judgment grants the human mind more power than it naturally possesses. Eliminativism thus appears to me to be more attractive by default.

III. Found Art and Found Artifacts

Some readers might not share my intuition that it was bizarre to be able to determine what substance a thing will be merely by a thought. They may claim that option #2 above should be compared to such existence conveying decisions involved with a piece of Found Art or a cousin of the phenomena that I will call a "Found Artifact." To discourage this approach, I suggest that readers consider the possibility that the whittler, after carving his last, could change his mind back and forth about what he has made thus resulting in there being one substantial change after another. I hope this increases the counterintuitiveness of accepting Found Artifacts.¹¹ Is there a considered judgment that

¹¹ Lynne Baker tries to downplay the charge of thinking of things into existence in a discussion of Found Art by stressing that there must be preexisting conventions and that there is and only the creation of additional

counts as a weighty enough decision which will prevent any later capricious and whimsical changes of the artist's mind from affecting what has been made? I don't see this being easy to spell out, but even if it can be, I don't see why there still couldn't be a problematic switch (substantial change) after there is an authoritative decision. Whatever it takes to be a considered judgment – how much thought, how long a period without wavering, how great a preference for one alternative over others, etc. - there isn't anything to stop this from reoccurring a little while later with an alternative outcome. So even if substantial change would not occur as suddenly and frequently as I first conjectured, it could still be common. And these changes could all occur after the carved object is wrapped and put away prior to being given on a Christmas vacation months later to his nephew. The whittler (the uncle) just changes the Christmas card that he intends to give his nephew every two weeks or so when he decides the carved object is something else.

Some readers might protest that it isn't just the artist's thought but the associated practices, i.e., there is the practice of taking things that look like toy vehicles and then using them as such and encouraging others to use them in the same way that determine what kind of things they are.¹² This could mean either of a number of rather unwelcome possible descriptions. 1) The least appealing involves backward causation. The wood would come to compose or constitute a van when the whittler finished carving only if it was later used (played with by the recipient) to be a van. So the later use determines when the van earlier came into existence. 2) There is a period prior to its use as a toy van in which it remains a partially made sports car and not a van even though the initial intention has changed and the whittler considers it a completed van. This raises the question why should the earlier intention so dominate? Why isn't this like the case of Found Art where later usage overrides the earlier intentions of makers and users? Of course, the intentions belong to the same person but

instances of already existing kinds See her *Monist* article "Everyday Concepts as a Guide to Reality. However, the existence of private Found Art that doesn't need a second viewer and the possibility that the first piece of Found Art could precede any "Made Art" would seem to undermine her two claims.

that seems even more conducive to substantial change since the original designer can withdraw his intention unlike the case of Found Art where the original designer isn't around. But if it is a van because of the whittler's earlier decision to treat it as one and to encourage others to do so as well, then what will stop him from changing his mind a number of times before bestowing his gift, thus transforming the kind of thing he ends up giving? 3) When the carved object is hidden away on a shelf prior to being given for Christmas it is neither a particular sports car nor van until used as such. I find it hard to believe that since the whittler intended to make one thing, but later decided it was something else, that it ends up being neither for weeks. The Christmas card then should not say "Dear Nephew: Enjoy this gift of a toy van" but "Dear Nephew: Turn this gift into a toy van."

There are other problems with Found Artifacts that should make one unwilling to annex the whittled toy van to such a model. Such artifacts suffer from a tension between substantial change with the instantiation of a new essence and what is merely a phase change with the acquisition of a contingent property. Organisms don't have this problem. The problem for artifacts can be seen by considering any of the following: a chair that comes to be used as a clotheshorse, an arrowhead that ends up a paper weight, a bookcase that is put to use displaying fine china and crystal, a desk that serves as a dining table, or a rail car that becomes a diner. These changes pose a problem of determining when there has been substantial change or whether something has merely acquired a contingent property. Using the chair once as a clotheshorse doesn't make it into something that is essentially a clotheshorse. But overtime, if it is no longer used as chair but exclusively as a clotheshorse, it may be said to undergo substantial change. To strengthen the case, add that the original use is forgotten or unrecognizable. The possibility of a substantial change raises the additional threat of vague identity since there will be a period in which it can't be determined whether something is essentially a chair and is just being used as a clotheshorse or has become

¹² This is the suggestion of an anonymous reviewer.

essentially a clotheshorse. If vague identity is impossible, then that means there is an exact moment where the substantial change occurs.

Organisms don't suffer either problem. Consider van Inwagen's example of a snake being used as a hammock. It hasn't undergone a substantial change and ceased to be an organism. Since what renders something a part of the snake and what determines the proper functions of its parts is not up to our decision, our subsequent choices and uses of the snake don't affect the snake's identity. (Of course, we can destroy it by crushing or burning it, but we can't change what kind of thing it is just by acting or thinking towards it differently as we can with physically unchanged Found Art or Found Artifacts.) There is no doubt that the snake has merely acquired a contingent property. It has become a hammock in the sense you can become someone's new chauffeur without ceasing to be what you are essentially. So with organisms, unlike artifacts, there will be no such problem of distinguishing substantial change from mere contingent change and no dilemma of accepting either vague identity or positing a sharp break between substances. This provides further reason for downplaying the ontological status of artifacts vis a vis organisms.

I have a deep-seated intuition that genuine entities are not at the mercy of the whims of their makers. Rather than accept that a decision made from one's armchair can bring something into existence, I think it is metaphysically preferable to deny that any sculptures or other artifacts have ever been made. We should instead maintain that sculpting and whittling involves only moving existing parts of the earth about and not creating any new substances. Such an ontological demotion of artifacts may seem more plausible when the alleged entities are compared to organisms which don't suffer any parallel dilemmas. Imagine an organism being made in a lab by a team of scientists. They may still be smoothing away an unattractive curve of the nose or adding bulk to the biceps, but if certain metabolic processes are taking place, then the entity is alive and it exists, whatever its makers may think. Whether an addition or rearrangement of matter would bring an organism into existence, or be just a modification to an already

existing entity, or constitute the replacement of an existing organism by a new organism, is not up to the choice of its makers as it was in the case with statues. Our decisions, intentions and judgments don't have such God-like powers. The explanation of why organisms avoid the problems plaguing artifacts is that they have the power within themselves to determine which things are parts and which are no longer constituents, and the onset and cessation of this internal power indicates the organism's coming into and going out of existence.

Section IV. Artifacts and the Problem of Intentional Overdetermination

The relation between an artifact and its maker's intentions is held to be an essential property of the artifact.¹³ It is intentions that distinguish a block of marble which has a humanoid shape due to the erosion of the canyon wall from a marble sculpture whose qualitatively identical shape is a result of a sculptor's deliberate handiwork. Intentions also distinguish which of two identical twins is being represented and honored by a statue. However, it is such intentions that prevent the believer in artifacts from presenting a tenable ontology. To see this, imagine that the production of an anvil and a physically identical barn doorstep can be initiated by pushing either of two buttons on opposite ends of a huge piece of machinery. When an anvil is desired, the button at one end of the machine is pushed. When a barn doorstep is sought, the button at the other end is pushed. Both buttons set the same pieces of machinery into motion and the results are objects of equal size, shape, weight and material. Now consider what happens when we have a case of overdetermination. Both buttons unwittingly are pushed at the same time by workers with different intentions. Have the workers used the machine to make two entities where there appears to be just one? I would expect that most people are reluctant to regard anvils and barn doorstops as spatially coincident but distinct artifacts. Have the workers then made just one object? If so, which one have they made, an anvil or doorstep? It can't be claimed the answer to the question of which

¹³For claims that artifacts have relational and historical properties essentially, see Lynne Baker. *Persons and Objects*, (Cambridge University Press, 2000) p. 39 and Dipert, Op. cit. p. 15.

artifact is made is to be given by later use because the product may sit unused on a shelf for years and surely it is some kind of artifact then. Perhaps the resulting artifact is neither a barn doorstep nor an anvil. Has nothing been made? People can, at times, fail to make what they intend. However, such scenarios usually involve mistakes in assembly or a flawed blueprint perfectly followed. Neither type of error can easily subsume the double intention case.¹⁴ Maybe the workers have made something like a pull out sofa-bed, one object with two functions. Call this an “anvil-doorstop.”

Before one adopts a sofa-bed type of solution, consider three scenarios. In the first it is used as an anvil in the evening by one person and then as a barn doorstep by another at night. Neither are aware of the other’s use and the item is returned to the same storage area after its night and day usage. Let’s assume that there would be one object with two functions. But which of the two functions would determine its essence? Is it essentially an anvil and used contingently as a barn doorstep or vice versa? Or does it have essentially two functions? But if it were essentially a dual-function artifact, then if it ceases to function as an anvil because of the loss of too much size and hardness it would also cease to be a doorstep even though the person every night was still using it effectively as a doorstep. That person would be quite surprised to be informed that the artifact had ceased to exist and merely the remains of it were holding the barn door open.

The second scenario involves the anvil or the barn doorstep being made by hand. Imagine that the production is a two man job and, unbeknownst to each other, their intentions are split - one thinks he is making an anvil, the other thinks he is making a barn doorstep. Conversing with each during the process, they then discover the difference during construction and reach an agreement to make just the anvil. Does it matter when this agreement is reached? Could it even occur just before the finished touches are put on the creations? And if they silently change their minds a number of times during the

¹⁴Perhaps if a choice had to be made, it is more like the blueprint failure. We can treat the object to be produced as something to be specified in a good blueprint. When there is a misunderstanding about what is being made, it is as if there was a faulty blueprint.

construction, has the item then gone from being a half finished anvil-doorstop to just a half finished barn doorstop without undergoing any physical change? And can their creation go from a one-half finished anvil-doorstop to just a three-fourths finished doorstop and then a four-fifths finished anvil? How many times was there a change of what it was a partially constructed item of? And if they were in agreement from the start, when is it too late for one's intention to change (say) the anvil to an anvil/doorstop? Is there a time in the construction where its identity is set? But any cutoff point at which it becomes too late for a change in what is made will seem terribly arbitrary. And it couldn't be vague whether it was an anvil or a doorstop that had been built because identity can't be vague.

The third scenario involves a variation of the anvil/doorstop story. Imagine two sculptors molding the same lump of clay, each believing that they were together making a statue of the same person. However, each was making a sculpture of a different identical twin, and completely unaware of the other twin's existence. The solution analogous to the sofa-bed remedy resorted to earlier is to say that they made one statue which represents both twins, just as a war memorial can honor more than one veteran. But now consider that they disagree over when the lump of clay has come to represent the respective subjects. One thinks the sculpture is done and anything else is an addition while the other thinks the sculpture is incomplete. (Perhaps they are making representations of the twins at different ages.) We can't combine the two judgements as we did when deciding that the split anvil/doorstop intentions would be treated like a sofa-bed, and treat the statue as we do a war memorial which honors more than one person. The problem here is that the two judgments are contradictory. The same artwork can't exist and not exist, or be complete and incomplete. If the sculptors have been making two spatially coincident statues, then this contradiction can be avoided. But such a move would be bad news for those who accept Locke's thesis that there can't be two spatially coincident entities of the same kind.

Some readers may claim that if the sculptors are each on a "different page" and their intentions differ then they haven't made anything. And they would say the same for (apparent)

functional artifacts if their co-creators' intentions were divergent. However, I don't think my thesis is weakened by that approach since the same problems of split intentions reemerge with Found Art and Found Artifacts. Imagine that the product of divergent intentions was later treated as Found Art. It would be odd to say that such things *then* taken as sculptures weren't such (that is, hadn't become such.) So it might be that readers would say the alleged makers had not made anything earlier because of their divergent intentions but the lumps they unsuccessfully worked on were now Found Art. Some people visiting the outdoor "gallery" in a park may be taking the sculpture as one thing which others visiting the gallery as something else. Imagine that over the year the numbers of such people are evenly split though all the visitors in the first six months held one view and then different visitors adhered to the other interpretation for the next six months. Would readers still insist that it wasn't a sculpture because its viewers are in the long run split? I would think most readers would initially treat this as Found Art. But after the first six months passes and a new interpretation emerges amongst the later visitors, then would the initial sculpture remain or cease to exist? Would there arise two things that are spatially coincident or one thing with two functions? Does the original sculpture undergo substantial change and become a new statue - a change that must occur at a precise time on pain of the threat of vague identity? But any precise point seems arbitrary. Thus I contend that many of the problems that I mentioned earlier about the split intentions during the construction reappear during the use even though there wasn't a shared plan that enabled the lump to initially constitute an artwork or functional artifact.

Section V. Artifacts and the Problem of Intentional Overpopulation

My contention is that even in the absence of intentional overdetermination, the defenders of artifacts will have to reluctantly accept a great number of spatially coincident entities of the *same* kind. Since most readers believe that roads can become smaller if parts are damaged and can overlap for a stretch, they are going to have a difficult time denying the existence of spatially coincident roads if the

overlapped parts are the only parts not destroyed by an earthquake. To see the suspect power of intentions that believers in artifacts must advocate, consider that the overlapped parts of the roads were made first and then financial considerations stop the construction of the roads right before they were to diverge. The existence of the mere intention of building overlapping roads that would fork off appears to make it the case that two spatially coincident roads were built. But can intentions really make one stretch of asphalt compose two roads? What if the appropriate people decided to build five overlapping roads that will eventually branch off from each other, but run out of money just when the construction reaches the point where the forking was to occur? It would follow that five spatially coincident roads have been built. The upper limit is the potential of prongs to a fork that can be built. I think we should deny the existence of any objects that depend upon such alleged mental power. However, the reader might think he can provide a less extreme conclusion. He might deny intentions have the power to determine that more than one road was built by insisting that roads can only overlap if their nonoverlapping parts were built first. This historical property is crucial. So two roads can come to completely overlap and become spatially coincident (after the earthquake) only because their construction went in one direction and not the other, the diverging stretches of road built before the merged parts.

There are at least three problems with this position. First, it appears to be a rather ad hoc attempt to avoid an unwanted spatial coincidence. Secondly, it would imply that road construction could never begin with an intersection. What was thought to be an intersection, an overlap of two roads, was really a small distinct road, or at least a stretch of asphalt that was not a part of either road that bounded it. Third, it ignores the role that intentions are usually granted to have in individuating artifacts. Why should the historical property of the later fork matter? Why isn't it enough for intentions of the builders or planners to be decisive? To see this, consider the role intentions play in determining which small stretch of road was built from a downtown courthouse to the outskirts of town. Imagine that a municipality is deciding whether to build either a road from its Courthouse to the park in the northwest part of town, or a road

from the Courthouse to the school in the northeast part of town. Either road would occupy the same first few hundred yards in front of the Courthouse before it veered off in the direction of the park or school. Only one road was built. Even when only the first 100 yards had been built before any veering off, there is held to be a fact about which road had been built. It was the road that had been decided upon by the appropriate authorities - perhaps the planning commission, the council, the construction crew or some combination. Their intentions sufficed to individuate the short road. So the intentions of the builders of the overlapped roads should likewise be decisive regarding which road, as well as how many, had been built. The historical fork shouldn't be necessary to determine which road or how many roads were built.

My position is that we should be suspicious of any alleged objects which are sanctioned by an ontology that accords mere intentions the ontological powers to determine the kind and number of things. This problem isn't like that in first two sections where no causal interactions followed a judgment but the number of things in the world was transformed. Instead, the problem is that the same arrangement of matter will constitute different numbers of the same kind of thing depending upon the intentions preceding it. So there is a change in the world following intentions but the same physical changes and actions compose different numbers of roads depending upon the relevant intentions. It is always illuminating to contrast artifacts with what I consider to be the only genuine composite objects - organisms. Living beings aren't dependent upon intentions of others for their nature or number. Consider a future in which complex organisms could be made in the lab by groups. The lab team could think whatever they want about what kind and how many organisms they have made, but unlike the workers making anvils and barn doorstops, the "cooperating" artists, and the road construction crew, what they have built and how many things they have made would be entirely independent of their intentions. The organism's independence of intention stems from its possession of essential properties that are intrinsic rather than relational. Its persistence is determined by the internal unifying self-maintaining forces that we know as life processes.

Positing the existence of an organism does not bring the threat of it being spatially coincident with another organism while we have seen that accepting the existence of any roads means there can be an explosion of spatially coincident roads. Not only don't organisms have the problems that artifacts do with spatially coincident entities of the *same* kind, but there's no threat of their being co-located with a mass of tissue akin to the way statues are thought to be with lumps of bronze and roads with pieces of asphalt.¹⁵ The reason for this is that many of the parts of organisms are liquid and thus not joined in the way the parts of bronze or asphalt are. A brief sketch of Rosenkrantz and Hoffman's position on what it is for parts to be joined should highlight the difference.¹⁶ Roughly, 1) x and y are joined if there is a relation of dynamic equilibrium between them. That is, the attraction and repulsion forces between x and y are in equilibrium. 2) It is physically possible that x is pulled or pushed in direction d thereby pushing or pulling y in that direction in virtue of the dynamic equilibrium holding between them and vice versa. Water in a liquid state is not joined for its molecules are electronically bonded for only trillions of a second before shifting partners. Since living things are in part liquid, the unity of their parts requires that they be interconnected via some causal connections other than being joined. So there isn't an organism spatially coincident with a lump or piece of tissue in the manner in which an artifact is spatially coincident with joined parts of bronze or asphalt.

PART II. PUZZLING PARTS

Section VI. Puzzles about Part Replacement

How much replacement of a thing's matter is too much for it to survive? It is again revealing that artifacts are confronted with a puzzle that organisms avoid. Part replacement in organisms doesn't

¹⁵ I must admit that there is the problem of the organism and the person being spatially coincident which would have to be overcome by identifying the two and explaining away intuitions in brain transplant cases that they differ as a result of being misled by what matters to us. See Parfit's *Reasons and Persons* (Oxford University Press, 1983) pp. 245-306 and Eric Olson's *The Human Animal: Identity without Psychology* (Oxford University Press, 1997) pp. 42-72 for defenses of the view that it is not identity that matters to us but just the continuation of our psychology. It is certainly worth pointing out that there isn't any even roughly equivalent explanation of how to identify the lump with the statue.

produce any of the confusion evoked by ordinary functioning artifacts as well as artworks and historically significant entities - at least if the organic parts replaced are small and the procedure of total replacement gradual. This difference between organisms and artifacts gives us a further reason for doubting that any plurality of simples can compose any artifacts. Organisms avoid the problems confronting artifacts because they are responsible for uniting and preserving and repairing their parts; they possess the intrinsic power to remove parts that no longer contribute to the whole; and they can assimilate new parts in order to stave off entropy.

A human being can not only undergo total part replacement but can radically change its size and shape. This is evident in the transformation undergone in the development of a fetus into an adult. Few doubt it is the same organism. But can a desk survive the replacement of all of its parts? There isn't a consensus. It is even less obvious that artworks, monuments and historically significant buildings can undergo complete part replacement. Even those who believe that functional artifacts like boats and cars can undergo complete part replacement still might hesitate to assert that a rowboat can persist through a change into a sailboat twice its original size or that a Chevy station wagon could survive total part replacement and end up with the engine and body of a BMW convertible roadster.¹⁷ What legitimate ontological principles could explain or justify these different reactions to puzzles of part replacement? My suspicion is that it is not the "tracking" of genuine ontological principles and properties, but only customs and habits of mind that explain the reluctance of many people to embrace full part replacement. We just don't encounter desks undergoing a series of repairs that involve gradually changing all of their parts. And it is also habituation that explains why we are a little more confident that boats and cars can undergo full part replacement - at least when the new parts are the same type as those removed. It is a more common practice to replace greater proportions of cars and boats in the normal repair and

¹⁶ Rosenkrantz and Hoffman. *Op. cit.* pp. 80-90.

¹⁷ See Judith Thomson's "The Statue and the Clay." *Nous*. 32:2 (1998).

maintenance process. Why does it seem less obvious that statues and artworks and historical monuments can undergo complete part replacement? Again, it is because we are not accustomed to their being so transformed. Efforts are made to preserve them and to avoid interacting with them in ways that cause deterioration.

Some philosophers may try to distinguish the degree of part replacement that artifacts of use can undergo from that of artworks and historical monuments on the grounds that the aesthetic value or historical importance of the latter two prevent total turnover of parts. This may not be as promising a strategy as they think. A historically significant item (Theseus's Boat now in a museum) may once have been functional and can become so again. And "Found Art" may have been previously functional, while artworks can become functional. If two standards of part replacement are accepted, one will have to understand such changes in use as indicating substantial change (i.e., a change that destroys one substance and creates another), or admit that one and the same entity will, at various times, have different relations to its parts because of changes in the attitudes of those people who interact with it.

Another reason for maintaining that organisms deserve to be granted a different ontological status than artifacts is that they are not plagued by a biological variant of the Ship of Theseus. All the matter that the reader possessed ten years ago has been eliminated by exhaling, excreting, perspiring, urinating, passing gas, etc. Suppose that some exploited graduate student has had the unpleasant job of tracking this matter and has now reassembled it in the exact form it had a decade ago. There is no difficulty of determining which being is the reader because we have a much better idea of what it is to be a part of an organism than part of a boat. No one will seriously think that you are the younger-looking individual that has just appeared. We know what it is to be a part of an organism, it is to be caught up in certain physiological processes. Thus there is no doubt which is the original organism. It is the entity whose life processes have not been interrupted, whose parts are where they are as a result of immanent causation.

Since organisms have a compositional unity that artifacts lack, they don't present us with the same puzzles of part replacement and reassembly. The organism solves the problem of individuation for us. Its very nature is such that it determines what is a part and what is not any longer a part of the functional unit. Part replacement in an artifact is not as cut and dry. No clear compositional principles govern ships as being caught up in the life processes regulate biological composition. And the problem with ships (and other artifacts) isn't the standard vagueness of the boundary part, i.e., is the piece of dirt part of the mountain or the valley. Instead, it is that we don't really know what it is for something to be part of the same ship. Because ships don't have the power within them to acquire, maintain and eliminate parts, they are dependent upon us, and we are at a loss to give an account of our *unusual* behavior where instead of discarding worn out planks, or disassembling the boat in a manner in which we disassemble and store other artifacts, we both replace the ship's parts and then reassemble the removed parts, resulting in two contemporaneous ships.

It is also worth pointing out that the location and upper limit of matter that can be removed from an organism without destroying it is determinable in a way that it isn't the case with artifacts because of the latter's dependence upon human intentions. With artifacts it isn't clear how much and which parts a boat or clock can lose and still exist. Boats and clocks aren't thought to cease to exist when they cease to function - dry dock crews try to repair unseaworthy but still existing boats while jewelers fix nonfunctioning but still existing watches. So we are left wondering how much structure can be lost before the artifact goes out of existence. I suspect the judgments of most are just based on visual similarity to the functioning clock and ship. But an organism is essentially alive and so how much and from where parts can be lost is determined by whether the organism will continue to live in the absence of those parts.¹⁸

¹⁸ For a defense of organisms being essentially alive and therefore the impossibility of their persisting as corpses see David Hershenov's "Are Dead Bodies a Problem for the Biological Approach to Identity?" *Mind* 2005 and Olson's *The Human Animal*, op. cit. pp. 152-53 and "Animalism and the Corpse Problem"

My explanation of these mereological difficulties is that ships and other artifacts are really conventional entities. This does not mean that their persistence conditions are a result of our conventions, rather, it is that we have conventions to act as if there really were things with such persistence conditions. The composite objects that we thought to exist, really don't. "Car," "clock" and "ship" are plural referring terms like "The Andersons" and "The Boys." They don't pick out and refer to one object. Any discussion of ships and cars is really a discussion of simples arranged "car-wise" or "clock-wise" or "ship-wise." Readers should react as skeptically to the claim that a car or ship is a genuine individual object as they would to the claim that the shoe, hat, and empty pizza box on my apartment floor compose an object.

Section VII. Indeterminate Identity and the Essentiality of Origins

Some philosophers claim that we human beings didn't need to possess all of the matter that we actually did possess at our origins. Only some of it was essential. We could have come into existence with somewhat different matter. While a good number of philosophers have such essentialist intuitions, they don't provide much guidance in resolving the question of how much matter was essential. They just leave matters at we needed some of our original matter, not saying how much. For all they do say, it could be necessary that we needed to have at our origins as little as 1% or as much as 99% of the matter that we did have at our actual origins. A few philosophers, Nathan Salmon is one, argue that there has to be an *exact* minimal amount or we will be faced with the incoherence of indeterminate identity.¹⁹ There couldn't be a world in which it was truly indeterminate, i.e., no fact of the matter, whether you or another individual were identical to the embryo there with some but not all of the matter that you possessed at your actual world origins. Indeterminate identity is not an option. Yet Salmon's position here is in one unwelcome aspect no different from that of the epistemicist. There must be a point at which the change

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¹⁹Salmon. *Reference and Essence*. Op. cit.

of a single additional atom would result in a different being existing, but Salmon does not give us any guidance where that would be. Readers may be as unsatisfied with this as they are with the epistemicist's insistence that our cognitive abilities can never inform us where amidst the vagueness is the real boundary. Classical logic forces upon us the thought that there must be such a dividing line, but metaphysics and epistemology don't provide any help in determining it. Of course, the logic in Salmon's attack on vague identity, an appeal to the indiscernibility of identicals, is more compelling than the epistemicist's insistence upon bivalence holding everywhere.

I will propose a plausible criterion for determining how much of our original matter is essential. This principled solution is *only* available to organisms. The believers in other composite entities like artifacts, can't avail themselves of the criterion. I think this difference is suggestive. Rather than just accept that artifacts have a vagueness that organisms lack, this absence of a principled way to determine how much matter is essential, provides us with additional reason to be skeptical that there really are artifacts.

I am assuming here that we didn't need all of our original matter.²⁰ Only some of it was essential. We could have come into existence with somewhat different matter. This view doesn't rest upon an intuition of which nothing else can be said. A very plausible criterion can be provided for how much of our matter is essential. What one has to do is to imagine worlds in which there is an embryo possessing only some of the matter that composed you as an embryo in the actual world (W_1). If the embryo could live without the missing matter, then that much matter is not essential to a living being.²¹ Since you are essentially a living being, you could have existed as an embryo without that inessential matter. There

²⁰Arguments for why some of our original matter is essential can be found in Forbes, Graham "Origins and Identity," *Philosophical Studies* 37 1980 and McGinn, Colin "On the Necessity of Origin," *Journal of Philosophy* 73. 1976.

²¹ It will also depend upon where the matter is taken so there is no single percentage that indicates any more matter taken would doom the possible entity. If the matter is taken from the nucleus it would have more effect than a similar quantity taken from less important organelles or cytoplasm.

seems little reason to doubt that the diminished embryo would be you in W_2 since it has enough of your original matter to support life. And if the W_1 embryo that you emerged from could exist despite the absence of certain matter in W_2 , then the same embryo could exist in a third world (W_3) in which there occurs the replacement of only the inessential matter missing in the W_2 . The embryo in W_3 would be identical to the embryo in W_1 as long as the rest of the W_2 embryo's matter reappears in the W_3 embryo.

There are only two kinds of scenarios in which replacement matter would compose a different individual than in the original world. One scenario involves too much of the matter that composed the original embryo being taken away and the result being the remaining matter doesn't compose a living entity in that world (W_4). If the matter missing in W_4 was replaced in W_5 by matter other than that which composed the original embryo in the actual world W_1 , then the resulting living embryo in W_5 would not be identical to the embryo of W_1 . There would just be too little overlap of essential matter.

The other scenario where replacement matter could prevent the original entity from existing in the possible world in question involves vague existence. Imagine a world (W_N) in which because so much of W_1 embryo's matter is missing (and not replaced) that the best judgment is that of vague existence in W_N . In other words, so much vital matter is missing in W_N that there is no fact of the matter whether the few W_1 atoms existing in W_N are arranged in a way that composes something definitely alive or definitely not alive. Next consider the addition of the new matter in (W_{N+1}) for the matter of the W_1 embryo missing from the indeterminate scenario in W_N . There clearly is a living embryo on W_{N+1} . This would be enough to differentiate what had been a case in which it was indeterminate whether the original embryo existed in such a world to a scenario in which the scales have been tipped against the original embryo existing in W_{N+1} . The new matter is sufficient for life and thus turns out to be decisive. The reader shouldn't doubt that a slight difference in quantity of original matter can be decisive in questions of existence and transworld survival. Although an object may fission out of existence in one world when split exactly in half, it is tempting to say that in another possible world, the original object survives as the

larger of the resulting divisions. Just imagine that in the second world the fission resulted in one of the two resulting entities possessing 51% of the original matter. So when we have a world with a case of borderline existence, too much matter having been taken away to make it a clear case of survival of the embryo from the actual world, then if the missing matter is replaced but not with matter possessed by the embryo in the actual world, even a small amount of such an additional matter would be enough to ensure that neither the vague existence of the nearby world W_N would be repeated nor would the embryo from the original world be present.

It is important to notice that there aren't any analogous principles to govern transworld artifact identity. What would be the equivalent amongst artifacts to taking too much matter from the actual world organism for it to live in the possible world in question? And what amongst artifacts would be analogous to the world in which it was vague whether an organism existed? The natural response would be to substitute artifact function where organic function (life processes) had been in the above scenarios. A chair in our actual world would exist in another possible world if enough actual world matter remained for it to function; it would be vague whether the chair existed in another world if not enough matter remained for the chair to clearly serve its function; and in another world there would be a different chair if too much of the matter of the actual world chair had been taken away and replaced. The problem with this account is that the capacity of the chair to function is a relational property, not an intrinsic property like being alive. Whether the chair still functions depends upon the reference group for whom it is to provide a seat. The chair may still function for slim people but not obese people who attempt to sit in it. It could support the former, but would collapse under the weight of the latter. It won't help to appeal to the average size person to determine whether the chair still exists. This would lead to bizarre scenarios in which the chair didn't exist because the matter of the original chair couldn't support the average person, but still could be sat in by little people. That would be a rather useful nonexistent chair!

And if one tries to abandon function as the criterion for whether the chair still exists, one is left

with the vagueness of having artifacts that don't function yet still exist and no principled way to determine how much of the original (or intended) structure of a nonfunctioning artifact is necessary for there to be a still existing artifact. We would just have to say at some point that too much nonfunctioning structure is lost for even a nonfunctioning chair to exist. It is hopeless to seek a principled basis for this judgement. This is not like the case of vague organic existence in which we have a principle for persistence (life functions) and just can't precisely determine the extension. We are lacking such a principle in the case of the nonfunctioning artifact. We don't have anything equivalent to saying too much matter was taken away for the organism to be alive and thus it no longer exists; Instead, we just have to say too much matter was taken away from the chair and thus it no longer exists. With artifacts like the chair, there isn't a further property that serves as a criterion for existence - unless one thinks the "structure" of the chair can serve in the role that "functioning" did in the other organic scenarios. But structure seems not to be specific enough and is equally applicable for every kind of thing. In fact, it is a not very useful truism. The loss of too much structure of anything will destroy it! If the organism loses too much structure, it ceases to exist. How much structure? Enough to prevent the functioning of life processes. There is no equivalent function-based answer to the question of the "How much structure can an artifact lose?"

I think it is telling that when we discuss the things that I claimed do not exist, i.e., the atoms (metaphysical simples) in question don't compose any artifacts, we find ourselves confronting unprincipled vagueness. That is, we find ourselves without a functional principle or criterion of which the extension is indeterminate. My suspicion is that the "results" obtained from applying the loss of too much artifact structure pseudo-criterion are just a quirk of our perceptual faculty and not the tracking of anything ontologically significant. We assert that the artifact no longer exists just because what remains doesn't look enough like the earlier object. So, once again, readers can see that the functional unity that is essential to an organism enables living beings to avoid problems that plague artifacts which lack such

internal organization and which are considered to have relational properties essentially. My suggestion is that readers construe this “unprincipled” structural vagueness as indicating not that certain objects in the world (artifacts) are susceptible to more vagueness than others (organisms), but rather that the world doesn’t possess any of the former.