IN DEFENSE OF ORDINARY OBJECTS:

A STUDY IN COMMON SENSE ONTOLOGY

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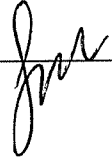Master of Arts

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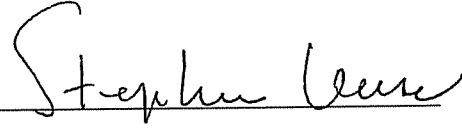by

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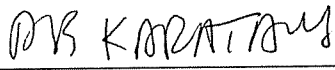
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Thesis Abstract

Nurbay Irmak "In Defense of Ordinary Objects:

A Study in Common Sense Ontology"

In this thesis I defend a common sense view regarding the ontological status of ordinary objects. It is a defense against philosophers who have believed and argued for the idea that the manifest objects of everyday human life are nothing but collections of fundamental particles. I discuss two important arguments against the existence of ordinary objects. First, I present various objections all of which stem from the problem of vagueness and I show that there are many solutions available for a proponent of ordinary objects. According to the other argument that I discuss in my thesis, ordinary objects are causally redundant which gives us a good reason to abandon them from our ontology. As I show in this work there are several reasonable responses to such an argument. One can easily resist it at no great cost and still maintain that objects like tables, vases or computers are causally efficacious.

I believe it is possible to create a non-reductionist ontology which gives a reasonable account not only for scientific activity but also for everyday human life without making any revisions or needing paraphrases in order to understand what folk believe. This thesis is to be seen as a contribution to such an endeavor.

Tez Özeti

Nurbay Irmak "Sıradan Nesnelerin Savunusu:

Sağduyu Ontolojisi İçinde Bir Çalışma"

Bu tez gündelik yaşamın sıradan nesnelerinin ontolojik statüleri hakkında sağduyucu bir görüşün savunusudur. Dolayısıyla bu çalışma sıradan nesnelerin temel parçacıkların toplamından başkaca birşey olmadığına inanan ve bunun için tartışan felsecefilere karşı bir savunmadır. Tezimde bu nesnelere karşı formüle edilmiş iki önemli argümanı ele alıyorum. Bunlardan ilki müphemlik sorununu temel alan çeşitli itirazlar. İkincisi ise gündelik yaşam nesnelerinin nedensel olarak işlevsiz oldukları iddiasına dayanan bir tartışma. Her iki itiraz da böyle nesnelerin indirgenemez gerçekliğin bir parçası olamayacakları ve dolayısıyla ontolojimiz içerisinde yer alamayacakları sonucuna ulaşmakadır. Tezimde de gösterdiğim gibi bu iki argümana karşı verilmiş onlarca yanıt mevcut ve dahası iki itiraz da karşılığında büyük bedellere ödemeden, kolayca karşılanabilir.

İnanıyorum ki sadece bilimsel aktiviteye değil gündelik insan yaşamına ve onun vazgeçilmez parçalarına da metafizik açıdan makul bir açıklama getiren, bunu gündelik dili tercüme etme veya düzeltme ihtiyacı duymadan yapabilen ve indirgemeci olmayan bir ontoloji mümkün. Bu tez böyle bir çabaya küçük bir katkıdır.

Sevgili anneme ve babama

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CHAPTER 1: INTRODUCTION

On Feb 7, 1845 a demented and probably drunken young man threw a statue on a case in which the Portland Vase, one of the most valuable possessions of the British Museum, was being preserved. The vase was from the first century BC and made of Roman cameo glass. After the smashing of this beautiful vase it was pieced together three times because of some thirty missing fragments during the first assemblage and the deterioration of the adhesive material used in piecing the vase together (Hodges, 1989). The young man, William Lloyd, did not say much about why he broke the vase into pieces but he spent some time in jail, not for ruining this magnificent ancient work of art but for breaking the case in which it was preserved since there was apparently no law protecting art works from vandalism in Britain then. This interesting story is appealing not only for a history of art scholar but for a metaphysician as well. Although both are curious about the smashing and re-assemblage of the vase the answers that they are after are not quite the same. For a historian of art, perhaps the question is how accurately the piecing together was accomplished or what happened to those thirty missing fragments that appeared some fifty years after the first assemblage. The metaphysician questions more fundamental aspects of the smashing and bringing together of the pieces, such as "What was the very thing that was, literally speaking, smashed and re-assembled?" or "Did the complete inventory of what there is (or was) in the world change when William Lloyd threw the statue onto the case where the vase was stored?" The problem is not only a matter of counting the population of the world in a complete and correct

manner but also a matter of explicating the genuine nature of artifacts, if any, and the principles, if any, for singling out artifacts like vases, statues, tables or chairs. Therefore, the critical question as far as the metaphysicians are concerned is not whether that particular vase exists or survives the smashing and re-assembling but whether there exists such a kind of thing as artifacts, to which the Portland Vase, too, belongs, and if there are then what are their persistence conditions by virtue of which we can tell whether a particular artifact survives the changes that it has been through or not. A particular case is still important in the sense that it may give us a good grasp of things that are important or essential concerning the questions we have or it may help us to clarify our intuitions about the case at hand or in general. I think our intuitions about the questions that we are dealing with are not only noteworthy but also they serve as supporting and independent evidence for our philosophical claims. Unfortunately, considering the limited space and the narrow scope of my thesis I will not be able to explain the grounds for having such a meta-ontological belief or to defend it against the opponent views. However I will not treat it as a conclusive test for any philosophical thesis. Rather I will take it as a virtue of any philosophical view that is compatible with our intuitions. Since different people, especially different philosophers, have different kinds of intuitions about any given subject, I will treat common sense beliefs as our shared intuitions. However, I am aware that my use of common sense beliefs depends on at least two controversial assumptions, one of which is the idea that there exists such a consistent set of beliefs which is mostly implicit and is revealed in the ways we use our language.[1] The further

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[1] Two things: I am not claiming that all common sense beliefs are consistent with each other rather; I have this half Kantian and half Wittgensteinian idea that the ways we use our language are governed by those beliefs which we do not need to express in our everyday life or in our ordinary language.

assumption is that the ontology that explains our everyday life or gives a metaphysical account for our ordinary beliefs about the world, assuming that such an ontology is possible, is superior to, using Strawson's terminology, any revisionary metaphysics which aims to produce a better structure of reality independently of any folk beliefs about it. (Strawson, 1959, p. 9)

Leaving the meta-ontology behind and returning to the original question, it can be said that many philosophers claim, perhaps disappointing the judge in the trial against William Lloyd, that there are no such things as vases, cases, statues, tables and chairs as commonly believed. Of course these alleged objects are not the only ones. The whole spectrum of artifacts that J.L. Austin originally referred as to "middle-sized dry goods" just does not exist. For those philosophers there is no substantial reason and no plausible argument to show that those objects exist and every reason to believe otherwise. The main aim of my thesis is not to propose a direct argument for the existence of ordinary objects. Rather it is a defense of the objects of everyday life. In that sense, it is an indirect way to support our folk beliefs about the world. The purpose of the thesis would be satisfied if I manage to defeat the main arguments for "believing otherwise". Although they use different concepts to describe their metaphysical approach, my philosophical allies are the ones who are doing common sense ontology. What are the main characteristics of common sense ontology? Roughly speaking, if ontology is a philosophical inquiry on what there is, common sense ontology, having the answer to that question already, is an attempt to give a consistent and reasonable metaphysical account of our everyday world; the

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Secondly, which makes my claim a little bit Kantian, issue is not about the nature of language; those beliefs are about the way the world is: they reveal some facts about the nature of the world.

world as we encounter in our everyday life; the world that includes, say, both ordinary objects and entities of physics; the world among the complete inventory of which there are tables, passports, cats as well as subatomic particles, sound waves and viruses.

There are a wide variety of views concerning the existence and/or persistence conditions of artifacts even among common sense ontologists. There is no unified account of artifact identity which stems from the folk ontologists' meta-ontological agenda. It would, however, not be wrong to say that common sense ontology of artifacts is a non-reductionist account as opposed to reductionist and eliminativist views.[2] A very brief exposition of the former would be something like this: For a non-reductionist account, the vase before William smashed it did really exist. A non-reductionist philosopher takes the records of the case or the report of the incident in the British Museum at its face-value on an ontological basis. That is, the smashing of the vase was the loss of an irreducibly real object. In other words and more generally she takes ordinary language ontologically seriously which in a way leads her to accept that familiar objects of our ordinary life are among the real furniture of the universe. Whereas according to the opponent view,[3] there was not, strictly speaking,

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[2] I am not proposing that these are the only views that are available concerning artifact identity. Actually there are as many views as there are different ontologies.

[3] Though there are different views that oppose the non-reductionist view, most of the time I will take eliminativism as the most important opponent view, especially regarding my discussions on causation. However a couple of words on reductionism would be helpful. The reductionist view also accepts that there are things like tables, vases, or baseballs, but there are also objects like the mereological sum that consists of my left arm, the number seven and Mount Everest. The view is also called mereological universalism or unrestricted mereological composition. For universalism then, necessarily any objects whatsoever compose another object. It is a reductionist view since any object can be reduced into some simples which are nothing but a bunch of space-time points. It is not hard to see why a common sense ontologist is willing to deny universalism. There is no place in folk beliefs for an object that is composed of, let us say, my cat's tail, a bottle of wine and the Great Wall of China. Although it is a challenging project, folk ontology has to find some way to restrict

an object called the Portland Vase which went out of existence when William Lloyd smashed it down.[4] What the young drunken man thought he broke were only the simples that were arranged vasewise. That means the smashing of the alleged vase was only a rearrangement of the simples that had previously been arranged as vasewise. All macroscopic entities, excluding living organisms[5] are eliminated from our ontology in favor of simples. That is why this view is known as eliminativism. Philosophers like Peter van Inwagen, Trenton Merricks, Peter Unger and Roderick Chisholm propose such a view. A typical exposition of the conclusion of that view is something like this: "In this book I shall show that there are no books. Nor are there statues, rocks, tables, stars, or chairs. Indeed I shall argue that there are no inanimate macrophysical objects at all (Merricks, 2001, p.1)." or "There are no ordinary things: no tables, no stones, no planets, and no sousaphones (Unger, 1979, p.141)."

Constitution View

As I said above there is no unified account that can be called the non-reductionist view. At certain points in my thesis, though, I will resist the arguments against ordinary objects by using the theoretical apparatus that the constitution view

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mereological composition or perhaps he should give up mereology altogether. I will discuss this point later on in this chapter.

[4] It seems we have a subsequent question which points to an important problem for a non-reductionist: "If the original vase went out of existence when it was smashed, then what was the thing that came into existence, if it did, when re-assemblage was accomplished successfully?" And furthermore what is the criterion of success in this case? Michael Burke (1994), committing to intermittent existence, has an interesting answer to that question: The very same vase came into existence again.

[5] Living organisms are excluded because most of the eliminativist philosophers believe that there is something special with animate beings which makes them immune to any argument against inanimate composite entities.

provides. That is why the following exposition of the constitution view is necessary for me to do that. The constitution view is one of the most well-known non-reductionist accounts held by many prominent philosophers.[6] One who defends such a view commits herself to two important claims besides the acceptance of the existence of ordinary objects:

(1)   Artifacts or more generally ordinary objects have some persistence conditions that are somehow related to their function and/or their material constitution. For example the Portland Vase would probably survive breaking off one of its handles since we would still call it the Portland Vase even if it has lost one of its handles. Whereas the piece of glass would persist through smashing the vase. That means it would still be the same piece of glass although its form has been changed.

(2)   Constitution is not identity.[7] It is a relation of unity without identity. The object and its constituters are not the same things. Consider again the vase and the glass that it is made of. It seems it is reasonable to claim that they have different persistence conditions. Here is why: The vase wouldn't survive the smashing down while the piece of glass, as I already said, would persist through the smashing. On the other hand, the vase would survive the breaking off of one its handles whereas the piece of glass would not be the same piece if we destroy the handle.[8] Since the glass which

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[6] Such as; Lynne Rudder Baker (2007), Frederick C. Doepke (1982), E.J. Lowe (1983), Kathryn Koslicki (2004), Stephen Yablo (1987), Michael C. Rea (1998), Mark Johnston (1992), Michael B. Burke (1994), David Wiggins (1968).

[7] Identity is used in a strict sense. If a=b then this is necessarily so. Followers of the constitution view deny the relative identity thesis that is defended by, for instance, Peter Geach.

[8] Imagine that we destroy the detached part of the vase by disposing its chemical structure using some chemical composition.

constitutes the vase and the vase itself have different persistence conditions,

or different modal *de re* properties they are not identical, having Leibniz's

Law in mind.

Besides these common grounds the philosophers who defend such a view vary

in their detailed ontological accounts. We need more than a rough sketch of the

theory in order to see the main idea and use it to defend ordinary objects. That is why

I take Lynne Rudder Baker's constitution view in order to present the details of such

an account.

According to Baker the constitution relation is not a mereological relation. That

is, the constitution relation cannot be understood in terms of the relations of parts to

the wholes. In other words, the relation between an ordinary object and its constituter

is not akin to the relation between the whole and its parts. As she keeps maintaining

constituted objects are not identical to any sums. Sums and ordinary objects are

different in many senses. Mereological sums have their parts essentially. That is, a

sum cannot survive losing any of its parts, whereas ordinary objects may change

their parts preserving their identity. Secondly, whenever there are some simples they

automatically compose a sum. On the other hand ordinary objects do not come into

existence whenever we have sums. Third difference is that the relations between

sums and parts are different from the relations between ordinary objects and their

parts. As we have seen before mereological sums have different persistence

conditions than constituted objects. Take our vase and the sum of atoms that

compose it. When William Lloyd breaks the vase into pieces, the Portland Vase no

longer exists, while the sum of atoms still does exist. Once more, the sums and

constituted objects have different persistence conditions and hence different modal

properties (Baker, 2007, pp.181-183). Therefore, ordinary objects do not have mereological parts. However, they do have parts as we understand in our everyday life. Table has parts as legs and a top. A passport has parts as a hard cover, sheets, etc.

Here is another question that comes to mind: Are there objects as sums? Baker thinks she is compelled to accept that there are sums, because the constitution relation holds between two primary kind objects, not between an object and many particles. Consider a driver license. (a) A driver license is constituted by a piece of plastic. (b) A piece of plastic is constituted by a sum of physical particles. In order to say that (b) holds we are forced to accept that there is something like a sum of physical particles. She thinks that since sums are not ontologically significant in the sense that the parts of the sums carry the entire ontological load, the only effect of including them into our ontology is just to increase the number of existing objects. "The Practical Realist would say, If the theory that best explains the everyday world is tidier with the assumption that there are sums, then there are sums (p. 193)."

There is this Aristotelian idea of sorts or kinds that resides in the constitution view. That is, for every object x, we can ask this question: "What most fundamentally is x?" The answer will give us the primary kind of x. Like other philosophers who believe in sorts or kinds, Baker claims that for every object there exists exactly one primary kind that it belongs to like a cat, a vase, a credit card. An object's primary kind is closely related with its persistence conditions. Or rather the persistence conditions of an object depend on its primary kind. An object cannot survive without satisfying its primary kind property. That means objects have their primary kinds essentially (Baker, 2007, p.33).

Not all the kinds are primary kinds. For instance, a child is not a primary kind, because the same person can grow up and thus lose the property of being a child and still be the same person. Therefore a child is not a primary kind, nor a tadpole or kitten. David Wiggins calls them phase sortals. They are phases restricted with certain intervals of time in the entire career of an object. Constitution relation holds only between primary kinds but not between any other kinds like phase sortals. A child does not constitute a person, but a human animal (the biological organism) does since the latter is a primary kind. Baker provides a test for being a primary kind. Let us say that if x has a property of being y, then y is a primary kind if and only if x cannot fail to be a y without ceasing to exist altogether. In other words, at every moment of its existence x always has the property of being a y. Having said all of this, now we can look at what Baker has to say about what the fundamental idea of constitution is.

> Constitution is a relation that things have in virtue of their primary kinds. As I have suggested, when things of certain primary kinds are in certain circumstances, things of new primary kinds, with new kinds of causal powers, come into existence. For example, when a piece of marble is carved into a certain shape by a member of an artworld, a sculptor, a new thing of a new kind – a statue – comes into existence. If a piece of marble constitutes a statue, then the primary kind of the marble statue is statue (Baker, 2007, p.36).

The difference between artifactual primary kinds and other primary kinds is that the nature of artifacts resides in their intended functions. I will not go into the details of her account of artifacts. Instead I will present the important ideas about artifacts and explain a little bit what makes them different from what most of the philosophers prefer to call natural objects like stars, cats and rocks. Along with other kinds of things (institutions like governments, activities like playing baseball, events like a

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football match, actions like surfing in the internet, dispositions like being jealous, etc.) artifacts are dependent on human intentions. They would not exist in a world in which there are no beings with their beliefs, desires, and intentions. That is why Baker calls all these phenomena Intention-Dependent Phenomena or ID phenomena. She contrasts ID phenomena with kinds of things the existence of which do not depend on or require some beings with intentions, desires, beliefs or any other kind of propositional attitudes. Non-ID objects are like natural kinds of things: trees, cats, galaxies and seas, etc. Most of the things we encounter in our everyday life have ID properties as well as Non-ID properties, for instance being a signature and being a mark on paper or being a credit card and being a piece of plastic. Having intentional properties is not enough to be rendered as ID objects. Instead, an ID object has to have those properties as its primary kind. That is to say, in the case of ID objects intentional properties determine the primary kinds that those objects belong to.

We already see that the nature of an artifact is determined by its intended proper function. A proper function is a function for which it is designed to or intended to serve by its producer. She maintains the phrase "intentions of a producer" since sometimes an artifact may fail to serve the functions that it is supposed to do which is a case of malfunction. However it would be wrong to define malfunction only as a failure of the intended function. In human history many scientists tried to build a perpetual motion machine which turned out that it is not physically possible at all. Could we say that these machines suffer from malfunction? We tend to say no.

Therefore we should restrict the term malfunction only to artifacts which have functions that are physically possible to perform (Baker, 2007, pp.55-57).[9]

Before leaving Baker's view it should be noted that unlike metaphysicians from the Aristotelian tradition like David Wiggins (2001), Baker believes that natural kinds are not ontologically superior to artifacts. Some philosophers as we have seen already and will see in subsequent chapters even believe that objects like artifacts do not exist.[10] Baker provides an argument in her book for her claim that "there is no reasonable basis for distinguishing between artifacts and natural objects in a way that renders natural objects as genuine substances and artifacts as ontologically deficient (Baker, 2007, p.59)." I strongly agree with her in the idea that considering their amazing and world changing effects on our lives and on the world itself, "artifacts have as strong a claim to ontological status as natural objects (p.66)."

Arguments against Ordinary Objects

It is noteworthy that common sense ontology is not a popular view among metaphysicians at all. This fact is interesting in the sense that an ontology based on our common beliefs about the world is not common among philosophers. What is popular and dominant in not only contemporary philosophy but also the history of philosophy as well is some sort of revisionary metaphysics. That explains why there are so many arguments against the existence of artifacts. In my thesis I will not be able to cover all of them. What I want to do, instead, is to focus on some strong

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[9] For a detailed account of the conditions of being an artifact see Baker (2007, pp.49-66).

[10] For an Aristotelian version of it see Joshua Hofmann and Gary S. Rosenkrantz, *Substance: Its Nature and Existence*.

objections and deal with them in a deep and comprehensive manner. I will explain and resist two conclusive arguments against ordinary objects. First I will discuss different arguments all of which are motivated by the problem of vagueness. According to the second objection not only artifacts but also any other kinds of composite objects excluding living beings are causally redundant. If such objects exist then there would be wide spread overdetermination.[11] Since there is no overdetermination, there are no such objects as tables, vases or baseballs.

The argument from vagueness is most of the time related to the Sorites paradox.[12] Consider the statue of David. Let us say, we are playing the Sorites Game with God: We annihilate one of the atoms of the statue and after the annihilation we ask Him whether David still exists. For the first 1000 times probably God would say yes but at some point he would say no. That means at some point annihilation of only one atom determines whether David still exists or not. For many philosophers that conclusion is not acceptable. For them there are no sharp cut-off points for the application conditions of empirical concepts like "bald" or "rich". Many treat vagueness as a linguistic phenomenon. That is, there is vagueness in our language or in our thought either because we are ignorant of some facts about the object which causes our hesitation over the use of an allegedly vague concept or it is just that we have not bothered to decide whether that concept applies to that object or not. In that latter sense, vagueness is just a matter of semantic indecision. In either case

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[11] An event e is overdetermined if an object O causes e; O is causally irrelevant to whether the objects $O_1 \ldots O_n$ cause e; and objects $O_1 \ldots O_n$ do cause e.

[12] "Sorites arguments are often used to argue that the very concepts of ordinary objects are self-contradictory, so that nothing can correspond to them. Others argue that no sense can be made of ontological vagueness, and that in consequence there can be no objects corresponding to our vague concepts." (Thomasson, 2007, p.4)

vagueness is not metaphysical. That is why we can sweep away vagueness in our language and thought using some appropriate logical or semantic apparatus. For others the source of vagueness is the world itself. There is vagueness in the world. Therefore no matter how hard we try we cannot get rid of vagueness in our language.

In the next chapter I will discuss those approaches to the nature of vagueness and different solutions to the problems that stem from vague concepts. However I will discuss them in their relations with the existence of ordinary objects. As we will see opponents of ordinary objects like Peter Unger use the argument from vagueness to claim that if such objects exist they would cause serious contradictions. The argument goes as follows. Think of our game with God. Assume that the statue consists of many atoms. After the removal of only one atom from its surface it is reasonable to say that David still exists. If we apply the process finitely many times, we are forced to accept that David exists even in the situation where there exist no atoms at all. To escape from such a blatant contradiction Unger suggests that we should eliminate composite substances from our ontology. We will see whether his argument holds or not in the next chapter but for now I should make it clear that my strategy in the next chapter will be to provide different solutions to the problem of vagueness. By explicating such solutions and applying them to Unger's argument, I claim that the arguments from vagueness including sorites style arguments do not constitute a threat to the existence of ordinary objects.

In the third chapter I will discuss the argument according to which if there are macrophysical inanimate objects they are causally redundant. All the causal work that is done by a macrophysical object is actually done by the collective causal power of the particles that occupy the same spatial temporal region that the object occupies.

That is, we can understand the alleged causal activities of a macrophysical object as the causal work of the simplest parts that are acting in concert. Whatever is done by the macro objects can be accounted for by the collective activities of simple microphysical parts. The strategy of the eliminativist philosophers is to put these arguments together with the metaphysical principle that is called Alexander's Dictum: "to be real is to have causal powers." It is a reasonable principle and common sense ontologists want to preserve it, too. However, the argument goes, if we accept that there are ordinary objects then we commit ourselves to the existence of objects that have no causal powers. Because all the causal work that is allegedly done by them, say a baseball's breaking a window, is actually done by virtue of some simples being arranged baseballwise. A baseball has no actual causal powers. Hence it does not exist, and neither do any other macroscopic composite objects. The very idea of ordinary objects is inconsistent: If they existed, they would have causal powers (by Alexander's Dictum), but they do not have causal powers (by the overdetermination argument). To put it differently, if there were such objects as tables, chairs, baseballs, then they have and do not have causal powers. Hence there are no macroscopic physical objects (van Inwagen, 1990; Merricks, 2001).

My defense basically consists of some reasonable responses that have already appeared in the literature. The responses diverge into two main groups. According to the first group of philosophers although there is no widespread overdetermination, the case that is presented by the eliminativists –macro objects as overdeterminers of events- does not constitute a case of a real overdetermination. Other philosophers claim that there is no harm done by accepting widespread overdetermination. If

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macro and micro causation present a case of overdetermination then it just proves that overdetermination is systematic and it is everywhere (Sider, 2003).

In addition to the arguments that have already found their places in recent metaphysical disputes, I will provide an argument with which, I believe, without committing widespread overdetermination and any controversial metaphysical principles the overdetermination argument can be resisted. Roughly speaking, I argue that there is a kind of distribution of causal work between macro objects and micro parts: Microphysical parts cause micro events; macro objects cause macro events. For example, atoms that constitute the baseball cause the scattering of the window atoms, whereas the baseball causes the shattering of the window. Both the baseball and its constitutive atoms have causal powers, they all are causally efficacious, none of them is causally redundant. Furthermore, since every event is caused by a single event, the apparent overdetermination vanishes.

My thesis as whole is a defense of an ontology which includes in it everyday objects of human life. I believe that if it is possible to build up a non-reductionist ontology which gives a reasonable account not only for scientific activity but also for everyday human life without making any revisions or needing paraphrases in order to understand what folk believe, one should take that chance and start working on that project. What I intend to do in this humble work is to contribute to such an endeavor.

CHAPTER 2: VAGUENESS AND ORDINARY OBJECTS

The idea of vagueness has many different philosophical implications. Some take it as an ontological problem which also has a linguistic counterpart; others treat it as a problem in logic and still others conceive it as a semantic problem. Although the huge literature on vagueness has concentrated intensely on logic and semantics, it is very important for any kind of defense of common sense ontology since all these discussions have serious consequences about the existence of middle sized composite objects. Many philosophers have been using the argument from vagueness to refute the existence of ordinary objects. Among them, Peter Unger is probably the most well-known for his sorites-style argument against ordinary objects. According to him, commitment to ordinary objects leads to a blatant contradiction, which forces us to reject them as a part of our ontology. His argument goes as follows:

1. There is at least one stone.

2. For anything there may be, if it is a stone, then it consists of many atoms but a finite number.

3. For anything there may be, if it is a stone (which consists of many atoms but a finite number), then the net removal of one atom, or only a few, in a way which is most innocuous and favorable, will not mean the difference as to whether there is a stone in the situation (Unger, 1979, p. 120).

If you apply the proposition (3) finitely many times, so that there exist no atoms at all, you still have to accept that there exists a stone. However this contradicts with the second proposition. For Unger in order to avoid the inconsistency, one has to deny that there is a stone since believing otherwise is just the same as believing a conceptual or a metaphysical miracle. It would be a conceptual miracle since removing a few atoms from the outside of a stone suddenly makes the stone vanished. To put it differently, with this kind of vagueness and commitment to stones or tables, we are forced to draw a sharp line for application or nonapplication conditions of our concepts which we do not seem to have such sharp divisions. In order to avoid the problem, making it physically impossible to remove an atom in a certain stage could be an illusion of a metaphysical miracle (p126).

It is trivial to apply the argument for any kind of ordinary objects like tables and chairs, but the story changes when it comes to living beings. As a reductionist philosopher, Unger is not alone in treating animate beings differently. According to Peter van Inwagen too, although composite objects like tables and chairs do not exist, living organisms do exist due to the governing principle of their existence: Life (van Inwagen, 1990). As we will see in the next chapter, for Trenton Merricks arguments against ordinary inanimate objects do not apply to living organisms like human beings (Merricks, 2001). Before dealing with any kind of arguments from vagueness one needs to see the different senses of vagueness which appear in the writings of different philosophers so that s/he has a better chance to locate where the particular problem or the confusion is rooted and hence where one should search for the solution to that very problem. In order to do that I need to forget about vagueness as

an argument against ordinary objects for a while and do my best to understand the nature of vagueness.

Nature of Vagueness

For Bertrand Russell language is infected by vagueness and not only certain words or set of words like nouns and/or adjectives are vague but the whole language is vague. Russell does not attribute vagueness to the world, for him vagueness and precision are alike in that they can belong to only a representation like language (Russell, 1999).

Before going any further let me explain what these philosophers mean by vague concepts by giving a classical example. The term 'bald' is vague since, roughly speaking, it has borderline cases where we cannot decide whether the term applies or not. What do we mean by borderline cases? Well, there are unfortunate cases in which it is obvious that a man is bald (assume he has no hair at all), or cases where a man is not bald. Now, between these two obvious cases there are some men, whom we talk about where it seems neither true nor false to say that they are bald or they are not bald. It is important for the aforementioned reason to notice that vagueness in this example is different from the ones that Russell provides in his article. Typical examples that Russell uses like a smudged photograph which might represent different men depend on the idea that "there is less vagueness in the near appearance than in the distant one (p. 67)." Hence, when you look closer or, speaking in more general manner, when you find out more facts about your representation,

vagueness disappears. Unlike Russell, I, agreeing with many other philosophers, do not think that his examples are examples of real vagueness or, better, I, at least, will not be dealing with that kind of vagueness in my thesis. Consider the borderline cases for the vague concept 'bald' in the above example. Vagueness in question has nothing to do with our ignorance of the relevant facts about the man.[13] Nothing further we learn about the number or the distribution of his hair will enable us to decide whether he is bald or not. Moreover, in most cases looking closer will make us see that terms that we use to explain the facts of the matter are vague themselves. For example, when we look at a hair with a microscope, we feel no longer as confident as before to individuate it as a single hair.

Although many philosophers disagree with Russell claiming that vagueness of certain concepts (mostly empirical concepts like 'bald', 'red', 'thin', etc.) in our language can best be explained by vagueness in the world, the standard view today, though it has many differences, is Russellian in essence: The reality that our concepts apply to is not itself vague. That is to say vagueness is a linguistic problem or it is a matter of thought.

It would not be wrong to label this kind of theories as the Linguistic Theories of Vagueness. According to the Linguistic Theory our concepts can be vague but objects, properties or relations cannot. That is to say, not all the words of a language are vague but, as we said before, the words whose extensions have borderline cases are vague: For example, the copula, the quantifiers or the identity sign is not vague,

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[13] Assume that a man who represents a borderline case of baldness has exactly x number of hairs. Then, the facts that I am talking about are the ones excluding the facts like, if any, "It is determinate that a man having an x of number of hairs is bald." I will return to this matter when I am dealing with epistemic solutions to the problem of vagueness.

but most of the adjectives, predicates or adverbs are. Consider the predicate 'is bald.'

I think, *pace* van Inwagen, the term may be vague for two reasons. First, there is

such a property *being bald* which has a precise extension, committing to the sharp

cut-off extensions of words, that is, for instance, a man who has a half million hairs

or less is bald. However, we do not know the exact number of hairs that one should

have in order to be bald or not bald; or we have not bothered yet to determine which

number should draw the line. The second, and for van Inwagen the only explanation

for the vagueness of the predicate 'is bald' is that there is no such real property as

being bald. There may be properties like *having a million hairs in one's head*, or

having such and such distribution of hairs but not *being bald.* We decide to apply the

predicate 'is bald' according to the instantiations of properties of this kind; the

properties that "are the only competitors there are for the position supposedly

occupied by the property" *being bald* (van Inwagen, 1990, p.231). Then, facts of the

matter would be in such a way that (1) we are compelled to apply the predicate 'is

bald', (2) we are compelled not to apply it, (3) we hesitate over using it. These

possibilities give us all we need to understand the relations between *being bald* and

properties of objects. Therefore, vagueness becomes an issue when the facts about an

object, which determine the application and nonapplication conditions of the terms,

leave us in doubt whether to apply the term or not for the object in question.

For David Lewis, a prominent defender of some sort of Linguistic Theory,

vagueness is a matter of semantic indecision:

> The only intelligible account of vagueness locates it in our thought and
> language. The reason it's vague where the outback begins is not that there's this
> thing, the outback, with imprecise borders; rather there are many things, with
> different borders, and nobody has been fool enough to try to enforce a choice

of one of them as the official referent of the word `outback.' Vagueness is
semantic indecision. (Lewis, 1986, p.213)

There are many reasons to deny metaphysical vagueness, the view according to

which vagueness resides in the world, and to handle the vague language as if it is just

another problem in logic or semantics. One of those reasons might be that the

Linguistic Theory is plausible and comfortable in many senses. It is comfortable in a

sense that it makes it possible to preserve the truth of logical principles like the law

of excluded middle; either p or not p. It seems if there is vagueness in the world

itself, then it would be quite hard to save the law of excluded middle. Consider that if

I am a borderline case for the concept 'bald', then it seems that the proposition

"Either I am bald or I am not" turns out not to be true which violates the law of the

excluded middle. Hence, many philosophers who have serious concerns for saving

the classical logical truths have treated vagueness only as a linguistic matter.

Timothy Williamson is one of them:

> The most obvious argument for the epistemic view of vagueness has so far not
> been mentioned. The epistemic view involves no revision of classical logic and
> semantics; its rivals do involve such revisions. (Williamson, 1992, p.279)

For them reality, apart from our language and language users, is precise. There are

still others who agree with them in their conclusions but for different reasons. For

this latter group of philosophers, roughly speaking, reality is neither vague nor

precise; what is vague or precise are the terms of our language.

The further discussion on the nature of vagueness requires an examination of

proposed solutions to the problem. However, it is not my intention to cover all the

suggested answers in formal logic and semantics in detail. Rather, I will limit myself

to derive some preliminary conclusions from the ongoing dispute for the ontological status of ordinary objects.

Proposed Answers to the Problem of Vagueness

To defend ordinary objects against arguments motivated from the problem of vagueness, like Peter Unger's sorites style argument, as Amie Thomasson says one only needs to show that there are some plausible ways to refute those arguments (Thomasson, 2007, p. 88). Fortunately there are many such solutions offered in the literature that help us to deal with the objections that stem from the problem of vagueness.

Solutions to the problem diverge mainly into two categories due to their understanding of the nature of vagueness. The most popular way of dealing with the problem of vagueness is, as we mentioned before, to treat it as a linguistic problem or a matter of thought. Epistemicism and supervaluation are two influential approaches that explain vagueness as a linguistic phenomenon in a way that preserves the truth of the law of excluded middle and other logical truths.

According to epistemicism there are sharp cut-off points in nature; however we do not know exactly where the line is drawn. Returning to our example of baldness, there is a number x such that, if a person possesses x hairs or fewer, then it is definitely true that he is bald and if s/he has x+1 hairs then he is definitely not bald. There are no borderline cases, but this does not mean that we do not hesitate over applying the concept 'bald' for some people. Our hesitation comes from our

ignorance of those cut-off points in reality. Thus, even if we are in no position to find out whether a vague sentence is true or false, it is, in fact, either true or false. Hence there is no threat to the law of excluded middle.[14]

How does epistemicism solve the sorites style arguments against vagueness? Well, consider Unger's formulation of the argument once more. If the epistemic view is true, then premise (3) is to be false, and hence the argument is not sound. The reasoning is obvious; defenders of epistemicism like Timothy Williamson, *pace* Unger, think that there are sharp cut-off points in reality, yet we are ignorant of them. There is a line in those finite series of removals after which the utterance of "There is a stone" is false. However, we do not know where the line is; it is epistemically inaccessible to us or, in other words, we may not be able to find out the truth values of all the utterances after each and every removal. If the epistemic view is correct, then we are not compelled by the sorites style arguments to deny that there are such things as stones, tables or coffee pots.

Supervaluation has a different path to solve the problem without threatening the excluded middle. Baldness again: There are people who are definitely bald (maybe a hundred hairs?), and there are people who are definitely not bald (more than a million maybe?) and there still other who are neither definitely bald nor not bald (half a million perhaps?). Supervaluation theories sharpen the predicate 'is bald' considering it in a way that a line may be drawn for each and every number of hairs where it is neither definitely true nor definitely false that a person with that number of hairs is bald. Then, each borderline case constitutes a cut-off point for *being bald*. Sharpening the concept bald by assigning a line for each and every borderline case is

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[14] For more on the epistemic view see Williamson (2004).

called precisification. With precisification all the borderline cases are eliminated, since each sentence would be either true or false according to that precisification. That means there will be as many precisifications as there are borderline cases.

Consider me as being a borderline case for *being bald*. Then, the vague sentence "I am bald" will be true on certain precisifications and false in others. That is the case for each vague sentence; on each precisification they will be either true or false relative to that precisification. Yet being true *simpliciter* is another thing; if a proposition is true for all precisifications then it is true and false if it is false for all legitimate precisifications. The former propositions are called 'supertrue' and the latters are called 'superfalse'. If a proposition is neither supertrue nor superfalse then it has no truth value. Thus, since "I am bald" is true for some precisifications and false for others, it lacks truth value. One can see the virtue of supervaluation theory when s/he searches for the truth value of a sentence "I am bald or I am not bald." Contrary to the proposition "I am bald", "I am bald or I am not bald" is true for all the precisifications and hence it is supertrue. It is supertrue because for any precisification I will turn out to be either bald or not bald which makes the proposition "I am bald or I am not bald" true for all precisification. If supervaluationism is true, together with bivalence, all other logical truths are preserved.[15]

The solution to the sorites arguments that supervaluationist accounts of vagueness provide is a bit more complicated than the solutions that the epistemic view provides. If a proposition "There is a stone" is true on all of the admissible precisifications, then it is supertrue, if it is false according to each such

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[15] For more on supervaluation see Lewis (1986, p.244) and Fine (1975).

precisifications then it is superfalse. If it is true on some precisifications and false in others, then it is neither true nor false. That means, the borderline claims about the stone lack truth value. However, it is supertrue that on any legitimate precisification there is some line according to which a removal of one atom or a few will determine the truth of a claim about the stone. Although it is not true that there is a *particular* boundary that draws the line between existence and nonexistence of a stone for all precisifications, still it is true, true *simpliciter*, that there is some and therefore, premise (3) is false.

Supervaluation theory solves the sorites paradox and it does not try to sweep away vagueness from our ordinary language and further it handles the vague language in a way that it preserves the classical logical truths. As Baker says "The effect of supervaluation is to acknowledge vague language but to render it irrelevant to logic (Baker, 2007, p.123)."

There is, however, a problem with the given account. If supervaluation is true then there are a number of vague claims utterances of which are neither true nor false since different precisifications assign different truth values to them. If, however, that number is precise, which is to say that there is a fixed and precise number of admissible precisifications, then there is a sharp transition from the sentences with truth values to the ones which lack truth value, or, more clearly, a sharp transition from supertrue claims to not-supertrue ones. In order to avoid the resurrection of the paradox in a different level, a supervaluationist should concede that it is also vague whether a given precisification is admissible or not: "To avoid sharp boundaries here, one must also accept that it is a vague matter what counts as a legitimate precisification (Thomasson, 2007, p.96)."

Both epistemicism and supervaluationism see vagueness as a matter of

language, as I said before. There is another way to handle vagueness which does not

necessarily need to treat it as a mere linguistic phenomenon. According to this view,

there are truth value gaps, which is to say that there are some sentences which are

neither true nor false but indefinite. Therefore, there are more than two truth values.

The third one is actually not a truth value but a truth value gap.[16] The law of

excluded middle is not necessarily true and neither are the other classical logical

truths. The most important implication of this new semantics for my concerns is that

the propositions for the borderline cases are neither true nor false but they are

indefinite. Therefore, there are many cases in which the truth of the claim "There is a

stone" is indefinite. Tye suggests that the sorites paradoxes do not constitute a real

problem for his theory. What does lie behind his confidence? Consider premise (3)

once more:

> (3)   For anything there may be, if it is a stone (which consists of many atoms
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> but a finite number), then the net removal of one atom, or only a few, in a
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> way which is most innocuous and favorable, will not mean the difference
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> as to whether there is a stone in the situation.

With the theory at hand, we understand that there may be a situation in which if x is

an item with n atoms, then "x is a stone" may have an indefinite truth value.

Similarly, we can imagine successive situations in which claims about both an item

with n atoms and an item with $n-1$ atoms are neither true nor false, that is indefinite.

If we can imagine such a case, then we should acknowledge that the truth value of

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[16] This theory comes with a new semantics, and a new logic. Details of such semantics and logic can
be found in Tye (1994) and van Inwagen (1990).

the conditional in premise (3) is indefinite since both the antecedent and the

consequence of the conditional have indefinite truth values.[17] The rationale behind

this idea is that "if there is even one case where "x is a stone" and "(x minus one

atom) is a stone" are both indefinite, the conditional is indefinite, and the universally

quantified statement (3) is indefinite (Thomasson, 2007, p. 97)." If the indeterminist

solution is true, then Unger's argument against the existence of ordinary objects fails

since premise (3) is indefinite.

One might object to the above account carrying the discussion into the meta-

linguistic level. The objection actually is very much like aforementioned argument

against the supervaluationist theory. Consider again our example of baldness. Let us

imagine a set of claims in the form of "A man with n hairs is bald" and let n ranges

from 0 to 1,000,000. Call these sentences M_0, M_1, …, $M_{1000000}$. The sorites

sequence starts with true sentences, then follows indefinite ones and finally there are

false sentences. It can be inferred from what Tye has told us so far that there is some

sentence M_k such that while M_k is true, M_{k+1} is not true, or better say, it is indefinite.

It seems the problem with the sharp boundaries strikes again.[18]

Tye defends his theory by committing higher order vagueness. Since the

object language is vague, so are the higher level languages that are based on it. So,

the claim that "For some k, there is a sentence M_k such that M_k is true and M_{k+1} is not

true" is neither true nor false, but it is indefinite. However that is not because Tye

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[17] I do not claim that this interpretation is beyond controversy. Since we cannot preserve the most of
the logical truths including bivalence in three-valued logic, it seems to me that it is possible to come
up with different truth values for such conditionals.

[18] Philosophers writing on this problem are well aware of the reemergence of sorites style arguments
in different levels of language: "I do not suggest that this simple observation puts an end to the lure of
reasoning, which, like a virus, will tend to evolve a resistant strain. Must there not be an outer limit to
the things which it is mandatory to apply "red", and a first member of the series with respect to which
we licence to withhold? The answer is "No: 'mandatory', too, is boundaryless"…" Sainsbury (1990).

believes that it is true that there are some statements "M_k is true" is indefinite. No. "M_k is true" is true if M_k is true and it is false if M_k is false or indefinite. What is it that makes the above claim indefinite then? That is because it is indefinite whether "M_k is true" is indefinite or not.

> My view on the truth value predicates is that they are vaguely vague: there simply is no determinate fact of the matter about whether the properties they express have or could have any borderline instances. So, it is indefinite whether there are any sentences that are neither true nor false nor indefinite (Tye, 1994, p. 290)

It seems preserving vagueness all the way up is the only way to save his theory. However "Is it not an *ad hoc* maneuver?" one might ask. The answer is, I think, no, since it is reasonable to take vagueness as a vague matter. As J.L. Austin remarks in *Sense and Sensibilia* 'vague' is itself vague. For philosophers like Tye and Baker according to whom vagueness resides in the world, this is the only natural response, I suppose. As Thomasson puts it "if there is genuine boundarylessness at the object level for the reasons we have outlined, we must accept that there is boundarylessness all the way up through layers of metalanguage (Thomasson, 2007, p.98)."

Metaphysical Vagueness

 Although there are other philosophers who commit themselves to some sort of metaphysical vagueness, I will mainly explicate Baker's view on the issue. That is not only because I limit myself to the constitution view but also I see her account of vagueness clear and strong enough. Baker gives two arguments for metaphysical vagueness. The first one goes as follows. If vagueness is only a semantic indecision

then we would be able to eliminate it if we want to.[19] However, she claims, not all vagueness can be eliminated. Consider any line that we draw for eliminating vagueness for the term 'bald' or any admissible precisification for a given borderline case of baldness. In order to eliminate vagueness we come up with propositions like "A man with n hairs on his head is bald" that introduce further vague concepts like 'hair' or 'head', or 'man'. Let us take 'hair' as a vague concept. Is it possible to eliminate vagueness in that term and come up with precise boundaries for application conditions for it? If we take questions like "Is a broken follicle hair?" or "Where does hair end and beard begin?" seriously, which we should, it seems we only push vagueness further but do not eliminate it.[20] If we cannot eliminate vagueness then vagueness is not only a semantic indecision. We cannot isolate vagueness from the world.

Her second argument applies both to epistemicist and supervaluationist views of vagueness. According to it, if processes or events do not have precise beginnings or ends then there is vagueness in the world. Having no precise beginning or end just means that there is no precise instant after which it definitely exists or fails to exist independently of our concepts. Consider life as an example of an event which has a vague beginning and end. As van Inwagen points out there is no mathematical instant at which or after which the activity of cells constitute a life (van Inwagen, 1990, p. 238). Is it really possible to find an exact instant in which a human being dies? Is it the exact moment when the heart stops beating? No. Since even if we know what it

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[19] The argument doesn't hold for epistemicists since they don't think that we can eliminate vagueness from our language even if we want to but most supervaluationist accounts seem to have that attitude.

[20] Not only the number of hairs but their distribution is crucial for the application conditions for the predicate *being bald*.

means exactly for a heart to stop beating, a human heart can stop but then it can start beating again with the help of electroshock or perhaps by natural reasons. Is it the time when brain dies? How about the deep coma? Is a person in deep coma dead? One tends to think otherwise. Could that instant be the time that doctors call the time of death? Even if we assume that doctors are very accurate in their diagnoses, can they be as precise as we want them to be? I mean can they really tell us the exact instant of death, not in hours, minutes and seconds but possible smallest instant?

It is possible to find more examples of natural processes that have vague beginnings more examples in astronomy and biology. [21] For Baker astronomers and biologists take their domain of study to be natural processes, independently of our concepts. That is, they would still occur even if we and our concepts did not exist. For example take the sun. For astronomers there are times that the sun definitely does not exist and times that it definitely does but there are also times in which it is neither true nor false to say that the sun exists.

Baker concludes, since there are natural processes with vague beginnings, independently of our concepts there is vagueness in the world. But in which way is the world vague, or what kinds of things are vague? Baker's answer is twofold. There are vague objects due to their temporally and spatially indeterminate boundaries. Furthermore the constitution relation itself is vague. We can understand this second kind of vagueness in two ways. First, it may be indeterminate if some things (or putative constituters) constitute anything at time t. Second, in cases where it is definite that an object is constituted, it may be indeterminate what microphysical

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[21] Actually it wouldn't be wrong to claim that everything that comes into existence by natural process has a vague beginning and a vague ending.

constituter constitutes it at *t* (Baker, 2007, p.127). Before getting into a detailed discussion about the kinds of vagueness it is necessary to point out that for Baker all kinds of vagueness can be treated as vagueness of state of affairs. That is, if an object has a property at time t, then there exists some state of affairs that is that object's having that property at t. Any state of affairs constitutes a borderline case if and only if it is vague whether it obtains or fails to obtain at *t*. This formulation will help Baker deal with prominent arguments against identity as a vague relation. I will delay discussing the problem of vague identity until I give a sensible constitutionist picture for the nature of vagueness.

Every ordinary object has vague spatial boundaries. Think of a cat. Is a certain hair on her body among the constituents of the cat? Or consider a jacket. Can we say that a tiny fiber on the surface is among the things that help make that jacket up? Or consider your house, your car. It seems it is reasonable to say that there are so many sums of particles that constitute a good candidate for being your cat, your house, or your jacket. Then, is not it the case that they have vague spatial boundaries? Baker provides a more formal and clear expression for the spatial vagueness:

> Any primary kind, F, whose instances are in the everyday world, has
> instances that exist at t such that there is some spatial place l, that is definitely
> within the region occupied by the F at t, and there is some other spatial place
> l', that is neither definitely within the region occupied by the F at t nor
> definitely outside the region occupied by the F at t. So, it is indeterminate
> whether the F exists at l' at t or not (Baker, 2007, p.129).

It is important to note that the kind of vagueness here we are talking about, namely spatial vagueness, is different from the idea of vagueness that sorites paradoxes are built on. When we think of objects as having vague spatial boundaries, we know that

they are objects that definitely exist: It is not indeterminate that the cat in question exists. It certainly does. What is not certain is exactly what spatial region it occupies. Whereas, in sorites style arguments we have borderline cases where it is indeterminate whether such an animal exists or fails to exist.

Think of an artisan who is making a wooden table. Before he finishes working on the surface and the legs it is definite that there exists no table. After he combines the legs and the top we definitely have a table. But if we consider him in the process of making a table, is there a precise moment after which a table comes into existence? Baker's response to that question is no. That is, between the times that the table definitely does not exist and that it definitely exists, there is some time through which we can say that neither the table exists nor it fails to exist. For example, after the artisan combines the top with the first pair of legs, can we say that the table exists? I tend to say no. However if you ask me whether it fails to exist, I again tend to give the same answer: No. For Baker, and I believe for many other people, the table's coming into existence is a temporally vague process: It does not have precise temporal boundaries. The conclusion from this example is that every middle sized object, including living organisms, is temporally vague. By temporally vague, I mean there is a time interval for any object that definitely exists, during which that object neither definitely exists nor fails to exist. Coming into existence is a gradual and vague process. There is no precise instant that an object starts existing or likewise goes out of existence.

One of the most important things about temporal and spatial vagueness is that "indeterminate existence is parasitic on determinate existence (p.131)." That means, if our artisan stops in the middle of making the table (and never finishes it), then we

cannot talk about the table or its vague temporal and spatial boundaries. Only objects that definitely exist have vague temporal and spatial boundaries. It is also important in the sense that what we refer to when we say that it is indeterminate whether something exists is the thing that definitely exists. That is, when we say it is indeterminate whether the table exists some time during the assemblage of the parts, what we refer to by the term 'table' is the table that exists after the artisan finishes his work (Baker, 2007).

As the last source of vagueness in the world, Baker introduces the vagueness of the constitution relation. Constitution is vague in two ways: it may be vague whether an aggregate constitutes an object at t, or it may be vague if an aggregate constitutes anything at all at t. One can infer from that exposition that Baker does not accept universalism, that is, any mereological sum constitutes an object. Although she does not believe in universalism *per se* she believes that any aggregate is a mereological sum or fusion. As we have seen before constitution is not identity. That means 'is' of composition is different from 'is' of identity, and as David Wiggins claims many alleged paradoxes and philosophical problems come from the confusion of the 'is' of material composition and the 'is' of identity (Wiggins, 1968, p.94). A table is constituted by an aggregate of atoms but it is not identical to that mereological sum. The identity condition for aggregates is obvious. An aggregate A is identical to aggregate B if and only if they contain exactly the same particles. There is nothing vague about the identity of aggregates. They are precise in that sense. Nevertheless, the objects that they may constitute are vague. "Every constituted object is vague and is constituted, perhaps vaguely, by a nonvague microphysical aggregate (Baker, 2007, p.133)."

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The vagueness of the constitution relation, Baker claims, explains why we have temporal and spatial vagueness in the world. I will follow her examples to present her reasoning. Consider two slightly different mountain-shaped things. Let us say, one is different from the other, having a little longer foothill. Call them "Everest" and "Schmeverest". Now the question is:

Q: Is Everest identical to Schmeverest?

The possible answers to Q lead to serious philosophical problems. If the answer is yes, then the violation of Leibniz's Law is inescapable. That is, if they are the same mountains then how is it possible that one has a different property than the other? And the difference here is not trivial: It is not that they have different names but they have different foothills. If one answers Q with saying no, then we have to explain what is so special about the referent of "Everest" that a slight spatial change in it makes it a different mountain or better mountain-shaped object; a sorites style puzzle with which we have to deal.

The constitution view seems to give a plausible answer to this question. But before that we need some clarification. First, it is not the case that there are many mountain-like candidates or overlapping mountains in those slightly different spatial regions and we have to choose one of them as the referent of the term 'Everest' when we are dealing with questions like Q above. The mountain Everest (not the mountain-shaped aggregate but the object mountain) has vague spatial boundaries. What "Everest" refers to is not indeterminate. Rather "Everest" determinately refers to a spatial region which has imprecise boundaries. [22] It is not that the aggregate has

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[22] It is important to note that what is vague here is the mountain itself; or to put it differently what the concept Everest is the concept of.

vague spatial boundaries; [23] the source of vagueness is the availability of many good candidates for being the aggregate that constitutes Mount Everest. "What is vague in reality is which of the many candidate aggregates is the constituter of (spatially vague) Everest (p.134)."

Returning to our question Q, the constitution view provides good answers for two different senses that Q may bring with it. The answer is yes, if Q is asked in the context of ordinary language, since "Everest" refers to a mountain which has vague boundaries. "Schmeverest" refers to the same vague object as "Everest" does. However this does not mean that the only possible answer to Q is yes. If one means aggregates when s/he uses the words "Everest" and "Schmeverest", the answer is obviously no: "Everest" and "Schmeverest" are definitely not the same aggregates. If we confuse the mountain with what constitutes it, then we have the alleged puzzle.

In the same way we can solve the well-known case of the cat(s) Tib/Tibbles. The story goes as follows. Consider a cat named Tibbles sits on a mat. Now suppose that someone who believes in undetached proper parts distinguished a different cat Tib; Tibbles minus his tail. After an unfortunate accident after which Tibbles loses his tail, we have this unpalatable consequence that although they are different cats, Tib and Tibbles occupy exactly the same space. Therefore, the question is: Is it possible for two different cats to occupy exactly the same space at the same time? One can avoid the problem with denying undetached proper parts like van Inwagen does. The way the constitution view solves the problem is more straightforward. The

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[23] One may think that in order for aggregates to be spatially precise one has to admit that fundamental particles (atoms, quarks or what you have) have precise spatial boundaries. I couldn't find anything that may be related to this idea in Baker's works, but I think there would be no harm for a constitutionist to believe that atoms have imprecise spatial boundaries. Quite the contrary, what would be more pleasing for a defender of metaphysical vagueness than the very claim that even the fundamental constituters are spatially vague.

crucial question for the puzzle is "Is the tail part of Tibbles?"According to the constitution view, the answer to that question does not have to do with the identity of the cat. It is about what constitutes the cat at a certain time. Tib is not a cat. It is a made-up concept that stands for a certain part of the aggregate that constitutes Tibbles before the accident. Tibbles is not identical to any aggregate since unlike cats aggregates are precise.

Before leaving this chapter, I would like to discuss a prominent argument against vague objects provided by Gareth Evans. According to Evans the claim that there are vague objects is incoherent. He argues that a belief in vague objects most of the time comes with an idea that for some statements there is a truth value gap. Further, he claims, identity statements are among those which may have truth value gaps. The main and simple idea behind his proof is as follows. Suppose that it is indeterminate whether x is identical with y. Since everything is identical to itself we can say that it is determinate that x = x. That means x has a property which y lacks: Being identical to x. By the Leibniz Law if x = y then, y has every property that x has. However, as we have seen y lacks a property which x acquires: Being identical to x. Thus it is determinate that x is not identical to y. This is, however, contradicting with our primary assumption: It is indeterminate whether x = y (Evans, 1978, p.317). The question here, before presenting Baker's response, is: Does the incoherency threaten only metaphysical vagueness or is it an argument against linguistic vagueness as well? As David Lewis sees it the alleged incoherency presented in Evans' proof, if it is correct, is also a denial of vagueness understood as semantic

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indeterminacy.[24] For Lewis the conclusion of the argument is plainly false; there are vague identity statements in language. For example: "Princeton = Princeton Borough". (It is unsettled whether the name "Princeton" denotes just the Borough, the Borough plus the surrounding Township, or one of countless somewhat larger regions.) (Lewis, 1988, p.318)" If it is obvious that there are vague identity statements then, Lewis suggests, Evans's point could not be to show that there are not any such sentences. Instead what Evans has in mind, Lewis proposes, is to show that the proof that he gives is fallacious and only the "vagueness-in-describing view" can diagnose the fallacy. The vague objects view has to face the argument as it stands and, it seems, there is no way to refute it. However, Lewis adds, for the argument to be a threat against the vague objects view, metaphysical vagueness has to be combined with the idea that vague identity statements have indeterminate truth value (Lewis, 1988, p.319). I will not discuss in details Lewis's point and the fallacy he sees in Evans' proof. Instead I will present Baker's view on this issue which, I think, is immune to Evans' argument as Lewis acknowledges in his last claim above.

Remember the question that Baker discusses again:

Q: Is Everest identical to Schmeverest?

Since a mountain is a spatially vague object and assuming that Schmeverest is a genuine object which refers to a mountain, then it is determinate that Everest is identical to Schmeverest. Nothing is vague in that identity relation. Objects sharing all other properties with each other, having exactly the same spatial vagueness, or fuzziness, are identical. Following Williamson, Baker claims that the thesis that

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[24] Terence Parsons has an argument on similar lines. "Evans' argument is not just an argument against "vague objects"; it is an argument against vagueness (indeterminacy) itself (Parsons, 1987, p.284)."

objects are vague does not force us to accept vague identity (Baker, 2007, p.131).

One might ask what does one really mean when s/he says having exactly the same fuzzy boundaries. Williamson gives a similar example to that of Baker's: Europe has fuzzy spatial boundaries. That is, there are some points that are neither determinately in Europe, nor determinately not in it. Consider a precise spatial region in Europe which includes all points that are determinately in Europe and excludes all points that are not determinately in it, and call this closed curve Europe*. According to the constitution view, the truth value of the sentence "Europe is identical to Europe*" is not indeterminate. Further it is not a case of vague identity. Then, does the identity relation hold between them? But before that a question has to be answered; what is the identity condition for objects with fuzzy boundaries? There may be other and perhaps better suggestions, but Williamson provides a simple identity condition. "x = y only if every point is determinately in x just in case it is determinately in y, and determinately not in x just in case it is determinately not in y (Williamson, 1994, p.255)." Does the relation between Europe and Europe* satisfy this condition? Obviously not! Consider some points that are neither determinately in Europe nor determinately not in it. Those points will be either determinately in Europe* or determinately not in it. Therefore, it is determinately not the case that Europe is identical to Europe*.

The identity relation is not the only possible source of vagueness in the world as Evans thinks it to be. Although they do not hold the same theories both Williamson (an epistemicist philosopher) and Baker (a philosopher who believes in ontic vagueness) endorse that there are other relations that are or may be blamed for vagueness such as parthood and constitution.

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Conclusion

In accordance with the modest attitude of this work what I hope to accomplish in this chapter is to show that arguments from vagueness do not constitute a serious threat to the existence of ordinary objects. Any sorites style arguments against such objects can be resisted at no great cost. A defender of common sense ontology has all the logical and semantic apparatus to defeat those arguments. Indeed, while doing that she does not need to commit herself to any specific kind of theory about vagueness. I've intended to show here that she can defend any kind of linguistic theory just as she can believe in metaphysical vagueness. The important thing is that all the difficulties coming from vagueness do not create any special problem for the proponents of ordinary objects than the reductionist philosophers who reject any inanimate macroscopic object.

CHAPTER 3: IS THE OVERDETERMINATION ARGUMENT SOUND?

Trenton Merricks in his book *Objects and Persons* (2001) gives many arguments

against the existence of ordinary objects like tables and chairs. For him all

macroscopic entities besides conscious beings like human organisms can be

eliminated in favor of simples. That is why his view is called eliminativism.[25]

What are the things that folk falsely believe in, then? Those things are simples

arranged so that if objects like statues existed, the simples' being arranged as such

would compose a statue (Merricks, 2001, pp.4-5). That is not to say, however, that a

statue is nothing but the atoms arranged statuewise, understood to mean that the

single statue is identical with many atoms that compose it.[26] Composition is not

identity. Indeed there is nothing there, contrary to common belief about the existence

of the statue, to be identical with the simples arranged statuewise. We can

comfortably eliminate those objects since the simples believed to compose them do

the entire job they are supposed to do. The idea underlying the claim is indeed the

gist of the argument that has central importance in Merricks's denial of the existence

of macroscopica.[27] That is his argument for the causal redundancy of macroscopica.

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[25] What Merricks suggests is very close to van Inwagen's eliminativist views on artifacts (1990), but with different arguments against folk ontology. Moreover Merricks doesn't offer a systematic paraphrasing in order to make common sense beliefs come out true. Instead he thinks that those beliefs are "nearly as good as true." For the related discussion see Merricks (2001, pp.162-190).

[26] Let us grant with Merricks and many other philosophers as well that identity is a kind of relation that can be one-one and many-many but not one-many.

[27] Hereafter, I will use 'macroscopica' to refer to all the macroscopic entities excluding human organisms and any other conscious beings which Merricks believes there to be.

I will first explicate his argument in some detail and then I will present the objections against each of its premises. Almost all of the objections have appeared in the literature except the one that I provide at the end of the paper. I will conclude that Merricks's argument from the (alleged) causal redundancy of macroscopica can be resisted at no great cost and thus there is still a hope for ordinary objects in the face of the eliminativists' attacks on their existence.

The argument Merricks introduces in his book is referred to as the Overdetermination Argument. The argument goes as follows:

    (1)   An object, O, is causally irrelevant to whether the xs, the simples, that constitute it, acting in concert, cause an event, e.
    (2) e is caused by the xs, acting in concert.
    (3) e is not overdetermined.
    (4)   Therefore, if O exists, it does not cause e (Merricks, 2001, p.56).

'Causal irrelevance' in premise (1) needs an explanation. O and the xs are objects. O is constituted by the xs. O is causally irrelevant to whether the xs, acting in concert, cause an event e only if all of the following hold together for O, the xs and e: O is not one of the xs, O is not a partial cause of e among the xs, O does not cause any of the xs to cause e, and conversely O is not caused by any of the xs to cause e (p.58).

Consider the example that Merricks uses throughout his discussion: A baseball is causally irrelevant to whether the simples that constitute the baseball, acting in concert, cause the shattering of the window, since (i) the baseball is not one of the atoms that constitute it, (ii) the baseball is not a partial cause of the shattering of the window together with its constitutive atoms, (iii) the baseball does not cause any of

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its atoms to cause the shattering of the window and finally (iv) the baseball is not

caused by any of its atoms to cause the shattering of the window.

'Overdetermination' in premise (3) must be explained and the premise itself

must be justified. Although there are serious differences with it the

Overdetermination Argument is pretty much like the Exclusion Argument in

philosophy of mind (Kim, 1993). The Exclusion Argument is put forward to show

that mental events or properties are causally redundant since everything that happens

can be accounted for by the physical events and properties. The mental (as distinct

from the physical) is not causally efficacious given that the physical is a sufficient

cause for any event (Bennett, 2008, p.1). In this sense the Exclusion Argument and

the Overdetermination Argument have certain similarities. Overdetermination means

something like this:

> O   An event e is overdetermined if an object O causes e; O is
> causally irrelevant to whether the objects $O_1 \ldots O_n$ cause e; and objects $O_1 \ldots O_n$
> do cause e.[28] [29]

If there are composite objects, like baseballs, statues or tables, then every event that

they cause is overdetermined since the simples that constitute those objects also

cause any event that the composite objects cause. That is to say that there is

widespread overdetermination. But Merricks claims that there is no systematic

overdetermination. Hence one of the causes is redundant. However even if we have

accepted the whole argument, the argument as it stands is not enough to prove

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[28] Many philosophers prefer to speak of overdetermination of events by events rather than by objects. See Schaffer (2003). Merricks prefers objects over events. This is not by accident of course; what Merricks wants to mark as redundant is not an event which is created by an object but the object itself.

[29] A well known example of overdetermination is this: "When two vandals throw rocks that simultaneously shatter the window, there are three actual distinct events: c_1, the throwing of one rock; c_2, the throwing of the other rock; and e, the shattering of the window. Here c_1 and c_2 are redundant causes of e. And since both c_1 and c_2 are causally on par with respect to e (neither rock arrives first, or knocks the other off course, etc.), c_1 and c_2 are overdetermining causes of e" (Schaffer, 2003, p.23).

Merricks's point; we still need a reason why Merricks prefers to eliminate macrocausation rather than microcausation. We need a reason since the conclusion of the argument is only that "*if* the atoms shattered the window, *then* the baseball did not" (Merricks, 2001, p.63). According to Merricks, in any case, there are some things that the atoms cause for which the alleged baseball cannot give an account. He sees an asymmetry there. The asymmetry, for him, is between the effects that atoms cause and the effects that the baseball causes. Anything that the alleged baseball causes can be accounted for by the work that the atoms which constitute the baseball do but not *vice versa* (*ibid.*). What he has in mind when he speaks of the effects that the atoms which constitute the baseball cause is, I suppose, microscopic events that an individual atom or a group of atoms causes, such as a scattering of an atom which is among the constituents of the window. Merricks does not say much about the priority of microcausation over macrocausation. Yet he thinks that given the asymmetry, we have enough reason to choose microcausation over macrocausation.[30]

Thus far, the Overdetermination Argument has shown us that if the macroscopica exist then they are causally redundant. That is to say macroscopic objects, if they exist, cause nothing since whatever we think they cause is actually caused by the simples arranged in certain ways. The argument concludes if there were such inanimate objects as composite ordinary objects or macroscopic objects or middle-sized dry goods, they would have caused something. But as the Overdetermination Argument shows they cause nothing. Hence they do not exist.

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[30] Although one still may question the way Merricks puts the issue, I think what he suggests is intuitively strong enough to believe.

The link between having causal powers and being real is provided by the principle often called the Alexander's Dictum (also known as the Eleatic Principle).[31] According to this principle, to be real is to have causal powers. As Merricks claims, the principle itself is controversial but for him his use of it is not since he is not deploying it in an unrestricted sense. Instead he only states that for material objects, to be real is to have causal powers. He finds this not as controversial as the application of the principle against other kinds of beings such as moral properties or Platonic Forms.

There is another reason, though it may be related to the previous one, to eliminate the macroscopic objects given the soundness of the Overdetermination Argument. As Sider points out this reason comes from epistemic considerations, namely from the principle of parsimony. As we discussed above if all the effects of macroscopic objects are already accounted for by the simples that constitute them then there is no need for postulating such entities (Sider, 2003, p.723). To express the principle in a different way, it dictates preferring fewer things that do the same explanatory work to many (Thomasson, 2007, p.154). Returning to our own case, microscopica do all the explanatory work that is supposed to be done and hence, by the principle of parsimony, there is no need for positing redundant entities in our ontology like baseballs, statues, tables and chairs. This is a relatively weaker claim against the existence of the macroscopica but still compelling for a defender of ordinary objects, since it forces one to agree that if there were such objects, they would be totally redundant. However as Merricks repeatedly states, his argument

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[31] "Everything that we postulate to exist should make some sort of contribution to the causal/nomic order of the world" (Armstrong, 2004, p.37).

does better than that. His argument shows that positing macroscopic objects leads to a contradiction: if there were such objects then they would both have causal powers, via Alexander's Dictum, and not have causal powers, by the Overdetermination Argument. Hence macroscopic objects do not exist (Thomasson, 2007, pp.9-10).

That concludes my explication of Merricks's Overdetermination Argument. In what follows I will be giving some objections to the argument and, hopefully, showing that, though the argument is valid, it is not sound. Each premise of the Overdetermination Argument faces a number of objections. I will not be able to present all of them in the scope of the thesis. Yet it is crucial and sufficient for the aim of this thesis to show that the argument is unsound, and one may claim this by arguing against any of its premises without any great cost.

Problems Concerning the Causal Principle

As we have seen already, for Merricks the baseball is causally irrelevant to whether its constituting atoms, acting in concert, cause the shattering of the window. Premise (1), objections to which this part of the paper is reserved, states this claim. Further, he explicates what he understands by being causally irrelevant. Consider the example that he gives to explain and support those claims.

> Suppose some individuals, such as the members of an unruly mob, cause the vandalism of a park. Suppose also that the vandalism of the park is not overdetermined. And finally, suppose that I am 'causally irrelevant' to whether those members cause the vandalism.
> … Causal irrelevancy, as I shall understand it, amounts to exactly four things. First, I am not myself one of the members. Second, I am not a 'partial cause' of the vandalism alongside the members; that is, it is not the case that only when combined with my additional causal contribution do the members cause the

vandalism. Third, I am not an intermediate in a causal chain between the members and the vandalism; that is, the members do not cause the vandalism by causing me to do something by which I, more proximately, cause the vandalism. And, finally, I do not cause any of the members to cause the vandalism (Merricks, 2001, p.59).

It strikes me that in this case it is clear and quite plausible that the mob and I are causally irrelevant to whether the members of the mob, acting in concert, cause the vandalism in the park. Nevertheless, the same irrelevancy claim loses its charm when one tells the same story for a baseball, its constituent atoms and the shattering of a window. The reason for that, as Amie Thomasson argues (Thomasson, 2007, p.13), is that there is an implicit assumption made in the causal principle, which must be something like the independence of the objects from one another. In the first case, where the mob causes the vandalism in the park, the mob and I are completely independent and wholly separate so that one can plausibly conclude that I do not cause the vandalism. However the similarity between the vandalism case and the shattering of the window fails, since, claims Thomasson, the baseball is not causally irrelevant to whether the atoms arranged baseballwise cause the shattering of the window. For her, in such cases where the independence condition fails, the claim of causal redundancy of one or the other does not follow as Merricks argues.[32] Thus even if we accept premise (3) and deny widespread overdetermination, we can still insist on believing in the existence of baseballs and the like. That is because the (alleged) overdetermination of shattering of the window by the baseball and the atoms arranged baseballwise is not real overdetermination as exemplified by two

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[32] "In Jaegwon Kim's original formulation of the problem of explanatory exclusion, he stated it as the principle that "two or more *complete and independent* explanations of the same event or phenomenon cannot coexist" (1993, p.250, italics are mine). But this independence seems to be lacking between the causal claims of the baseball and the atoms arranged baseballwise" (Thomasson, 2007, p.15).

rocks' simultaneously causing the shattering of the window, each a sufficient cause of the shattering.

Though this objection has its initial appeal, we need an account of how we sort things out as dependent or independent. In other words, we need an account by virtue of which we can show the difference between overdetermination of an event by wholly separate entities (like the two rocks case) and alleged overdetermination of an event by a composite object and its constituents. There are different ways to do so. For instance one may defend a view that, granted that O and the *x*s are material objects, if an object O is constituted by the *x*s then O depends on the *x*s and furthermore the causal relations that O and the *x*s get into are relevant to each other. Moreover, one may urge that we can see the difference between the two cases if we look at the counterfactuals that we use for those cases. First the two rocks case: If the first rock had not been thrown, the window would still have been shattered by the second rock and *vice versa*. But in the latter case if the baseball had not hit the window, the window would not have shattered, because the atoms arranged baseballwise would not have hit the window. Also if the atoms arranged baseballwise had not hit the window, the window would not have shattered, because the baseball is constituted by those atoms and if the atoms did not hit, neither did the baseball. As one can easily notice these two kinds of counterfactuals give us different truth values which may provide a way to differentiate the real overdetermination cases from pseudo ones.

Another one is given by Thomasson (2007, pp.15-20). The account that she gives relies on the notions of 'analytic entailment' and 'analytic truth.' Despite

Quine's and his followers' influential arguments against such notions Thomasson gives her account of the 'analytic entailment' relation as follows:

> I use the expression 'analytically entail' to mean 'entail in virtue of the meanings of the expressions involved and rules of inference', so that a sentence (or set of sentences) Φ analytically entails a sentence Ψ just in case, given only logical principles and the meanings of the terms involved, the truth of Φ guarantees the truth of Ψ. Thus where Φ analytically entails Ψ, given knowledge of the truth of Φ, as well as grasp of the meanings of the terms and reasoning abilities, a competent speaker may legitimately infer the truth of Ψ on that basis alone. … If the truth of Ψ does not require anything more of the world than the truth of Φ requires, then clearly it does not require any *extra* causal action beyond what was averted to in Φ, and there is no doubling of or competition between the two claims (p.16).

Consider once more the expressions "The shattering of the window is caused by the atoms that constitute the baseball, acting in concert" and "The shattering of the window is caused by the baseball." If the above account is true, the first expression analytically entails the second. For anyone who knows that the second expression is true need not investigate the world for the truth of the first one. That is to say, contrary to what premise (1) states, the baseball and the atoms that compose it are causally relevant to each other. Thus premise (1) is false and the Overdetermination Argument is unsound.

Even if an eliminativist accepts the account given above he may still urge that if the atoms arranged baseballwise can do all the explanatory work, having the principle of parsimony in mind, there is no good reason for positing the baseball. As we have seen before, this objection is compelling for a defender of ordinary objects, yet it does not provide what Merricks wants to establish, namely the inconsistency of macroscopica. Instead, as Sider points out:

> It demonstrates no internal incoherence or awkwardness in an ontology that includes them; it only shows that such an ontology cannot be supported merely

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by the simple causal argument that non-living macro-entities must be postulated as causes of our sensory experience (Sider, 2003, p.724).

Of course one may deny that the mentioned expressions involving the baseball and the atoms arranged baseballwise are examples of analytic entailment or he may reject the whole idea of an analytic entailment relation. Though Thomasson gives a reasonable account, a proponent of the Overdetermination Argument may still reject it and maintain that premise (1) is true. After all, analytic entailment is not, as I have already said, uncontroversial. By doing so an eliminativist may save the first premise and continue to claim that the Overdetermination Argument is sound. Nevertheless, there are many other objections that are addressed to premise (3), which states that there is no widespread overdetermination.

Problems with Overdetermination

Just like Ted Sider one may ask "What's so bad about Overdetermination?" (Sider, 2003). Is not it philosophically possible to hold that there is widespread and systematic overdetermination? Merricks has his reasons and philosophers who claim otherwise have theirs. Before getting involved in that question there is a different point that I want to focus on right now. If Thomasson's discussion has not proven anything to an eliminativist, it at least has shown this: Even if one concedes that there is no widespread overdetermination, one can still hold that macro-causation (causation occurring at the macro level) does not constitute real overdetermination. What follows is that objections to premise (3) diverge into two distinct types: (i) Overdetermination, including macro-causation, is everywhere and hence premise (3)

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of the argument is false; (ii) premise (3) is true and yet an object and its simplest

constituents are not overdeterminers of the same event. The rest of the thesis is

devoted to a detailed discussion of these objections.

     (i)   Overdetermination, including macro-causation, is everywhere and

hence premise (3) of the argument is false.

     Conceding widespread and systematic overdetermination is a way to maintain

the causal efficacy of the macro as well as the micro, and to defend the existence of

macroscopica against Merricks's objection. Actually there are philosophers who tend

to do this. As I have already implied Sider (2003) is one of them. He examines three

possible objections to systematic overdetermination. The first of them is that

overdetermination is metaphysically incoherent. Second, if there is

overdetermination it would be coincidence. Third, there is no reason for us to believe

in the existence of overdeterminers (by the principle of parsimony). I will not go over

the whole discussion that Sider makes, but what he concludes from all of this is

important for my purposes. For Sider the first two arguments against widespread

overdetermination do not hold. Only the epistemological objection, the objection that

I have already presented at the end of the previous part, has force. But as it stands

this argument only shows us that 'just seeing' baseballs, tables and chairs cannot be

evidence for believing that they exist. "It only shows that such an ontology cannot be

supported merely by the simple causal argument that non-living macro-entities must

be postulated as causes of our sensory experience" (Sider, 2003, p.724). Sider, *pace*

Merricks,[33] contends that only a few philosophers who believe in the existence of

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[33] "… once the locus of the debate moves to philosophical argument and leaves behind what we can 'just see', things look good for eliminativism. (…) And, in part, this is because there is very little out

ordinary objects defend their position merely on the ground that we experience them (p. 25). Although this controversy is very important for the whole discussion, for our purposes we shall assume that the Overdetermination Argument, if it is sound, is a strong argument against our belief in the existence of ordinary objects.

For the sake of argument let us take sides with Merricks and claim that we need a good reason to believe that overdetermination is everywhere (and there is nothing wrong with that). Jonathan Schaffer, in his *Overdetermining Causes* (2003), tries to show that there is nothing contradictory or problematic about overdetermination. He deals with two objections, by Jaegwon Kim (1989) and Martin Bunzl (1979). According to Bunzl overdetermination is impossible. Consider the two rocks case. Bunzl claims that one rock's hitting the window, *e**, is a different event from two rocks' hitting it simultaneously, *e*. Hence both rocks are necessary for *e* to occur. That means that all alleged cases of overdetermination are actually cases where *joint causation* occurs. In reply, Schaffer gives some reasons to believe that there is overdetermination. One of them is that even if two rocks' hitting the window is not real overdetermination, events that are caused by both macroscopic entities and the simples that constitute them, in other words the two-levels cases, as Schaffer calls them, are actual instances of overdetermination. His reply to Kim's 'severely improbable' objection is on the same lines. Kim contends that overdetermination cases, if there are any, are severely improbable since "… two rocks hitting a window at once could only be due to a perfectly timed conspiracy or cosmic coincidence" (Schaffer, 2003, p.28). Although Schaffer agrees with Kim's

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there by way of positive, non-question-begging arguments for the existence of baseballs. After all, their existence is generally taken for granted" (Merricks, 2001, p.76).

claim, he maintains that the two-levels cases are enough to show that there is systematic overdetermination (and of course there is nothing wrong with that).

One may argue that what Schaffer shows is, in a way, on a par with what Merricks wants to show. Both Schaffer and Merricks would agree that if there are macroscopic composite objects then systematic overdetermination follows. For the former macroscopica exist and so does widespread overdetermination. For the latter, on the other hand, the conclusion of the conditional is false and hence macroscopica do not exist. For a moment let us ignore Schaffer's arguments for overdetermination and agree with Merricks that a metaphysics without systematic overdetermination is a good thing or an 'improvement' and eliminativism gives us such an account, unlike, for instance, any common sense approach to ordinary objects.

Even if a proponent of eliminativism gives up insisting on the denial of overdetermination, and welcomes widespread overdetermination, she still has an important point to make. That is, if an event is overdetermined by two or more objects, then one of the objects is sufficient by itself for that event and the others are redundant causes. If we have independent and reasonable arguments for the principle of Alexander's Dictum, causal redundancy of alleged objects is a reason to eliminate them. The second kind of objections which Merricks faces is closely related to this last point and examining them will, I think, shed some light on it.

(ii)   Premise (3) is true; yet an object and its simplest constituents are not overdeterminers of the same event.

Thomasson's objection was of this sort. She claimed that since in the alleged overdetermination cases an object and its constituents are not wholly separate or independent, they are causally relevant to an event that they allegedly overdetermine.

Overdetermination exists only if the objects in question are independent. Hence macro-causation is not real overdetermination.

This is not the only way out. Schaffer (2003) asks this: if c_1 and c_2 are overdeterminers of e then how do they cause e? There are two plausible answers, it seems. First, each of c_1 and c_2 individually caused e, and second, c_1 and c_2 collectively caused e. He calls the first *individualism* and the second *collectivism*. Different accounts of causation favors different answers to that question. Consider a simple counterfactual analysis of causation where a causes b if and only if, if had a not occurred then b would not have occurred. If this is correct then the overdeterminers of e, c_1 and c_2, cannot individually cause e, since e would have occurred even if c_1 had not occurred and similarly e would have occurred even if c_2 had not occurred. That means according to this analysis that c_1 and c_2 overdetermine e collectively. It seems this is bad news for Merricks. Here is why. The case in which two rocks hit the window is real overdetermination whereas the baseball and its atoms' hitting the window is not. If the baseball had not hit the window, the window would not have shattered, because the atoms arranged baseballwise would not have hit the window. Likewise, if the atoms arranged baseballwise had not hit the window, the window would not have shattered, because the baseball is constituted by those atoms and if the atoms did not hit, neither did the baseball. Although the Overdetermination Argument fails, Merricks still has a point. One of the causes is redundant (assume either the baseball and atoms are independent or else there is no need for such independence in order to be causally irrelevant). However that conclusion would be too easy. Remember the causal analysis that we are operating with: a causes b if and only if had a not occurred then b would not have occurred.

According to this analysis, though there is no overdetermination it is true that the atoms arranged baseballwise cause the shattering but the baseball causes the shattering as well. I think this *prima facie* contradictory result grows out of the assumption that the baseball is causally irrelevant if its atoms cause the shattering of the window. [34] However, as we have seen before there are many reasons to be suspicious about that assumption.

Eric Olson, I think rightly, says we should be suspicious since Merricks "… never discusses causation in general, and offers no theoretical support for his crucial principle" (Olson, 2002, p.297). Although Merricks does not explicitly discuss a causal analysis that he favors or that is compatible with his argument, or give arguments against different approaches to overdetermination, such as *collectivism*, we should not think that he has not got any view of causation. Considering the problems with different causal analyses, one may deny a simple counterfactual analysis and provide a theory of causation that goes hand in hand with Merricks's Overdetermination Argument. Moreover, *collectivism* is not immune to criticisms. An eliminativist may coherently prefer an individualistic approach to overdetermination cases and on that ground he may assert that there is no overdetermination. All these moves have some costs for Merricks of course. Yet a proponent of the Overdetermination Argument may venture losing the charm of generality and commit herself to certain accounts and principles of causation and still maintain her point.

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[34] Contradictory because if they both cause the shattering then they are overdeterminers. But as we have seen they cannot be overdeterminers via the simple counterfactual analysis.

Nevertheless, I think an objection against the Overdetermination Argument that does not make so many commitments to certain causal or other metaphysical principles, or better only makes the commitments that Merricks does or should make, is possible. As Merricks notices, one may contend that premise (2)

> e is caused by the xs, acting in concert

is not true. The objection goes as follows: The atoms that constitute the baseball do not cause the shattering of the window; what they cause is the scatterings of the atoms that constitute the window. The shattering of the window is caused by the baseball. Further, the scatterings of the atoms of the window and the shattering of the window are two distinct events.[35] While the scatterings are many, the shattering is one and we already denied the identity relation between one and many.[36] All these points together come close to saying that there is some kind of division of labor among macro and micro entities. Since the shattering of the window has a single cause, i.e. the baseball, there is no way for it to be overdetermined. Daniel Korman (2007) provides such an argument, in his *The Naive Conception of Material Objects: A Defense*, which he calls 'specialization'. Merricks's reply to that objection takes its root from an intuitively plausible principle about composite events:

> P If some objects cause events $v_1 \ldots v_n$, and $v_1 \ldots v_n$ compose event V, then those objects cause V (Merricks, 2001, p.64).

Suppose that the scatterings of the atoms arranged windowwise compose the shattering of the window. Therefore "… If the atoms cause the multiple scatterings,

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[35] For the desired non-identity claim for the scatterings and shattering, one may deny composition as identity or constitution as identity as well just like many philosophers who defend some form of constitution view. Lynne Rudder Baker (2008) and (2004), Frederick C. Doepke (1982), Mark Johnston (1992), David Wiggins (1968) and (2001) are among them.

[36] See footnote 3.

and if there is a composite event of the window's shattering, then the atoms cause that composite event." (p.65) Thus premise (2) is true and a proponent of the 'specialization' view needs an argument to show that P is not true.

It is important to note against Merricks's defense that even if P is true, the truth of premise (2) does not follow. Here is why. Consider a baseball, which is constituted by atoms, $a_1, a_2, a_3 \dots a_{100}$ in such a way that atoms a_1 to a_{50} cause the scatterings of the window atoms $v_1, v_2 \dots v_{50}$. Suppose that the scatterings, $v_1, v_2 \dots v_{50}$ compose the shattering of the window V. Further, suppose that atoms a_{51} to a_{100} have no actual causal role in V. If we can imagine such a ball then having P in mind, can we claim "The shattering of the window is caused by the atoms arranged baseballwise"? No. For the shattering of the window is composed solely by the mereological sum of the multiple scatterings of the atoms arranged windowwise , v_1, $v_2 \dots v_{50}$ which are caused by the atoms $a_1, a_2, a_3 \dots a_{50}$ which compose some part of the ball. That is to say, premise (2) does not hold for the case that I present since all of the atoms arranged baseballwise do not cause the shattering but only *some* of them. However, there is an amendment available for a proponent of the Overdetermination Argument. She may change premise (2), adapting it to this particular example, as follows:

> (2)*   The shattering of the window is caused by *some* of the atoms that are arranged baseballwise.

It seems that after this revision the desired conclusion follows. But unfortunately it is not that easy. Suppose that the simple counterfactual analysis is

true and apply it to this particular case once more.[37] If the baseball had not hit the window the window would not have shattered. So the baseball causes the shattering. What about some of the atoms that are arranged baseballwise? Do they cause the shattering? Let's see: If atoms a_1, a_2, a_3… a_{50} had not hit the window, the window would still have been shattered by atoms a_{51} to a_{100}. That means a_1, a_2, a_3… a_{50} do not cause the shattering, which implies that P is not true. Thus one cannot grant the truth of a premise which states that in each and every case of such an event some of the atoms that are arranged baseballwise cause the shattering. Hence, premise (2)* does not hold either. The shattering of the window is caused only by the baseball. There is neither overdetermination nor causal redundancy in such events.

Thus far, I tried to show that one can defend macrocausation without committing systematic overdetermination. Now the question is whether we can establish microcausation with our causal analysis. In order to show that let's complicate the scenario a little bit. Suppose that all of the atoms a_1 to a_{100} hit the window simultaneously and assume, as in the first case, a_1, a_2, a_3… a_{50} cause the scatterings v_1, v_2… v_{50}, which would be enough to compose the shattering by themselves. Further, assume that a_{51} to a_{100} cause the scatterings v_{51}, v_{52}…v_{100} which also would be sufficient for the shattering.[38] Here we seem to have a case of overdetermination. But that is not what I intend to show. Instead what I want to

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[37] The same story holds for some sort of chance-raising view of causation as well: "Consider the idea that to cause something is to raise the chance of its occurring. That is, x causes y just in the case that the chance x gives y of occurring in the circumstances is greater than the chance of y's occurring without x (where a chance is a propensity, an objective physical property). Call this the chance-raising view of causation" (Olson, 2002, p.297). I will not be able to apply this view to the case we have because of my limited space.

[38] A similar example is given by Schaffer against Kim in his (2003). "When *one big rock* hits the window flying northwards, the rock's eastern and western hemispheres are overdetermining causes of the window shattering" (Schaffer, 2003, p.28). Schaffer considers this as a case of quantitative overdetermination. Schaffer (2003)

prove is that neither the sum of atoms a_1, a_2, a_3… a_{50} nor the sum of a_{51}, a_{52}…a_{100}

causes the shattering; instead, they cause the scatterings v_1, v_2… v_{50} and v_{51},

v_{52}…v_{100}, respectively. Here is why: Once more suppose that the simple

counterfactual causal analysis is true. Then, a_1, a_2, a_3… a_{50} cause the shattering if and

only if it is true that if a_1, a_2, a_3… a_{50} had not hit the window, the window would not

have shattered. Yet, as we know, this is not the case since a_{51}, a_{52}…a_{100} would still

have shattered the window. Thus a_1, a_2, a_3… a_{50} do not cause the shattering. How

about micro causation? Do a_1, a_2, a_3… a_{50} cause the scatterings v_1, v_2… v_{50}? Well,

yes: If a_1, a_2, a_3… a_{50} had not hit the window, the scatterings v_1, v_2… v_{50} would not

have occurred. The same story holds for the atoms a_{51}, a_{52}…a_{100}, scatterings v_{51},

v_{52}…v_{100} and the shattering. That is to say, with our causal analysis we have an

intuitive conclusion that micro events have micro entities as their causes. Combine

this with the above conclusion that macro events have macro entities as their causes.

The division of labor between micro and macro follows. I do not claim that there is

such a division. What I do claim is that Merricks's defense against such objections

does not work.

That concludes my argument against Merricks's defense against the objection

that is raised to premise (2).

Conclusion

I tried to present Trenton Merricks's most important argument for his denial of

ordinary objects and many criticisms, including mine, with which it is faced. I do not

claim that any of these objections are conclusive. Merricks or any other proponent of

eliminativism may reply to them by providing further arguments for their premises or

perhaps by making clarifications of the causal analysis that their argument is based

on. What I do claim is that the Overdetermination Argument is not causal-theory

neutral and indeed can be resisted without much cost.

CHAPTER 4: CONCLUSION

In my thesis I defended a view according to which ordinary objects of everyday human life exist. Putting it in this way one may ask "Why bother? Is not it obvious?" Well, like any other existential claims, saying that tables, baseballs or credit cards exist is not obvious at all for a metaphysician. In the previous chapters I presented the main concerns and the most important arguments against the existence of such objects.

Many philosophers have believed that different problems that stem from vagueness constitute a serious threat against the existence of ordinary objects. For those philosophers believing that such objects exist lead us to accept either that there are sharp cut-off points in nature or that there are sharp lines for the application and nonapplication conditions for the empirical concepts like baldness or richness. It seems that none of the options above are available for a defender of common sense ontology. Nevertheless, as I showed in my thesis those are not the only choices open for the proponent of ordinary objects. There are many theories of vagueness that do not automatically rule out the existence of everyday objects. Quite the contrary, proponents of ordinary objects are in no worse position than the eliminativist philosophers. Therefore, it is true that vagueness creates serious problems for any theory in metaphysics but it does not constitute a special threat to the existence of ordinary objects.

According to the other argument that I dealt with in this work ordinary objects are not causally efficacious. If we have no reason to deny the metaphysical

principle which states that to be real is to have causal powers, then we are forced to deny that ordinary objects exist. There is a stronger form of this argument formulated by Trenton Merricks (2001). For him, adding those objects to our ontology leads to a contradiction. The argument goes: whatever is done by the macroscopic objects can be accounted for by the collective activities of simple microphysical parts. That means if such objects exist they are causally redundant. That is because if they were causally efficacious then all events would suffer from overdetermination (the same event would be caused by both the macro object and the mereological sum of the simples that compose it). Since there is no widespread overdetermination, ordinary objects are causally redundant. This conclusion leads to a contradiction because if there were such objects like tables, chairs, baseballs, then they both have and do not have causal powers. Therefore, there are no macroscopic physical objects.

I presented several responses to the above argument. The common way to resist it is to claim that although there is no systematic overdetermination, the case with macro objects and their simple parts is not a real case of overdetermination. Another line of defense is to embrace the widespread overdetermination and claim that we do not have any good metaphysical or epistemological reason to discredit common and systematic overdetermination. Furthermore, I presented my own objection to the overdetermination argument which simply shows that there is a division of labour between macro objects and their micro parts: Macro objects cause macro events and microscopic parts cause micro events. No event is caused by more than one object and hence there is no overdetermination.

In my thesis I showed that the arguments above can be resisted at no great cost. Of course those are not the only arguments that the opponents of ordinary

objects have come up with so far. There are many other arguments that I have not mentioned in my thesis. However, I strongly believe that those arguments, like the ones that I dealt with, must have gone wrong somewhere. The work that stands on the shoulders of common sense philosophy is to find those mistakes and defend an ontology which includes the *sine qua non* part of everyday human life: Ordinary objects.

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