

Universal: They Argue, Therefore I Am

A thesis submitted to the College of
Graduate Studies and Postdoctoral Research
in Partial Fulfilment of the Requirements
for the Degree of Master of Arts
in the Philosophy Program
University of Saskatchewan

By

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Abstract

Numerically different things can have the same feature. Not only can actual numerically different concrete things have something in common, but also fictional abstract things can share a feature with other fictional abstract things or actual concrete things. But, how is that possible? Different answers to this question have raised the problem of ‘one over many’ since Plato addressed this issue in *Republica*. David Armstrong formulates a theory of universals to ground an explanation of this problem, along with a connection between universals and causality. In this thesis, I examine two approaches to this problem that are nominalism and realism. Following Armstrong’s argumentation against nominalism, I develop arguments against nominalism, and apply them to Lewis’ version of nominalism which I call a possibilist nominalism. I further extend my critiques to the realist approach by examining the immanent version of a theory of universals. I argue that the immanent thesis fails to satisfy objectivity and universality of an immanent thing. However, there seems to be no difficulty for the idea that there is a relation between objective intrinsic relevant features of particulars and the causal relation between them. Borrowing Armstrong’s words, I establish that nominalist and realist approaches face some difficulties to deal with the problem of ‘one over many.’ The realist approach has some advantages in dealing with the second duty of a theory of universals that is grounding a connection between universality and causality. At the end, I suggest a theory of universals grounded on the inter-subjective linguistic concepts (Fregean senses). I argue that my theory can successfully explain the problem of ‘one over many.’ Since the theory is consistent with the core idea of connection between universality and causality—the idea that objective intrinsic relevant features of particulars play the main role in analyzing causal relation between them—my theory can satisfy the second duty for a theory of universals.

Key terms: concepts, immanent, material inference, properties, transcendent, universals

Acknowledgements

I would like to express my gratitude to Dr. Peter Alward, for his great supervision of this thesis and for his continuous support during the process of my research. I would also like to thank Dr. Sarah Hoffman and Dr. Dwayne Moore for their valuable comments on my work. I further extend my gratitude to Dr. Braj Sinha, for agreeing to be the external reader of my thesis. Also, I would like to thank Zahra Ghoreishi, for her unwavering and unconditional support.

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Introduction

Our world is an inclusive thing. Its constituents are countless different and similar objects and events. In fact, the differences and similarities between this-worldly objects and events are relative. On the one hand, all individual objects and events have some similarities at least in their fundamental features. On the other hand, even members of the same type have some different individual features. The world is saturated by individual objects and events that are not identical and have more or fewer features in common. For example, there are an unknown number of 'red shirts' in our world that are numerically distinct but have *redness* in common.

There is a widely shared intuition that different individual/ particular things can have the same nature, quality, or feature. In other words, particulars have properties and stand in relations, and in some cases, these properties and relations are the same for numerically different particulars (Armstrong I 1978, 11). Understanding the nature, quality or feature that non-identical individual objects have in common constructs the problem of 'one over many.' The problem of 'one over many' is based on a fact that is observed throughout our ordinary experiences. The fact is that numerically distinct particulars have common features. Lewis calls such a fact a Moorean fact since its nature is similar to the fact of the external world's existence which Moore tries to prove by showing his own hand. Lewis says:

We know a lot...We have all sorts of everyday knowledge, and we have it in abundance. To doubt that would be absurd... It is a Moorean fact that we know a lot. It is one of those things that we know better than we know the premises of any philosophical argument to the contrary. (Lewis 1999, 418)

A part of this comprehensive knowledge about the world is the fact that things have a shared nature. When one wants to explain the facts, problems emerge. Why should one believe in the existence of external world or other minds? How do numerically distinct particulars have something in common? As Lewis argues, there are three possible ways to deal with a Moorean

fact: (1) deny it, (2) accept it and analyze it, and (3) accept it as a primitive. Lewis asserts that philosophers should have no desire to deny Moorean facts. Instead, any comprehensive doctrine of philosophy should provide answers for the problems which are raised in virtue of these facts, and problem of ‘one over many’ is one of them.

Having such an explanation is important since these common natures are required to explain (1) the nature of things, (2) the nature of our experiences, and (3) how communication is possible. Both rational (including a priori, philosophical, and non-empirical) and scientific inquiries rest on these shared natures (Baylis 637). To provide an explanation for this fact, one needs to consider and answer these questions: What is the nature of these things in common? What is their ontological status? How can one have knowledge of them? Do these common natures exist independently from things which have them? How can one grasp these common natures when they only observe individuals? If these common natures exist, where are they? How can we refer them? (Edwing 207).

To answer these questions, philosophers have chosen different approaches. An explanation for this problem might be relational or non-relational (Crockett 242). An explanation for the problem of ‘one over many’ is relational when it explains the sameness between numerically different particulars in terms of extrinsic relations between those particulars themselves or in terms of relations between those particulars and other external entities. A non-relational explanation answers the previous questions in terms of intrinsic features of particulars. Putting together these two distinctions, to deal with the problem of ‘one over many’ results in: (1) nominalism: a relational approach only in terms of individuals that have a common nature, (2) transcendent realism: a relational approach in terms of the individuals that have a common nature and distinct extra entities, and (3) immanent realism: a non-relational (in terms of relation between a particular and a non-particular entity) approach in terms of individuals that have a common nature and immanent extra entities.

Although the word ‘universals’ has been used as a noun for metaphysical discussions about the possible answers to previous questions since the sixteenth century (Woozley 587), discussions about this subject matter go back to Plato – the father of almost all perennial topics of philosophy. There are approaches that have more or less offered the same answer to the question of universals, and different candidates for the nature of universals and the way that we grasp them. Realist philosophers such as Plato and Aristotle believe that universals are mind-

independent entities. For Plato, Forms belong to an unchangeable realm which by grasping them one can grasp true knowledge of the world (Woozley 589). Aristotle, in contrast, emphasizes that “universals are not substances existing independently of particulars. They exist only as common elements in particular: the universal X is whatever is common to, or shared, all x’s; it is what is predicated of the individual” (Woozley 592). And conceptualists such as Locke and Berkeley suggest that universals are mind-dependent images that are grasped throughout our sensual perceptions (Woozley 594&596). There are other approaches that deny the existence of universals understood as entities. Nominalists such as Hobbes, for example, suggest that universals are words and names that are “imposed on many things, for their similitude in some quality or other accident” (Woozley 592).

Plato believes that not only is the existence of universals necessary to understand the nature of the world, but it is also necessary for understanding the nature of human knowledge of the world (Woozly, 587). In other words, a theory of universal is important, both ontologically and epistemologically. Plato himself provides two distinct arguments in favor of the existence of universals, one ontological and the other epistemological. With respect to epistemological argument, he accepts the Heraclitean doctrine of flux, and adds to this doctrine the principle that what is known or knowable needs to be stable. Thus, Forms are required because there is no stability with particulars. But if universals exist and are required for having unchangeable knowledge, they cannot exist in the same world that particulars exist since the world of particulars involves in the Heraclitean flux (which would make universals changeable) (Copleston 168). Therefore, the first appearance of a theory of universals presents Forms as universals that exist mind-independently in an unchangeable realm. Thus, particulars and Forms belong to different realms: particulars are sensible objects that belong to the sensible world and Forms belong to an intelligible realm that is (albeit not spatio-temporally) located outside of this sensible world. This results in some difficulties for this strategy. The first difficulty is the possibility of having a relation between a Form and its instances (particulars). Consider that this relation should connect two different entities of different realms, which means it must cross realms. How is that possible? What is the nature of this relation? There are two options suggested by Plato, the first advocate of this theory. His suggestions about the nature of the relations are ‘participation’ and ‘imitation’ (Copleston I 167).

Aristotle keeps the core of Plato's theory of universals that is the importance of the Forms in explaining the nature of our understanding and the world. He agrees with Plato that universals are not merely subjective phenomena or "a mode of oral expression" (Copleston I 301). For Aristotle, there is the specific essence in object that is corresponded to a universal in the mind. In other words, universals are separated through our mind's activities. But, this fact does not mean that universals are not real. They are real not only in the mind, but also in the objects. Therefore, for Aristotle formal universality is the production of mind's activity based on objective feature in things (Copleston I 301). He explains "[a] Form as the object of a definition that describes a thing's essential nature" (Woozly, 591), but refutes the existence of a mystical unchangeable realm. Instead, he suggests that universals are independent of minds but dependent on the particulars for which they serve as common elements (Woozly, 592).

Nominalism is the first and the most important reaction against realism in the theory of universals. Peter Abelard and William of Ockham, two medieval philosophers, were the first nominalists who refuted the predominant scholastic approach to logic and metaphysics, and replaced it with a nominalistic approach. Since they were logicians, they faced another sub-problem of 'one over many:' the problem of the 'reference of common nouns.' Our language includes common nouns such as 'horse', but in the world, we only have particular horses each of which can be the reference of a proper name. Thus, the question is: what are the extension of common nouns when we use them in our everyday communication? For Abelard, a type of thing is a meaningful sound and meaningful sound is a word. This word is meaningful by referring to a common idea that is a composite of images. Ockham insists that "universals [types of things] are terms or signs standing for or referring to individual objects and set of objects, but they cannot themselves exist" (Woozly, 599). Inspired by these medieval philosophers, Thomas Hobbes argues that type of thing is a name. It is applied for different things because of their similarities in some qualities and features (Woozly, 599). This required resemblance lies at the core of nominalism and facilitates the reduction of universals from mind-independent entities to linguistic entities (Pap 333).

In this thesis, I study both nominalism and realism (by considering their modern representations). I examine nominalism in term of its principle (to answer the problem of 'one over many' there is no need for any extra entities beyond particulars) and strategies to analyze predication ('x has the property, F'). Furthermore, by applying the ontology of possible worlds, I

make a distinction between two versions of nominalism, namely actualist nominalism (particulars are inhabitants of our actual world), and possibilist nominalism (particulars are inhabitants of actual and possible worlds). I suggest that all of these different versions of nominalism face serious difficulties. As a result, an adequate solution to the problem of ‘one over many’ requires a realist account of universals.

Furthermore, I focus on Armstrong’s and Lewis’ discussions about universals. Armstrong argues in favor of universals since only universals can successfully ground an adequate explanation for the problem of ‘one over many’, as well as a required connection between properties and causality. There are two realist approaches toward universals: transcendent approaches, and immanent approaches. Armstrong evaluates these approaches in terms of their analyses of predication and argues that a transcendent realist analysis of ‘have the property, F’ runs into serious difficulties. And he develops instead an immanent realist approach to universals. Although Lewis concedes that universals are immanent objective entities, his reasons for invoking them are different from Armstrong. In fact, Lewis refutes the first part of Armstrong’s main argument in favor of universals (grounding a solution for the problem of ‘one over many’), but he suggests a new job for universals: drawing the distinction between natural and unnatural properties. I think this new work is a restatement of the second part of Armstrong’s argument. As a result, Lewis’ Immanent theory of universals is a complement for his theory of properties. I think both of these arguments have some flaws that make them vulnerable. In my view, there is a linguistic basis for a theory of universals which avoids all the difficulties which other theories have faced. Considering universals as concepts (Fregean senses) is the linguistic basis which helps advocate of universals to pass the difficulties.

In Chapter 1, I present nominalism by considering two versions of it: actualist nominalism and possibilist nominalism. By evaluating these versions in terms of the principle of nominalism and the strategies of analyzing predication, I argue that both of these versions face unsolvable difficulties. In Chapter 2, I first, present two different immanent realist arguments in favor of universals (Armstrong’s and Lewis’ arguments) and develop two versions of an immanent theory of universals, Second, I critique these two arguments in favor of immanent universals. Finally, in Chapter 3, I develop my own theory of universals, a quasi-platonic (transcendent) approach, which is grounded on concepts (as Fregean sense). At the end, I assess my theory in terms of

critiques that nominalism, immanent realism, and classic version of Platonism (transcendent realism) have faced.

Chapter 1

The Problem and Nominalist Solutions

As mentioned in the introduction, there are several possible approaches to explain the problem of ‘one over many.’ In this research, I exclude two approaches – denying there is a problem and solving it by appeal to brute facts – and then present and assess some substantive explanations to the problem. Nominalism and realism are the two most prominent views in the related literature. In this chapter I elaborate two versions of nominalism: actualist nominalism and possibilist nominalism. I discuss the flaws in these explanations and argue that they cannot explain the problem of ‘one over many.’

1.1 Actualist Nominalism

Medieval nominalists suggest reducing the problem of ‘one over many’ to a linguistic discussion about using common nouns. Following this idea, finding linguistic answers for metaphysical questions, some linguistic philosophers in the 20th century suggest that if ‘having the property F’ is reduced to ‘applying a predicate F’ then the problem of ‘one over many’ can be explained by saying that different things can fall under the same predicate (Armstrong I 1978, 2-4). This approach is called actualist since the different things that fall under the same predicate are these worldly actual things.

According to Frege’s analysis, each atomic sentence is comprised of a subject and a predicate (Armstrong I 1978, 2). The predicate is a certain kind of sentence-frame, a sentence with one or more singular referring expressions removed. In this analysis, subjects are singular referring expressions while predicates are unsaturated linguistic entities and, as such, cannot be referred to. Similarly, particulars are singular entities while properties and relations are not singular and are instantiated by different particulars. This similarity and the idea of reducing ‘having the property’ to the process of predication encourage some nominalist philosophers to make a correspondence between features in common and predicates (Armstrong I 1978, 2). A nominalist’s view about the problem of ‘one over many’ tends to make a connection between the

problem and this question: In what sense do numerically different particulars have the same property 'F'? A nominalist aims to prove that there are successful analyses of 'having the property' only in terms of particulars, and thus there is an explanation for the problem of 'one over many' by using only particulars.

1.1.1 Nominalism in General

A general feature shared by many versions of nominalism is the claim that all statements about universals are translatable to statements about particulars (Jackson 427). As Nelson Goodman states, "the nominalistically minded philosopher like myself will not willingly use apparatus that peoples his world with a host of ethereal, platonic pseudo entities" (Goodman 32). I call this quotation the principle of nominalism. Following Goodman's idea, a nominalist argues that only particulars exist, and the existence of some entities in addition to particulars cannot logically be deduced from the fact that there are some resemblances between existent particulars (Pap 330 & Armstrong I 1978 12). To prevent this deduction, some of nominalist analyses include the notion of 'resemblance' and exclude the notion of 'identity' between the same things and qualities (Pap 331) that particulars have in common (Smith 395). According to them, to explain the fact of the sameness between numerically distinct particulars there is no need to have an objective identity between instantiated properties since there is no logical connection between "A is red and B is red" and "*redness* of A is identical with *redness* of B" (Armstrong I 1978 12).

1.1.2 Nominalist Strategies

Nominalists argue that there are only particulars, and there are no objectively identical things in particulars when the particulars themselves are not identical. There is no objective '*redness*' in 'my red shirt' and in 'my red pants,' while 'my shirt' and 'my pants' are not identical. There are only these particulars: 'my red shirt' and 'my red pants.' If this is the case, it falls upon nominalists to provide an explanation for 'having a feature in common' only in terms of particulars. To provide such an explanation, nominalists need to answer the question that if the sameness among numerically different particulars can explain, by applying predication, then how one should analyze 'having the same property, F?' Or, what does one mean by 'having the property, F.' Consider this point that any analysis should satisfy the principle of nominalism to be successful. That means this analysis does not allow using any term referring to types of

things. Nominalist strategies for answering these questions aim to present an analysis of ‘having the property’ without terms referring to anything other than particulars. In each of them, a particular ‘a’ has the property ‘F’ in terms of having a relation ‘R’ to a particular ‘Q’ (or a bunch of entities that are particulars) (Armstrong I 1978 16). I focus on two of these strategies¹, Class and Resemblance nominalism, since they are mainstreams nominalist views:

- 1- Class nominalism uses ‘class’ and ‘being a member of a class’ to analyze ‘having the property, F’ (Armstrong I 1978, 29). The formal schema of the strategy is: ‘a’ has the property ‘F’ iff ‘a’ is a member of the class of Fs.
- 2- Resemblance nominalism uses the notion of resemblance to analyze having a property. This strategy applies the relation of resemblance by appealing to “degree of resemblance” and “the notion of ‘paradigm.’” A ‘paradigm’ of particulars includes selected samples of particulars which have the same property. A particular that has a property has a degree of resemblance to a paradigm (the samples of the instantiations of property) (Armstrong I 1978, 45-46). Therefore, ‘white’ things are different from ‘red’ things since they are similar to different paradigms of particulars. The formal schema of this strategy is: ‘a’ has the property ‘F’ iff ‘a’ sufficiently resembles a paradigm of F.

1.1.3 Against Actualist Nominalism

There are some difficulties with actualist nominalism, which I categorize in two groups: difficulties with the notions of ‘class’ and ‘resemblance’; and difficulties with the strategies of predication based on the membership relation and predication based on the resemblance relation. I refer to the first group as ‘general critiques’ and the second as ‘failure of strategies.’

1.1.3.1 General Critiques of Actualist Nominalism

¹ Other strategies include predicate nominalism, conceptual nominalism, and mereological nominalism. Predicate nominalism argues that there is a sense of property since we apply predicates for subjects. As John Searle argues that “universals are parasitic upon predicate expressions” (Searle 120), a property is nothing except applying a predicate for particulars (Armstrong I 1978, 12). Therefore, the formal schema of this strategy is: ‘a’ has a property ‘F’ iff ‘a’ falls under the predicate ‘F.’ Conceptual nominalism maintains that concepts, as mental entities, do the job which the predicate nominalist considers for predicates. For a conceptual nominalist ‘a’ has a property ‘F’ iff ‘a’ falls under the concept of F. Mereological nominalism analyzes ‘having a property’ in the terms: ‘a’ has a property ‘F’ iff ‘a’ is a part of the aggregate (heap) of Fs.

There is a difficulty when a nominalist applies the notions of ‘class.’ Bertrand Russell maintains that a class of particulars which instantiate the same property does not bear the property of its members; for instance, the class of ‘red things’ is not *redness* itself (Russell in Carmichael 702). Accepting Russell’s point, there is a problem to make a distinction between coextensive properties in terms of nominalism. Consider the coextensive properties such as ‘having a heart’ and ‘having a kidney.’ There is no difference between the class of particulars which have a heart and the class of particulars which have a kidney in terms of the member which constitutes them. Without regarding ‘having a heart’ and ‘having a kidney’ as the properties, one cannot make distinction between these properties in virtue of the classes of their actual instantiations (McGill 246).

Some nominalists use the notion of ‘resemblance’ instead of ‘class.’ It seems reasonable to ask them for a clear explanation about what they mean by ‘resemblance’ or ‘particular resemblances’ without referring to anything more than particulars (Ewing 208). There are some candidates for such a clarification. One can use the notion of class or samples to say what she means by resemblance. According to first candidate, two things are similar if they are members of the same class. The problem with this candidate is related to the way that one puts together the members of this class. The question that arises is: how can one make a class, without using the notion of ‘resemblance’ (Smith 392)? The second candidate, is the suggestion that by putting together some samples of things that have the same property arbitrarily or conventionally, one can grasp a paradigm of samples. It seems that to grasp such a paradigm one needs to know whether those samples are similar or not. Another obstacle emerges since one cannot use the notion of ‘resemblance’ without referring to a property, and studying whether those different objects have ‘the same properties’ or not. Things are, thus, similar since they have the same properties, but it is assumed that the notion of resemblance should serve us to understand what one means by saying that those things have the ‘same property.’ In other words, things have ‘the same properties’ since they are similar in some respects (Smith 396).

A nominalist can argue that the notion of ‘resemblance’ is assumed to be an unanalyzable notion in their theory or accepted as a primitive predication² as David Lewis suggests (Lewis 1983 10). Since the notion of ‘resemblance’ is unanalyzable and primitive, a nominalist does not

² here is an example of such a primitive predicate: ... *sufficiently resembles a paradigm case of redness*

require more clarifications in their analyses. The difficulty with the primitive notion of ‘resemblance’ is the possibility of a unique property. It is quite conceivable that under some specific circumstances there is a property that is instantiated by only one particular (such as *being Venus*). It seems that talking about ‘resemblance’ in this case is meaningless without having more samples or instances of that property.

1.1.3.2 Failure of Actualist Nominalist Strategies

I mentioned some general difficulties that an actualist nominalist approach faces. Based on this general view, I articulate different categories of objections and examine whether or not either variant of nominalism can successfully withstand these objections. I evaluate the two strategies in this section: class nominalism and resemblance nominalism.

1.1.3.2.1 The Absence of Relation

All nominalist strategies try to analyze ‘having the property F’ in terms of a relation that a particular has with other particulars. One can imagine a circumstance in which particulars do not have these relations used by different nominalist strategies. In the absence of these relations, the object should not ‘have the property, F.’ That is not the case.

According to resemblance nominalism, an object has the property of *hardness* insofar as there is a resemblance between it and the paradigmatic hard things. Imagine that after alien invade the Earth, they reprogram humanity in a way that the Earth’s inhabitants cannot recognize the ‘resemblance’ between different objects. Instead, they believe that every object is uniquely made by nature or God. If people analyze ‘having the property, F’ in terms of ‘resemblance’ then they should believe that things in their world do not have any properties. Therefore, the absence of the relation means the absence of properties (Armstrong I 1978, 17). Nonetheless, I think that in this world, the similar table on which I lay my laptop would have a ‘hard’ surface. Thus, the resemblance nominalism fails to analyze having the property of *hardness*.

A class nominalist strategy has the same problem. Suppose that the class of ‘hard’ things does not exist (Armstrong I 1978, 37). For instance, there is a world without intellectual beings to make classes, or there is a world with people who do not have any interest in collecting things in their mind or outside. Should one conclude that there is no hard thing anymore in such

worlds? This is not the case. The table with my laptop on would still have a ‘hard’ surface in a world without the class of ‘hard’ things.³

1.1.3.2.2 Threat of Infinite Regress

The main point of this objection is that to provide an explanation for the problem of ‘one over many’ the first step is preparing an explanation of the meaning of ‘having the property, F,’ and then exploring how it is possible that numerically distinct objects ‘have a feature in common.’ According to nominalism, such an explanation should be constructed in a way by using terms which refer to particulars and no terms that refer to types of particulars. This requirement for a nominalist explanation emerges since nominalism insists that to explain the problem of ‘one over many,’ particulars are enough and there is no need to use anything more than particulars and their relations. Unfortunately, this requirement is not satisfied by nominalist strategies and causes infinite regress. This infinite regress means that preparing an analysis of ‘having the property, F’ would be successful only by reinstating further types and predicates (Armstrong I 1978 19). Applying further types is against the principle of nominalism (the adequacy of particulars) in analyzing ‘having the property, F’ and consequently explaining the problem of ‘one over many,’ and using further predicates causes an infinite regression.

Class nominalism faces the difficulty by analyzing ‘having the property, *hardness*’ in terms of *being a member of the class of hard things* (Armstrong I 1978 42). This difficulty arises since a new type or property *memberships* has been reinstated. Using this strategy to analyze ‘having the property, ‘membership’’ establishes a higher-order type that is *being a member of class of things that are members of another class*. To analyze ‘having the property, ‘being a member of ...’, one needs to establish a higher-order type, *ad infinitum*. There is the same difficulty with resemblance nominalism strategy. Analyzing ‘having the property, *hardness*’ in terms of *being suitably similar to a paradigm case of hard objects* introduces a new type of property, resemblance (Armstrong I 1978 55), and applying this strategy to analyzing this new property resemblance requires a higher-order type, that is *being suitably similar to a paradigm case of objects which they have a resemblance in a feature*. Consider that a nominalist strategy cannot

³ I should make it explicit that this critique is based on a conventionalism about classes that implies without the agents who make convention there is no possibility to have things such as classes.

refer to higher-order of types and properties since these things are not particular, and a nominalist analysis of ‘having the property, F’ is supposed to provide an analysis in terms of particulars and not further types and properties. One might argue that a nominalist can consider higher-order of classes to solve this problem. But, according to the principle of nominalism, a nominalist should use only particulars and relations among particulars in their analyses. A class of classes is, however, a collection of classes not particulars. Furthermore, the notion of ‘class of classes’ has the same ontological problem that is adding extra entity to the world. It means that applying the notion of ‘class of classes’ is a violation of the principle of nominalism. It seems that these two strategies are not able to provide an analysis of ‘having the property F’ that uses only terms which refer to particulars. Since the process of predication, or ‘having the property F,’ has an important role for a nominalist explanation for the problem of ‘one over many’ this failure can be considered as the failure of nominalism to explain the problem.

1.1.3.2.3 Keeping Causal Power

Intrinsic features of particulars play the main role to make a causal relation between two events. An intrinsic feature is a feature that a thing has independently of other things, and a feature that is not intrinsic is extrinsic (Lewis 1983 112). Particulars have different features, some of which are relevant to causal relations and some are not. Consider this case: an amplifier announces the words that ‘words are shattering’ in a room and suddenly the glass of a window is shattered. In this case, features related to sound waves, such as wavelength, are relevant, but the meaning of ‘words are shattering’ is not relevant. Following this line, Armstrong argues that causation is a lawful relation between particulars which depends on relations between intrinsic properties, that are relevant properties, or the powers that relevant properties bestow on each other (Armstrong I 1978 22-23 & 27). Therefore, if some properties have causal powers then there is a requirement for a successful analysis of ‘having the property, F’ that demands any analysis of this statement should keep the causal content when the original statement has a causal content (Armstrong I 1978 23).

Class nominalism analyzes ‘having the property, *hardness*’ as ‘being a member of the class of hard things.’ Assume a proposition that claims a causal relation between properties. If one substitutes the properties by classes then the resulted proposition does not have the same content as the original one (Armstrong I 1978 42-43). For example, assume the causal proposition that

‘having the property of *hardness* is the cause of some noise when my cup falls.’ By applying a class nominalist analysis, one can translate this proposition to ‘the membership of my cup in the class of hard things causes some noise when it falls.’ Since only intrinsic features are causally relevant, as I explained above, and being a member of class is not intrinsic, there is no causal role for *being a member of a class*. Similar to class nominalism, analysis of ‘having the property, *hardness*’ in terms of ‘suitably resembling a paradigm case of hard objects’ is not compatible with the causal power of properties (Armstrong I 1978 57), since *being suitably resemble to paradigm case of hard objects* is not an intrinsic feature of an object.

1.1.3.2.4 Difficulties for a Class Nominalism

There are some specific objections that a class nominalism faces. The first objection is the problem of coextensive classes. Coextensive classes are identical collections of instances that collecting based on different properties, for instance, the class of creatures that have hearts and the class of creature that have kidneys.⁴ The question is: how can a class nominalist make a distinction between these two properties (two features in common) in virtue of the relation of *being a member* of such-and-such classes?

Second, it is not controversial that there are classes with infinite members, for example, the class of odd numbers. Reasonably, since human beings have finite minds, they do not have any chance to become familiar with all of the infinite members of such classes. Thus, there are some members of an infinite class that are known and there are some that are not known for a finite mind (Armstrong I 1978 36). For instance, the class of odd numbers has infinite members. Some of its members, such as 13, are known for us, but there are some odd numbers that have never been used in any mathematical equation yet, I name one of them *ZZZ*. As a result, according to class nominalism, people cannot recognize the resemblance between known members (13) and unknown members (*ZZZ*) since they have not known anything about the membership of unknown members, they do not know whether *ZZZ* is a member of the class of odd numbers or not. They should not recognize the resemblance between a known odd number (13) and an unknown odd number (*ZZZ*) in their oddness, but a well-educated student can recognize the

⁴ It is perhaps not true that these two classes are exactly co-extensive (but this is irrelevant to the point I am making)

resemblance between known odd numbers and unknown odd numbers without using the notion of their memberships.

1.1.3.2.5 Difficulties with Using Paradigms

The first difficulty with the usage of paradigms is the possibility of having shared paradigms or as Armstrong calls it, “over-determination of the paradigms.” One can assume one paradigm with the samples that apply as the samples for two distinct properties (Armstrong I 1978 48). This difficulty is a restatement of the problem of coextensive classes in terms of resemblance. Consider two coextensive properties: ‘having a heart’ and ‘having a kidney.’ Any paradigms of samples for the property of ‘having a heart’ can be considered as a paradigm of samples for the property of ‘having a kidney’. Then, how can this strategy make distinction between these two properties?

Second, it can be assumed that it is possible for there to be a particular with a unique property (Armstrong I 1978 53); for instance, within a possible world that is constructed by mysterious spiritual things there is only one ‘hard’ object. In the absence of other samples of *being hard*, there is no possibility to construct a paradigm in this world. One might say that it is possible to construct a paradigm since an object has numerous parts and spatiotemporal suppositions. But if having one object is enough to determine the property of particulars, then other objects are redundant. In the absence of other objects, how one can claim that this self-constructed paradigm can be used to explain what one means by saying that other particulars have the same property in comparison with the particular that its parts and suppositions construct the paradigm. The only logical conclusion that one can draw from a self-constructed paradigm is that there is a resemblance between a thing and its parts.

1.1.3.2.6 Difficulties with Nominalist Translations

Nominalist translations of a statement that include terms referring to types to a statement that only include terms referring to particulars run into difficulties. The difficulty arises because there are cases in which the translated statement does not have the same truth-value as the original statement, or they keep the same truth-value by violating the principle of nominalism. Consider these two true statements about colors: (1) red resembles orange more than it resembles blue, and (2) red is a color. A nominalist analysis might translate the first statement as follows:

“for all particulars, x, y, and z if x is red and y is orange and z is blue, then x resembles y more than x resembles z” (Armstrong I 1978 59).

But this translated statement is not true for all of its substitutions. Assume that x is a red soccer ball, y is an orange chair, and z a blue billiard ball. It is obvious that the substituted statement by these particulars is wrong since a soccer ball does not resemble orange chair more than a blue billiard ball. Here is an improved nominalist translation of this statement:

“For all particulars, x, y, and z if x is red and y is orange and z is blue, then x colour-resembles y more than x colour-resembles z” (Armstrong I 1978, 59).

The problem with this translation is the fact that this translation uses the term “colour-resemblance,” these terms seem referring to a kind of general feature of particulars, a property that a nominalist wants to omit. In other words, this translation seems to be against the principle of nominalism by appealing things which are not particular.

A nominalist translation of the second statement might be the following:

“for all particulars x, if x is red, then x is coloured” (or having a kind of relation with other particulars).

However, accepting the translation as a true translation that keeps the truth value of the original sentence (Red is a color) creates another difficulty. By accepting this translation, one can logically conclude “red is a colour” from “for all particulars x, if x is red, then x is coloured.” Consider the case that one can conceivably substitute ‘extended’ for ‘coloured’ in the second statement. The substituted statement is ‘for all particulars x, if x is red, then x is extended,’ and has the same truth-value. But, the concluded statement from this substituted statement does not have the same truth value since “red is an extension” is false or at best is meaningless (Armstrong I 1978 60). Thus, this nominalist translation fails.

1.2 Possibilist Nominalism

The problem of ‘one over many’ is based on a Moorean fact (the sameness between numerically different particulars), and one can adopt several attitudes toward this kind of fact: denying it, accepting it as a brute fact, or trying to explain it. By referring the first step of Michael Devitt’s argument, Lewis states that the easiest reaction to this problem is denying it as a real fact (Devitt, 435), or at least accept it as a primitive feature of this-worldly things. Lewis argues that a comprehensive philosophy should not have any desire to deny a Moorean fact. As I explained before, a Moorean fact is based on our comprehensive knowledge about our immediate environments. An example would be the fact that our world exists. Denying such facts cannot be considered as a reasonable reaction to a comprehensive philosophy. The next option is taking it as a brute fact. Given that any comprehensive philosophy (including metaphysical systems) is going to end up with brute facts somewhere, the question is not whether there are brute facts but rather if one-over-many facts in particular are brute. Then, what makes a fact a good candidate for being brute? The answers to these questions emerge when attempts to find an explanation for the fact of sameness between particulars are doomed to fail.

Lewis says that if one intended to explain this problem, a theory of universals would not be the only option on the table. There are at least two other options that have some ontological advantages in comparison to a theory of universals. One of these options is an adequate nominalism that takes ‘resemblance’ as a primitive relation, equipped by a primitive distinction between perfectly natural properties, natural properties and unnatural properties, and enriched by ontology of possible worlds. In this section, I develop a possibilist version of nominalism based on the Lewisian idea of an adequate nominalism, and assess how this version deals with the critiques against actualist version.

1.2.1 A Development in Ontology: Lewis’s Terminology and Ontology, Paradise Not Lost

The ontology of possible worlds includes possible worlds and possible individuals. In Lewis’ terminology, “a world is a very inclusive thing” (Lewis 1986, 1). For instance, the world that we live in is a very inclusive thing since it includes all materials, dimensions, space, events, and so on throughout its entire history. Consider all constituents of our world, including past and present events, natural and unnatural properties, the ways things are, and so on. The ways that these constituents have happened might have been different in countless ways; some might have

completely been different or even opposite to the ways that our world is now. For example, this world includes an unknown amount of mass (dark and visible); however, a world might contain unmeasurable spiritual alien fundamental units that serve the same role which mass serves in our world. Therefore, a possible world is a very inclusive thing that means a world consists of all spatio-temporally related objects and events throughout a history and not just the goings on at a single planet.

Since there is a non-denumerable infinity of ways in which things could be different from how they are, there is a non-denumerable infinity of possible worlds. These possible isolated worlds or other-worldly things exist *simpliciter*, such as our world and these-worldly things exist (Lewis 1986, 3). These countless worlds are isolated from one another in logical space: there are no spatio-temporal or causal relation between them (Lewis 1986, 2). Although worlds are isolated, it is possible for two worlds to be similar in some respects; this means that possible worlds can share the same universals and conceptually related. Therefore, these worlds exist *simpliciter*, in isolation and in their own ways; ways which could entirely be different and alien to others. Worlds can be considered as actual or non-actual worlds. Lewis says that “actual” is an indexical referring to world in which it is used; therefore, when “actual” is used in another world, *w*, it refers to *w* and not our world (which from the point of view of *w* is non-actual). These worlds, similar to our actual world, are concrete worlds which might made up of some abstract parts.

1.2.2 Possibilist Nominalism: A Sets Theoretic Nominalist among Possible Worlds

Lewis suggests a nominalism that is enriched by the ontology of possible worlds, a primitive predicate, and a primitive distinction, which I call possibilist nominalism, can remain a viable option for explaining the problem of ‘one over many.’ Possibilist nominalism considers the relation between this- and other-worldly particulars as the basis of an explanation for the problem of ‘one over many.’ It means that in their strategies they quantify over the worlds. According to possibilist class nominalism, classes are a collection of this- and other-worldly individuals. Or, for a possibilist resemblance nominalist a paradigm of samples can be either actual (this-worldly) or possible (other-worldly) samples of a property.

Applying the ontology of possible worlds is not enough to overcome all the difficulties against nominalism. To keep nominalism as a defensible option, one needs to add a primitive

relation: for class nominalism *membership* and for resemblance nominalism *resemblance*. The primitive relation is needed to prevent the problems such as infinite regress. If a nominalist wants to prevent the difficulty that is related to believing in the connection between universals and causality then they should add one more primitive thing. This additional primitive part is a primitive distinction between fundamental natural properties, ordinary natural properties and unnatural properties.

1.2.3 Possibilist Nominalism versus Actual Nominalism's Difficulties

Let us see how this possibilist nominalism deals with critiques which Armstrong poses against nominalism. Some of these critiques are successfully dealt with by possibilist nominalism. First, the problem of coextensive, unique, and alien properties are solved by considering all of this- and other-worldly instances. There are no coextensive properties such as 'having heart' and 'having kidney' since there is a possible world with creatures that have 'heart' and do not have 'kidney.' In the same way, alien properties are not non-instantiated since there is a world that includes this alien properties. All unique properties are not unique anymore because there are possible worlds that include other instantiations of these properties.

Although the possibilist approach can solve these difficulties easily, there are some necessary coextensive properties, such as *triangularity* and *trilaterality* that are identical sets by considering all of this- and other-worldly instances that can be considered as a new version of the problem of coextensive properties for a possibilist. But, these properties are not distinct properties as *redness* and *greenness* are. According to Lewis, since these properties are not distinct in these cases one would have two explanations of one property, and not different properties.

The second is the problem of circularity. To use the notion of resemblance or to build a theory on this notion, one should assume resemblance as a primitive relation unless she explains what they mean by resemblance or particular resemblances, which is not possible without circularity. Since the notions of resemblance and membership are primitive, Lewis' version of nominalism does not need to satisfy this requirement.

Third, the main point of the problem of infinite regression is that to provide an explanation for the problem of 'one over many,' the first step is providing an explanation of what the meaning of 'having the property F' is, and then exploring how it is possible that very different

objects ‘have something in common.’ Such an explanation in virtue of the nominalist approach should be constructed by using terms which refer only to particulars and not by any common terms that refer to types. Since a possibilist nominalism considers resemblance as a primitive relation, there is no threat of regress from analyzing ‘have the property, F’ in terms of ‘resemblance to’, because there is no more predicate to apply for analyzing resemblance. The same is true for membership as a primitive relation.

Fourth, the problem of constructing paradigms of samples for a unique and alien property is a difficulty with the notion of ‘resemblance.’ It is conceivable that there is a possible world where there is only one ‘red’ particular. According to resemblance nominalism ‘a particular has the property, F’ meaning that ‘a particular is a suitable resemblance to the paradigms of Fs (samples of particulars that have the property F).’ Seemingly, talking about resemblance in a world that includes only one ‘red’ thing is meaningless. Applying the ontology of possible worlds can help a nominalist in this case. Possible worlds can share similar universals that means they are not conceptually isolated. Therefore, according to the ontology of possible worlds the case of having a unique property is inconceivable. One can construct a paradigm of samples by considering this- and other-worldly things.

Instead of Lewis’ claim that his version of nominalism can respond to all of Armstrong’s critiques, I think some of Armstrong’s critiques remain unmet by Lewis’ version of nominalism. First, the problem of keeping causal power says that a successful analysis of ‘having the property F’ should keep the causal power for properties. Lewis hopes that adding a primitive distinction between perfectly natural properties, natural properties, and unnatural properties, and attributing causal power to perfectly natural properties can keep the causal power for the translation of ‘having the property, F’ in terms of his saturated nominalism. Consider the proposition: *having a hard surface causes a noise when a cup falls on it*. Here is the translated proposition: *being a this- or other-worldly member of the class of hard things (or having a degree of resemblance to the paradigm of this- or other-worldly hard things) cause a sound that is a member of the class of a specific wavelength (or having a degree of resemblance to the paradigm of this- or other-worldly sounds with a specific wavelength) when a cup falls on it*. The question here is how sets of instances can bestow causal power on each other? It seems that a primitive distinction between natural and unnatural properties (that are sets) are not helpful here unless one assumes that there is a causal relation between their members. In other words, each member of the first set

is causally related to an appropriate member of the second set. If this is the case, then there is no connection between properties (sets) and causality. Instead, there is a connection between singular particulars and causality.

Second is the problem of absent relation. This problem insists that all nominalist strategies try to analyze ‘having the property, F’ in terms of a relation that an entity has with others. One can conceivably imagine a world where particulars do not have these specific relations used by different nominalist strategies. Then, in the absence of this relation, these particular should not have ‘the property F,’ but that is not the case. Assuming resemblance as a primitive relation between particulars does not bring any advantage to deal with this difficulty. A possibilist nominalist includes actual and non-actual individuals in the relevant classes and using a primitive relation (resemblance or membership) in their analysis of ‘have the property, F.’ Still one can assume a world without such a primitive relation, and without having this primitive relation it seems that a ‘hard’ object cannot be considered as ‘hard’ anymore for the inhabitants of this world. That is not the case.

Third, the problem of keeping truth value is another problem that remains unresolved. This is a possibilist nominalist translation (recall that according to Lewis abundant properties are sets):

“for all this- and other-worldly particulars, x, y, and z if x is a member of the set of red things and y is a member of the set of orange things and z is a member of the set of blue things, then x resembles y more than x resembles z.”

Again, substituting a red soccer ball for x, an orange chair, and a blue billiard ball changes the truth value of a translated sentence.

1.3 Concluding Remarks

By reducing the discussion about universals to the linguistic discussion about prediction and common noun, nominalism refutes adding any entity more than particulars to the world. I call this line of nominalism the principle of nominalism. In addition, nominalism applies different strategies to explain the problem of ‘one over many.’ In this chapter I have examined two of these strategies; class nominalism and resemblance nominalism. In addition, one can apply

nominalist approach by considering only this-worldly particulars, or by considering this- and other-worldly particulars. I have named the first one actualist nominalism and the second one possibilist nominalism. I have argued that, first, the principle of nominalism causes some difficulties for both actualist and possibilist nominalism. The most persistent problem has been translating a statement that include types to a sentence that include particulars with the same truth values. Furthermore, following Armstrong's arguments against nominalism, I have argued that the selected nominalist strategies, in both versions, fail to provide an adequate analysis for the problem of 'one over many' since these strategies have had certain difficulties to analyze the statement 'x have the property, F' such as regression, absent relation, and keeping causal power.

Chapter 2

Immanent Realist Approaches

There are two possible options for a realist approach toward the problem of ‘one over many:’ the relational and the non-relational. Since the relational approach has faced insoluble difficulties, the non-relational approach, that is, the immanent realist theory of universals, remains the only option on the table for the realist in dealing with the problem of ‘one over many.’ The immanent approach was initiated by Aristotle as the reaction to Platonic Forms. Aristotle pulls down the common features of things, in Platonic terms Forms, from the non-spatio-temporal non-physical realm to the spatio-temporal physical world, and more specifically, puts them inside of things which instantiate them. This pivotal shift should be considered as the core of any version of an immanent realist theory of universals. In this chapter, I present a modern version of immanent realism by using Armstrong’s and Lewis’ theories on this subject. I conclude that this modern version of immanent realism is not immune against critiques.

2.1 An Immanent Realist Theory of Universals

Relational accounts (including nominalism) of analyzing ‘having the property,’ as the first step to explain the problem of ‘one over many,’ involve insoluble difficulties. As a result, it seems reasonable to conclude that the analysis of ‘having the property, F’ should not be understood in terms of a relation between particulars and something extrinsic to them. This leaves immanent realism the only remaining option to explain the problem of ‘one over many.’ In addition, for Armstrong, a theory of universals should be consistent with a theory of causation that defends causal relations as relations between intrinsic features or properties of particulars. Therefore, “[t]here are the universals that there must be to ground the objective resemblances and causal powers of things, and there is no reason to believe in any more” (Lewis 1983 12).

Armstrong’s argument in favor of an immanent theory of universals is quite straightforward: first, there is the fact of sameness between very different particulars. Second, a requirement for any successful explanation of this fact is an answer to this question: what does

one mean by saying ‘having the same property, F,’ or more generally, by saying ‘a particular has the property of *F-ness*?’ Third, all rival explanations for the fact of sameness between numerically distinct particulars fail to provide an adequate answer to these questions. Fourth, the rival theories (nominalism and transcendent realism) are doomed to fail because they offer answers that invoke extrinsic relations between particulars or between particulars and some extral entities. Accordingly, there should be immanent universals because explaining the fact of sameness between particulars in terms of extrinsic relation among particulars fails.

Consequently, an explanation of the fact of sameness between particulars should be constructed by referring to an intrinsic approach to universals or a non-relational immanent realist approach.

In this section, I start by explaining how Armstrong builds up his immanent or intrinsic, approach to universals on the notion of ‘state of affairs.’ This notion lies at the ontological core of his theory and distinguishes it from the alternatives. Accepting states of affairs as the fundamental units of our perceptions enables Armstrong to satisfy his suggested requirement, a successful analysis for ‘having the property, F.’ I also assign a part of this section to the taxonomy⁵ of universals in this theory. Armstrong develops a taxonomy of objective immanent universals which serves two purposes: first, covering all of the properties and relations, which means this taxonomy should be as abundant as the taxonomy of properties and relations are, and second, providing material for grounding a theory of causation, which means that this taxonomy should be as sparse as the inventory of fundamental physical properties. Finally, I explore how Armstrong’s theory overcomes the difficulties that its rivals could not.

2.1.1 State of Affairs: Universality Plus Particularity

Armstrong introduces three principles for an ontology, the first of which is supposed to be the ground of his theory. The principles are: (1) the constitutive parts of our world are particulars that have properties and relate to each other; (2) there is a single spatio-temporal system that covers all corners of the world; and (3) there should be a completed physical explanation that completely describes the world (Armstrong I 1987 126). The first principle leads Armstrong to suggest the immanent approach to universals by accepting the state of affairs as the ontological foundation of the world.

⁵ By taxonomy I mean the classification of something.

Armstrong argues that one cannot find particulars and universals separately in the world. Based on our ordinary observations, the particularity and universality of our perceptions and phenomena are inseparable (Armstrong I 1987 111). So, an immanent approach to realism involves a dichotomy between universals and particulars which is not a difference between two kinds of elements, but a difference between “two ways of looking at the same thing” (Ewing 219). In *Universals and Scientific Realism* Armstrong does not explain how one can understand universality in a realist sense when particularity and universality cannot be separated. But in “Against ‘Ostrich’ Nominalism: A Reply to Michael Devitt” he mentions ‘abstraction’ as the way to grasp universality (Armstrong 1980 440-441). Borrowing A.C. Ewing’s words: abstraction enables us to look for universals; and sense observation enables us to look for particulars. Universals are the way that particulars are, and expecting to find them independently of particulars is not reasonable.

Armstrong asserts that since the particularity and universality of our perceptions and phenomena are inseparable, one can find them only throughout a state of affairs which is defined as “a particular’s having a certain property, or two or more particulars standing in a certain relation” (Armstrong I 1987 80); for instance, *David Armstrong being more than 4.9 feet tall* is a state of affairs. In other words, a state of affairs can be expressed by the statement that ‘x has the property, F.’ So, states of affairs are constructed out of particulars and universals. The fact that the world is constructed out of states of affairs, and not only by particulars or by universals, or particulars and universals, but separately, is the foundation of an immanent theory of universals. An immanent approach to universals can be summarized in some principles that Armstrong has outlined:

- The principle of instantiation: for each n-adic universals, U, there exist at least N particulars such that they U.
- Principle of rejection of bare particulars (weak): for each particular, x, there exists at least one universal, U, such that x is U.
- Principle of rejection of bare particulars (strong): for each particular, x, there exists at least one non-relational property, P, such that x is P. (Armstrong I 1987 113)

It is important to emphasize that although a state of affairs includes an objective general feature, a state of affairs always keeps its particularity. It means that a state of affairs is not repeatable, and “particularity plus universality yield particularity” (Armstrong I 1987 115).

2.1.2 A Taxonomy of Universals: An Abundant Sparse Taxonomy

As I mentioned before, Armstrong’s taxonomy of universals serves two purposes: providing materials to serve the job of a theory of properties, and keeping the connection between universals and causality. For the first purpose, one needs to present universals as abundant entities, and for the second purpose, one needs to show that these abundant entities are constructed by sparse ones. To do this contradictory job, Armstrong assigns a universal to each property and relation, based on the principle of instantiation. And then moving from these countless sets of properties and relations to a sparse inventory of universals by showing that all those abundant universals can be constructed based on a sparse inventory of universals in terms of applying the notion of combination and structure. In this section I focus on two types of universals, first-order universals and structural universals. First-order universals are important since they are the base of abundance, and structural universals are important for my thesis since they are one of the connection points between abundance and sparseness. In addition, this type of universals is related to one of Lewis’ main objections against the possibility of a theory of universals.

2.1.2.1 Abundance: First-Order Universals

The first-order of universals is a set of properties of particulars (such as *being red*) and relations between particulars (such as *being a member of*). Armstrong names them monadic and polyadic universals that are properties and relations. The monadic universals are not found except as the properties of particulars, and the polyadic universals as relations between particulars (Armstrong I 1978 xii). Properties are not temporal things that are created and destroyed; they are not eternal entities either, but applying the language of creation and destruction to them is not appropriate (Armstrong I 1978 112-113). Relations can be categorized into two general types: internal and external. There is an internal relation between particulars iff the particulars necessarily stand in the relation. If there is not such a necessary relation between particulars then the relation between them is external (Armstrong II 1978 85). The internal relations are not temporal, but external

relations are temporal. For example, assume that A is a soccer ball and B is a billiard ball. It follows that A is the same shape as B. So, the relation that A bears to B when A is the same shape as B is internal in Armstrong's view. In contrast, spatiotemporal relations are external (in his sense) because the intrinsic characteristics of A and B don't necessitate how close or far apart A and B are.

2.1.2.2 Sparseness: Combinations of Structures

As discussed earlier, one of the main purposes of Armstrong's taxonomy of universals is moving from abundance to sparseness. He needs sparseness since he believes that there is a connection between universals and causality, and only a small portion of properties can bestow causal power. The main idea behind this connection is that causality should be understood as a relation between intrinsic properties of particulars versus an extrinsic relation between them. Therefore, a causal power for universals or properties that necessitate each other should be considered. But there are few first-order properties that have such power to necessitate another. These properties are fundamental natural properties discovered by physics. To narrow down an abundant list of properties to a sparse list of them, Armstrong proposes two types of universals—combined universals⁶ and structural universals—which are abundant universals. Consequently, these types of universals are necessary for a theory of universals to serve its purpose.

There is an old distinction between properties that can help to understand what Armstrong means by the distinction between structural and non-structural universals which is the distinction between nomoamerous and anomoeomerous properties. A nomoamerous property is a property such that if a particular has it, then all parts of the particular has this property, being *methane*, for example. A property that is not nomoamerous is anomoeomerous (Armstrong II 1978 68), for instance, *being a MacBook* whose parts are not a MacBook. Thus, a structural universal is an anomoamerous property. According to Armstrong, "a property, S, is structural iff proper parts of particulars having S have some property or properties, T and etc. not identical with S, and this state of affairs is, in part at least, constitutive of S" (Armstrong II 1978 69). There are two types of structural universals, one of which has been called as the 'particularizing universals,' for

⁶ A combined universal is an abundant universal that is constructed by at least two simpler universals through applying conjunctive. Armstrong assigns a whole chapter in his book to proving that only a conjunctive can make a universal.

instance *being a pound of gold* or ‘having three *carbon* atoms.’ Another type is universals such as *being a methane molecule* (Armstrong II 1978 70).

In the case of ‘having three *carbon* atoms,’ Armstrong argues that since we have properties such as ‘three *carbon atoms*’ and it is irrelevant to talk about having a universal three times, to talk about these kinds of universals one needs to introduce a new type of universals that are structural universals. In the case of *being a methane molecule*, it is a molecule constructed by one *carbon* and four *hydrogens* in specific bonding relation. As a result, the universal that is assigned to *methane* is constructed by five different universals: two structural universal (having four *hydrogens*, and four *bonded*), and three non-structural universals (*carbon*, *hydrogen* and a relation of *bonded*). Consider *methane*’s case and Armstrong’s presentation of a structural universal. There is a *methane* molecule that has the property of *being methane*; it is a particular that has proper parts with different properties such as *carbon* and relation such as *bonded* that are not identical with the property of *being methane* but they are constituent of it. The main point of Armstrong’s definition is refuting the identity between a structural universal and the bare mereology of its constituent parts.

2.1.3 Immanent Realism and Difficulties

In this section I examine Armstrong’s immanent realist theory of universals in light of the difficulties that he raises against nominalism. There were six difficulties raised against nominalism. Two of them refer to the notions such as ‘resemblance,’ ‘membership,’ ‘class’ and ‘paradigm of samples.’ One of these critiques refers to nominalist translations of sentences which include common nouns. Since these critiques cannot be applied to realist approaches, I assess the immanent realist theory of universals by referring to three remaining critiques: the absence of relations, the threat of infinite regress, and keeping causal power.

The main point of these critiques is that in order to provide an explanation for the problem of ‘one over many,’ the first step is giving an account of the meaning of ‘having the property, F’. Then one can discuss how it is possible that numerically distinct objects ‘have something in common.’ But, analyzing ‘having the property, F’ in terms of nominalism and transcendent realism faces some difficulties. An immanent realist analysis of ‘have the property, F’ is: ‘a’ has the property, F, iff a is instantiating the property, F. The question is: how does immanent realism avoid these difficulties?

First, all nominalist strategies analyze ‘having the property, F’ in terms of a relation that an entity stands in to others. In the absence of these relations, the object should not ‘have the property, F.’ Instead, an immanent realist does not face such a difficulty because in its analysis, ‘instantiation’ is not a relation between particulars themselves or between particulars and an extra entity. ‘Instantiation’ is an intrinsic state of things, a relation between things and their inseparable objective features. As long as there are things with some objective features, they instantiate something; therefore, there is no possibility to lose this relation.

Second, I argue that nominalist strategies analyze ‘have the property, F’ in terms of further types of things and higher-order universals. An immanent realist analyzes ‘having the property F’ in terms of ‘instantiating the property, F.’ One might say *tu quoque* since ‘instantiation’ is not different from ‘resemblance,’ and ‘being a member.’ In his book, Armstrong does not answer this critique, but I assume that he would answer by saying that the assertion ‘x has the property, F’ refers to a state of affairs. Since immanent realism defines ‘instantiation’ by referring to the state of affair and states of affairs are fundamental constituents of our world, the predicate ‘... instantiate F’ is primitive. Then analyzing ‘having the property, F’ in terms of the primitive predicate ‘...instantiate F’ does not involve regress. But, if applying a primitive relation is acceptable, a nominalist or a transcendent realist can also apply a primitive relation to prevent this difficulty. A nominalist can suggest a primitive relation between particulars such as resemblance and membership, and a transcendent realist can also suggest a primitive relation between particulars and a Form to prevent the threat of regression. Therefore, nominalism, transcendent realism and immanent realism stand on fall together in the face of this difficulty.

Finally, according to Armstrong, causation, as a lawful relation between particulars, depends on the power that properties bestow on their instances, or it depends upon the intrinsic properties of things (Armstrong I 1978 22-23 & 27). It means that there should be a connection between universals and causality. In fact, the causal relation between singing ‘words are shattering’ and actually shattering a window is a relation between the intrinsic property of the sound such as wavelength, and the intrinsic property of the glass such as fragility. Therefore, since causal powers are intrinsic and properties have causal powers, properties need to be intrinsic. Therefore, he suggests a requirement for a successful analysis of ‘having the property, F;’ that is, a successful analysis of ‘having the property, F’ should keep the causal power for properties (Armstrong I 1978 23). Obviously analyzing ‘having the property, F’ in terms of

‘resemblance,’ ‘being a member of,’ ‘participating in a Form,’ and ‘imitating from a Form’ does not keep the causal power of ‘property, F,’ because all of the mentioned notions are extrinsic relations between particulars and the properties which ground the causal relation have to be intrinsic. In contrast, ‘instantiating the property, F’ keeps properties in its analysis. Since Armstrong’s immanent realist theory of universals constructs a taxonomy of universals that include sparse universals as the bases of other abundant universals and sparse properties (or fundamental natural properties discovered by physics) all have causal power, this analysis keeps causal powers.

2.2 A Complementary Theory of Universals

In previous section, I presented Armstrong’s version of an immanent theory of universals. Now I shift toward an approach which takes immanent universals as a complement for a theory of properties. Lewis’ “New Work for a Theory of Universals” opens with an examination of Armstrong’s work on universals to explain the problem of ‘one over many,’ attempts to find new work for universals and then adds them to his ontology (Lewis 1983, 9). Lewis finds a part of Armstrong’s argument in favor of universals problematic. However, he suggests a new job for a theory of universals as a complement to a theory of properties (he is a possibilist class nominalist about the explanation for ‘one over many’ while he’s an immanent realist about the solution to causal powers of properties). He argues that this theory helps him deal with topics such as duplication, supervenience, and divergent worlds, a minimal form of materialism, laws and causation, and the content of language and thought (Lewis 1983 9). In this chapter, first, I develop his counter-arguments to Armstrong’s arguments in favor of a theory of universals, and then explain some of Lewis’ proposals that a theory of universals is supposed to serve.

2.2.1 Objections to a Theory of Universals

The problem of ‘one over many,’ in its ontological, linguistic and epistemic versions, has been mentioned as the reason to believe or to accept a theory of universals since Plato’s discussion of Forms. The advocates of universals have argued that there should be entities which serve as the basis of an explanation for how numerically distinct objects can have a feature in common. nominalism rejects the need of these entities since they believe there is another explanation for the problem without burdening such an ontological commitment to their philosophy. Assume, for

present purposes, that nominalism is right about the redundancy of universals in an explanation for the problem of ‘one over many.’ Furthermore, assume that an adequate form of nominalism can be developed which is immune to the realist critiques presented in Chapter 1. One can ask the question: is there any basis left for believing in universals?

Lewis argues against a theory of universals as a solution to the problem of ‘one over many’ but in favor of the view that there is another job for a theory of universals to serve. I will consider each of these arguments in turn. First, I focus on his objections to a theory of universals as an answer to the problem of ‘one over many’ as well as his rejection of ‘structural universals,’ which Armstrong argues are essential to a theory of universals. Second, I discuss the new job for universals.

2.2.1.1 Universals and the Problem of One over Many

According to Armstrong, universals are needed to explain the problem of ‘one over many.’ His argument is simple. He insists on the lack of any adequate rival explanations and the Moorean fact of the sameness between numerically different particulars “is a *prima facie* case for postulating universals” (Armstrong 1980 440-441). Lewis rejects this argument as he believes that there are adequate rival theories, for instance, an adequate nominalism or a theory of tropes. He says that an adequate nominalism can explain the Moorean fact (that numerically different particulars can all have features in common) by accepting the existence of a primitive and unanalyzable resemblance relation between particulars (Lewis 1983, 21).

As Lewis argues, there are three possible ways to deal with a Moorean fact: (1) deny it, (2) accept it and analyze it, and (3) accept it as primitive. As I mentioned in Chapter 1, he refutes the first way which is denying by arguing that any comprehensive philosophy should not desire denying Moorean facts because they are epistemically more secure than any philosophical thesis that could be used to undermine them. In fact, denying them can result in the unreliability of our observations. The third option is accepting two things: first, there is a real problem here, and second, there is no real solution here. It seems that Lewis does not take the fact of sameness as a brute fact since he suggests there are at least two adequate answers to the problem of ‘one over many.’ Thus, only the second option remains on the table.

To refute the rival explanations, Armstrong reduces the problem of ‘one over many’ to “a demand for an analysis of predication in general” (Lewis 1983 19), arguing that before

answering this question that in what sense different particulars can 'have' the same property, one first needs to analyze 'having the property, F' (Armstrong 1978 11). In the first step of his argument, Lewis critiques Armstrong's strategy as one which converts the Moorean fact of the sameness between particulars to an analysis of predication and by that "the question ceased to be answerable at all" (Lewis 1983 21). This question looks unanswerable since Armstrong argues that to analyze 'having the property, F' one should apply a new type and an appropriate predicate. In other words, since there are no unanalyzable predicates, one needs to apply a new predicate and an appropriate type to analyze having the old one, *ad infinitum*. Therefore, there is a regression here and thus no answer to the question. This requirement, having unanalyzable predicates, causes a difficulty for nominalist strategies called 'relation regress' (Lewis 1983 22). It means that nominalist strategies analyze 'having the property, F' by restating other properties or relations (in other words predications) that the proposed analysis is unacceptable in terms of the requirement of unanalysed predication. But Lewis states that "... how could there be a theory that names entities, or quantifies over them, in the course of its sentences, and yet altogether avoid primitive predication? Artificial tricks aside, the thing cannot be done" (Lewis 1983 22). He argues that by considering the predication of 'instantiation' in its analysis of 'having the property, F' in terms of 'instantiating the property, F,' Armstrong violates this requirement too (Lewis 1983 23). If it is impossible to avoid the regress, then why the nominalist cannot do so either. Lewis suggests the first version of his adequate nominalism which takes the relation of resemblance between particulars as a primitive. Although accepting overabundant or mysterious primitives can cause a theory to be faulted, Lewis insists that accepting the relation of resemblance between particulars as a primitive cannot be assumed as a fatal fault (Lewis 1983 23).

But, there is a semantical version of the problem of 'one over many' which this adequate nominalism cannot explain. People use sentences that include a common noun such as 'donkey' which cannot be taken to denote particulars or individuals. The question is: What are their semantic roles? Armstrong argues that considering a collection of individuals as the semantical values of common nouns makes some difficulties (Armstrong in Lewis 1983 16). For example, according to Armstrong, in the statement that 'donkeys are mammals' the words of 'donkey' and 'mammal' do not refer to two collections of individuals. It seems controversial that by stating 'donkeys are mammals,' one considers the membership of donkeys in the sets of donkeys and

mammals and make the assertion that ‘donkeys are mammals.’ There should be some objective immanent features in those individuals prior to constructing sets of things. Instead, universals can easily serve this role, there are particulars that instantiate two universals: *donkeyhood* and *mammalhood*. and serving this role can be an adequate argument in favor of universals.

In contrast, Lewis argues that properties are the right candidate for being common nouns’ references (Lewis 1983 17). He argues that on the one hand, according to Armstrong’s theory of universals, in the final stage, universals are sparse entities. This means that they are not reasonable candidates for being the references of common nouns since these nouns are definitely abundant; thus, there are not enough universals to address abundant common nouns. On the other hand, properties are sets of individuals that are as abundant as common nouns. Are they rightful candidates for being referents of common nouns? It seems that with the lack of any other options the answer would be yes (Lewis 1983 17). Consider the example of ‘donkeys are mammals,’ even if no one considers the relations of membership in asserting ‘donkeys are mammals’ still by saying ‘donkeys’ one can legitimately refer to a set of a type of animals.

One might mention at least one more difficulty for using properties, understood as sets of instances, as the semantic values of common nouns: the possibility of non-instantiated properties (there are some common nouns without references such as unicorn). Using the ontology of possible worlds, Lewis defines properties as the sets of this- and other-worldly instances (Lewis 1986 50-51), and since properties have this- and other-worldly instantiations there are possible worlds that include creatures such as unicorns. Thus, Lewis argues that properties, understood as sets of instances, are the right candidates to be the contents of common nouns. By adding a modal realist set-theoretic approach toward properties to nominalism, as I called it possibilist nominalism, he concludes that since there is a rival explanation for the Moorean fact of the sameness of type, that is an adequate nominalism (possibilist nominalism with a primitive resemblance relation), there is no need for a theory of universals unless one can find other jobs for it.

2.2.1.2 Commitment to Present Structural Universals

Lewis also explores Armstrong’s work on universals with a more critical eye. He demarcates different conceptions of structural universals and mentions a variety of objections against each. Lewis asserts that any problem or difficulty for structural universals is bad news for friends of

universals because Armstrong's theory of universals implies there are/exist structural universals, and having structural universals is the key to reducing abundant universals to a set of sparse universals (Lewis 1986 80). One might ask why a friend of universals is obliged to accept these type of universal. I would answer that there is no obligation unless they cannot suggest an alternative to serve as referents of a common noun such as *being methane*. Therefore, if one refutes the possibility of having structural universals without introducing any alternative for them, then they refute the possibility of having a set of sparse universals in terms of Armstrong's theory. That means the resulting theory of universals cannot serve the second purpose of such a theory that is making a connection between universals and causality.

But, why couldn't Armstrong simply admit that there are abundant universals but insist that not all of them enter into causal relations? Armstrong himself does not consider this possibility and does not provide any clear answer to this question, either. It seems to me that because of his scientific interests, Armstrong intends to consider universals as entities that ground both the sameness between numerically different things and the causal connection between things. Therefore, if there are some universals (properties) without any causal power they should be reducible to other universals with such a power. One might ask why all universals ground both of these purposes? I would answer that maybe because there are other alternative options if universals are supposed to ground only the sameness between numerically different particulars.

Excluding the above possibility, I return to discuss the issue of structural universals. First of all, what is a structural universal? A structural universal is a universal; thus, it can occur repeatedly. Second, "it is instantiated by different particulars, at different spatiotemporal position; and wherever it is instantiated, there the whole of it is present" (Lewis 1986 80-81). According to Armstrong, a property, S, is structural when parts of particulars that (the particulars) instantiate S, instantiate different properties from S. It can simply be said that a structural universal includes other universals, or the constituents of structural universals are universals. Recall that according to Armstrong structural universals are the key to reduce a universal to another. This is not possible unless the constituents of structural universals are universals. For example, *being methane* is a structural universal that is constructed out of simple monadic universals such as *carbon*, *hydrogen*, *quaternary*, *singularity* and a simple dyadic universal such as *bonded*. Lewis suggests three different "conception[s] of what a structural

universal is,” then he provides some objections to each to show that all the conceptions of structural universals are not acceptable, and without any conceivable conception of an entity, one cannot consider the existence of the entity. He names these conceptions: “linguistic, pictorial, and magical” (Lewis 1986 87).

The linguistic conception of a structural universal presents it as a “set-theoretic construction out of simple universals,” or a complex predicate in a language whose words are simple predicates, generated by logical connectives, quantifiers, and variables (Lewis 1986 87). But there is a problem here. This conception needs the simples to construct structural universals while “Armstrong's principal need for structural universals is exactly to cover the possibility that there are no simples, or not enough simples; and constructions out of simples are worthless to meet that need” (Lewis 1986 89). For instance, if we need a structural universal for *methane* which is just a set-theoretic construction out of simple monadic universals such as *carbon*, *hydrogen*, *quaternary*, *singularity* and a simple dyadic universal such as *bonded*, then we will need a structural universal for *being carbon* that is a set-theoretic of constructions out of monadic universals such as *being protons*, *neutrons*, *electrons*, and *senary*. But we still need more structural universals for *protons*, *neutrons*, *electrons*, and maybe more for *quarks*, *color*, *flavour*, *fundamental interaction*, *strings*, *vibration*, *dimension*, and *ad infinitum*.

According to the pictorial conception, “a structural universal is isomorphic to its instances that are themselves universals” (Lewis 1986 90). In other words, it is a three-dimensional model of several universals; for example, the structural universal of *methane* is a three-dimensional model of *carbon*, *hydrogen* in a specific bonding relation. In this version, a structural universal is mereologically composed of simpler universals and “it is nothing over and above them, nothing but their mereological sum” (Lewis 1986 90). In this conception, a structural universal is an individual entity, not a set. The proper parts of this individual entity are simpler universals. As a proper part, a simpler universal can be a complex universal or a simple universal. Therefore, there is no need to distinguish between simple and complex universals, and according to this conception it is not necessary that a simple constructive part be the actual simplest part.

The Pictorial conception has its own problems, however. Consider that constituents of structural universals are universals. In the *methane* example, each *methane* molecule does not have one *hydrogen* atom but four. But four of what? According to the definition of structural universals suggested by Armstrong, it should be four universals of *hydrogen*. Yet, it is

meaningless to talk about having four of the same universals since universals are unique (Lewis 1986, 91). One might argue that since universals are multiply locatable, they can occupy multiple ‘locations’ in a single abstract structure. Universals can occupy multiple ‘locations’ in terms of their instantiations by particulars. But, according to the pictorial conception of structural universals, the constituents of structural universals are universals which is controversial. Actually, this point, universals as unique entities, is one of Armstrong’s secondary reasons to accept the necessity of having structural universals. He argues that since we have properties such as *being two electrons* and it does not make sense to talk about having a universal twice, one cannot talk about this kind of universals in terms of simple universals. (Armstrong II 1978 69-70). To avoid this problem, Armstrong introduces structural universals and, seemingly, reproduces the problem in at least one conception of structural universals—the pictorial.

Finally, the magical conception asserts that a structural universal has no proper parts. Speaking of composition here is metaphorical. “If we say that the universal *methane* consists of the universal *carbon*, *hydrogen*, and *bonded*, the most that we may mean is that an instance of *methane* must consist, in a certain way, of instances of the others,” and the necessary connection between a whole and its parts, which means *methane* cannot be wholly present without *carbon*, *hydrogen*, and a specific bonding relation, is just a brute modal fact (Lewis 1986 100-101). In other words, a composition of parts is always something more than its parts, but how is it possible? The answer is, ‘the world behaves in this way.’ Lewis emphasizes that such a mysterious way of explaining any topic means that there is no real conception here (Lewis 1986 102). Therefore, because of the lack of a definable conception for structural universals, there is no advantage in holding structural universals. Since having structural universals is vital to having a sparse immanent theory of universals to make a connection between universals and causality, a theory of universals that requires these entities, such as Armstrong’s version of an immanent realist theory of universals, fails.

2.2.2 A Theory of Universal as the Complement

Lewis argues that since there are explanations for the problem of ‘one over many—at least an adequate nominalism and a theory of tropes—and there is no reasonable conception of structural universals, there is no need for a theory of universals unless some new jobs are suggested for

universals. Lewis believes that a theory of properties is where one can find a new job for universals.

2.2.2.1 A Theory of Properties

A naïve set-theoretic definition of properties defines properties as sets of instances or things which instantiate them (Lewis 1986 169). This naïve set-theoretic version of a theory of properties has faced some difficulties, including the problem of accidental coextensive properties, the problem of non-instantiated properties, and the possibility of the existence of alien properties. In his book, *On the Plurality of World* (1986), Lewis introduces an improved version of this theory based on the ontology of *possibilia* proposing that: properties are sets of this- and other-worldly instantiations of them (Lewis 1986 50-51). Accordingly, there is no possibility of having accidental coextensive properties when we consider all members of a set that belong to all possible worlds, because there are some worlds including creatures that have a heart but not a kidney. Therefore, there are no non-instantiated and alien properties when one considers other-worldly objects and individuals. In addition to properties, there is the same analysis for relations; for instance, a dyadic relation is a set of ordered pairs of related this- and other-worldly things (Lewis 1986 52).

The ontology of *possibilia* helps us solve the old problems; however, it has brought some new difficulties for a set-theoretic theory of properties. First, consider that having a property (the relation of membership) is often contingent: a pink pig, for example, might have been yellow (might have been a member of the set of yellow pigs). But if we consider the full memberships of the set of pink pigs, this- and other-worldly members, there is no contingency anymore since we consider any possibility for a specific pig among the worlds. Lewis argues that the contingency of the relation of membership is preserved when we restrict ourselves to a world, and this level of contingency is enough for a set-theoretic theory of properties (Lewis 1986, 51). The idea is that the pig is in the extension of ‘pink things’ but it (or a counterpart) is in the extension of ‘yellow things’ at other worlds.

2.2.2.1.1 A Taxonomy of Properties

When we talk about the variety among properties, we talk about properties as abundant and as sparse. According to an abundant theory of properties, properties are as abundant as sets. They

are “as extrinsic, as gruesomely gerrymandered, and as miscellaneously disjunctive” (Lewis 1986 59). They carve things up not in their joints, but in whichever way that one pleases. Therefore, two intrinsically identical things share countless different properties, as they stand in different extrinsic relations to others and fail to stand in countless others. In contrast, a sparse theory of properties considers properties as intrinsic. This theory characterizes things by considering their features independently of other things. Jonathan Schaffer states that these properties characterize things in virtue of their fundamental natural similarities, such as ‘being quarks,’ and their causal power (Schaffer 98). These properties should only satisfy our needs to characterize the world without redundancy. Thus, “they are highly specific, the sets of their instance are *ipso facto* not entirely miscellaneous” (Lewis 1986 60). For example, physics provides a short list of fundamental physical notions that can be counted as sparse properties such as: the *charges* and *masses* of particulars. Apparently, it is possible to have an inventory of sparse properties based on this- or other-worldly things, since physics can provide a list of fundamental properties, but having an inventory for countless abundant properties is quite controversial.

Lewis insists that a theory of properties can accommodate both abundant and sparse views of properties (Lewis 1986 60). To prove this point, he makes two major distinctions between properties. His first suggestion is making a distinction between properties as natural and unnatural. According to Lewis, natural properties are a small minority of properties which stand in a relation with perfectly natural properties. Perfectly natural properties are fundamental features of the world (Lewis 1986 60). Therefore, there are a few perfectly natural properties, and the rest of the family of natural properties are natural in a derivative way, or in Lewis’ words “by not-too-complicated chain of definability from perfect natural properties” (Lewis 1986 61). Colors are less perfect natural properties in comparison with completely perfect natural properties such as the *mass* or *charge* of fundamental particles, and all compounded colors of original colors are less natural in comparison with the original colors. All properties that do not belong to this family are unnatural properties. Therefore, unnatural properties are independent of perfectly natural properties, and because of this there should be a distinction between them and derivatively natural properties. Thus, the categories are perfectly natural, derivatively natural, and (entirely) unnatural.

In addition to the natural and unnatural distinction, there is also another helpful distinction among properties, which is between intrinsic and extrinsic properties. Things have intrinsic properties in virtue of the way that they themselves are, and extrinsic properties in terms of their relations, or lack thereof, to other things. For instance, *density* is an intrinsic property of any physical object, whereas *weight* is an extrinsic property since it depends on the gravity (Lewis 1986 111). A few questions arise when one makes such a distinction. Is there any relation between these two distinctions among properties? Can we unite them in a unique distinction?

It is an uncontroversial fact that not all intrinsic properties are natural. Lewis mentions an example of unnatural intrinsic properties which are disjunctive; for instance, the property of *being tripartite-or-liquid-or-cubical*, that are still intrinsic (Lewis 1986 61). Lewis suggests that one can make a relation between these two distinctions in terms of the notion of duplication. “An intrinsic property is one can never differ between two duplicates” since, first, all perfectly natural properties are intrinsic properties, and second, all duplicates have the same corresponding, perfectly natural properties (Lewis 1986 61). It seems that the fundamental distinction among properties is the distinction between natural and unnatural properties. In addition to properties, there are the same distinctions between relations as the natural and unnatural relations and internal-external relations. Internal relations supervene on the intrinsic nature (property) of its relata taken separately, for example, the relation of *closeness* of worlds as is mentioned by Lewis. Relations that are not internal would be external (Lewis 1986, 62). Thus, the distinctions between natural and unnatural properties and relations are fundamental for a taxonomy of properties for a theory of properties.

2.2.2.2 A Complementary Work for a Theory of Universals

A taxonomy of properties includes a major distinction between natural and unnatural properties. Lewis argues that since there is no reason to reject this distinction and a theory of properties needs this distinction to discuss other relevant issues such as duplication, intrinsic and extrinsic properties, and so on, an adequate theory of properties is a theory which recognizes an objective difference between natural and unnatural properties (Lewis 1983 14). But how? According to Lewis, there are three options on the table. First, accepting this distinction as primitive; second, using a theory of tropes to make this distinction, and third, accepting a sparse immanent theory of universals (Lewis 1986 63-64).

As I mentioned earlier, natural properties (or sparse properties) are a small group of properties which explain the world in a different way in comparison with unnatural properties as abundant properties. Based on this difference, Lewis suggests that a theory for abundant properties should consider them as the sets of instances since sets are the rightful candidate to do the job of abundant properties in describing the world. Instead, a theory of sparse properties should attribute a universal to each perfectly natural property since immanent universals, in terms of Armstrong's theory of universals, are the rightful candidate to serve the work of sparse properties in describing the world.

Sparse properties characterize the world and things-in-the-world in virtue of their fundamental similar features and their causal relations. Properties as the set of instances might serve the first purpose, but they definitely cannot serve the second one. Remember Armstrong's argument that "there are the universals that there must be to ground the objective resemblances and causal powers of things, and there is no reason to believe in any more" (Lewis 1983 12). That is why Lewis suggests immanent universals to be sparse properties.

By considering immanent universals as the sparse properties, one can make the required distinction between natural and unnatural properties. But, how can one make this distinction in virtue of a sparse immanent theory of universals? The main point for making this distinction is that "to each perfect natural property there corresponds a universal not a set of instances, and wherever the property instantiated there the corresponding universal is present" (Lewis 1986 64). Accordingly, as much as the fundamental properties that have been discovered by physics or will be discovered there are non-spatiotemporal immanent universals, for instance mass, charge, color of quark, flavor of quark, dimensions, and so on and so forth. Therefore, the inventory of universals is identical with the inventory of perfectly natural properties. This solution needs only one primitive notion to avoid Armstrong's regression problem of predication, to explain what one means by 'having the universal, F' that is 'instantiation' (Lewis 1986 65). This is a new job and hope for a theory of universals.

2.2.2.3 Why One Needs Both of These Theories

If one can accept using universals to pick out 'perfectly natural properties' why should she stop using universals and continue to use sets of instances for other unnatural properties? There are

two major differences between properties and universals that support the idea of keeping both of them instead of reducing one of them to another. First, universals are the constituents of each particular that instantiate them, but particulars are members of a property understood as a set of instances. In other words, “universal would unify reality in a way that properties do not” (Lewis 1983 11). It means that the nature of universals and properties are entirely different, and one cannot substitute them for each other (Lewis 1983 10). Second, universals are sparse since they should prepare a minimal conceptual structure for characterizing the world completely in terms of similarities and causal relations among particulars (Armstrong 1978 7-8). But properties are as abundant as sets of instances (Lewis 1983 13). They can explain the sameness among particulars in terms of their *membership-hood*; however, abundant properties cannot characterize the causal power that are intrinsic to particulars. This difference gives them different qualifies to deal with different jobs. On the one hand, Armstrong mentions two main jobs for universals and believes that abundant properties cannot do them; these jobs are analyzing the objective resemblance between particulars and explaining the causal power of things (Armstrong in Lewis 1983 12). On the other hand, since abundant properties are potentially countless sets of instances, they are suited to do different jobs. They can serve as semantical values of common nouns, for instance *humanity*, and as semantical values of second-order quantification, for example *color*. Lewis argues that universals as sparse properties are ill-suited to do these jobs. Thus, there are some jobs for universals as sparse properties that abundant properties cannot serve, and some jobs for abundant properties that universals, as sparse properties, cannot serve. Additionally, since an adequate theory of properties should be able to make a distinction between perfectly natural properties as sparse and unnatural properties as abundant properties, one needs to keep both universals and properties.

2.3 Against Armstrong and Lewis

Armstrong and Lewis both hold an immanent realist theory of universals but for different reasons. Armstrong endorses this theory as the only reasonable explanation for the problem of ‘one over many,’ and provides grounds for the connection between universals and causality. Lewis endorses the immanent realist theory of universals in order to distinguish between perfectly natural and unnatural properties. I think both of these views face the same difficulties.

2.3.1 Against Armstrong's Theory: The Essence in Crisis

I make some critical points using Armstrong's notion of a state of affairs that can be considered as epistemological issues. One might question the legitimacy of doing epistemology to evaluate metaphysical issues. Before delving into the first critique, I need to make explicit the principle that I presuppose about the link between metaphysics and epistemology. As David G. Ritchie argues, there are some fundamental epistemological propositions that conclude knowledge is possible. Such epistemological propositions should be considered as the bases to construct "speculative metaphysics." Furthermore, the results of epistemology can set some problems for a metaphysics. "The problems, even when thus determined, are so numerous and admit of so many various answers that the metaphysician has no reason to complain that the epistemologist is interfering unduly with his province" (Ritchie 28). If so, it is not absurd to study metaphysical issues in terms of epistemological issues that are relevant to them.

A state of affairs is a particular having a property, for instance, *David Armstrong being more than 4.9 feet tall* is a state of affairs. According to Armstrong's view about states of affairs, they are the bases of our perceptions which have always kept their particularity. But, how can they explain the problem of 'one over many?' I would restate the problem of 'one over many' by saying that there are numerically distinct states of affairs that have the same feature in common. According to Armstrong, that feature in common is the same properties of things and the same relations among things, and thus the problem is solved. Nonetheless, according to an immanent thesis, properties or relations are inseparable from particulars, meaning that one can recognize them only in terms of a particular. The question is, *how can a property or relation keep its universality when they are understood only throughout particulars?* Consider these different states of affairs: *My shirt being red, my brother's pants being red, my hat being red, a tulip being red,* and so forth. In these cases, there is no universal sense of *redness* since there is no identity between 'redness of my shirt' and 'redness of my brother's pants.' There is no identity since in terms of the immanent thesis, *redness* of my shirt is not separable from 'my shirt' and *redness* of my brother's pants is not separable from 'my brother's pants.' Thus, one has not ever had *redness* itself, instead they always have had the 'redness of something.' Accordingly, there are two different kinds of *redness* here. The point is that immanent universals are supposed to be wholly present in multiple locations, but since Armstrong denies the possibility of grasping universality without particularity, they cannot be wholly present. Thus, there is not an objective feature which is wholly present in

different locations. Instead, since the objective feature is not separable from its location it cannot be wholly present in another location.

One might argue that for immanent universalists, universals are immanent in the particulars, so the red is present in the shirt. But the *redness* of the shirt, in abstraction, is the same as the *redness* of the pants. And, the *redness* of the shirt, by abstraction, is different from the *cottonness* of the shirt. As I mentioned before, for Armstrong universality is not separable from particularity. Therefore, in the case of red shirt and red pants, there is an inseparable *redness* from a specific shirt in the shirt and an inseparable *redness* from a specific pants in the pants. The question is: how can one guarantee that the result of the abstraction of *redness* can keep both objectivity and universality when the universality is inseparable from the particularity? I think the result of the abstraction cannot keep both.

Following this point, the second objection emerges that is the process of extracting a feature in common. How can one grasp objective universals from states of affairs? To extract such things there are two possible options: abstraction or convention. One might wonder why not direct apprehension? The immanent universals are after all wholly present in the objects of experience. The difficulty related to direct apprehension is the individuation of universals. By direct apprehension, in terms of Armstrong's view, one can grasp only particularities (this or that shirt's *redness*) that are not technically the feature in common. Since the result of our observations are presented in terms of states of affairs they always keep particularity and cannot be the bases for universality without additional actions such as abstraction and convention. First, by observing the same thing that appears in numerically distinct particulars, one can purify their perceptions from all individual features of them, such as locations and other different properties and relations, and come up with a common idea about that feature in common. If this is the case, advocates of abstraction should answer these questions: Why should the result of this process be considered inter-subjective? In other words, how can one prove that the result of abstraction is not subjective? I think there is no non-controversial answer to these questions. Second, one might suggest that by observing the same thing which appears in numerically distinct states of affairs people can assign a tag to refer to this specific feature. This solution can answer the question of 'how one refers' not 'how this feature in common is grasped.' Since there is a convention to refer to a feature in common, this solution implies that there is nothing more than particularity in those states of affairs. That is the principle of nominalism, already denied by Armstrong's theory.

Furthermore, there might be a third option that is the combination of abstraction and convention. According to this option, first, one grasps a common idea of a feature in common by abstraction. Second, a tag is assigned to this common-idea not to those states of affairs. This option may be able to prevent the threat of nominalism, since one assigns a tag to the common-idea that is grasped based on observing concrete things, yet it cannot provide uncontroversial answers to the mentioned questions for the first option.

2.3.2 Against Lewis

Since Lewis accepts the immanent version of universals, his theory also faces the above critiques. Furthermore, in this section, I focus on the role that Lewis claims universals play in drawing the distinction between natural and unnatural properties, arguing that universals are redundant in this domain. The main idea of Lewis' argument for the essential role of universals in making the distinction between natural and unnatural properties is that the alternatives face the problem of circularity since the rival ways of drawing such a distinction presuppose the notion of natural properties. Lewis suggests that one can "take the perfectly natural properties to be those that correspond to universals (in the sense that the members of the property are exactly those things that instantiate the universal)" (Lewis 1983 28). Then, among the taxonomy of properties, properties that have a universal assigned to them or can be derived from these fundamental properties are natural and the rest of them are unnatural.

According to Lewis there are two different types of properties: sparse and abundant. In *The Plurality of Worlds*, he argues that "[i]f we have abundant properties then we have one of them for each of sparse properties... We need no other entities, just an inegalitarian distinction among the ones we've already got (Lewis 1986 60). Instead, in "New Work for a Theory of Universals," he proposes extra entities to make the distinction between abundance and sparseness: universals. As I discussed earlier, Lewis also maintains that there are two other options to make such a distinction; take it as primitive or make it by accepting a theory of tropes.

The primitive distinction view and Trope theory aside, why should one accept universals when one can pick up natural properties by referring to fundamental features of the world discovered by physics? Here is my suggestion to make this distinction. There is a set of fundamental features of nature that are discovered by physics (for a reductionist view) or any of special science (for a non-reductionist view). One can make up the set of sparse properties in the

way that each of its members correspond to one and only one member of the set of those fundamental features of nature. Thus, universals are redundant since physics does the job of making distinctions as well as they do. There is a difficulty with my suggestion in terms of the second part of Armstrong's argument in favor of universals: the causal connections between properties. This is a difficulty since there is no causal connection between two sets of instances in terms of their nature. Although in "New Work for a Theory of Universals," Lewis does not mention it clearly, it seems that the necessity of having such connections to extract laws of nature from accidental regularities motivates Lewis to keep universals as an option on the table. Thus, one needs immanent universals since only these entities can ground the connections between spares properties and causality.

2.4 Concluding Remarks

To explain the problem of 'one over many,' Armstrong argues that universals are needed. Since transcendent universals have some insoluble difficulties, it has to be immanent universals. Furthermore, immanent universals are consistent with Armstrong's ontology that is based on states of affairs (universality plus particularity). In Armstrong's theory of universals, universals are properties and relations. They are inseparable from particulars which instantiate them. Although properties and relations are abundant, there is an elite minority which other properties and relations can be reduced to the elite ones. Abundant properties and relations explain the problem of 'one over many' and the elite ones ground the relation between a theory of universals and causation. Lewis refutes the first part of Armstrong's argument in favor of universals. He insists that nominalism plus ontology of possible world can provide an adequate solution for the problem of 'one over many.' But, by suggesting a new work for universals, making distinction between natural and unnatural properties, Lewis accepts the second part of Armstrong's argument.

I have mentioned several points against Armstrong's argument that question the objectivity and universality of an immanent feature. Therefore, I have concluded that immanent universals cannot explain the problem of 'one over many.' In Chapter 1, I have established that possibilist nominalism (nominalism plus ontology of possible world) has faced some difficulties for explaining the problem of 'one over many.' Furthermore, in this chapter, I has argued again the new work for universals, and I have suggested that to make a distinction between properties,

universals are redundant. I accept, however, that my argument cannot refute the connection between some intrinsic features (properties) of particulars and the causal relations between them.

Chapter 3

A Linguistic Ground

So far, in contrast to Lewis' view, the problem of 'one over many' remains unexplained since actualist and possibilist nominalism failed. Immanent universals faced the difficulties of individuation and abstraction. I accept the fact that there are some objective features in things. These features have important roles to analyze causal relations. But, these objective features are unable to unify themselves under a unique notion. In other words, since they are inseparable from things that instantiate them, they cannot unify themselves in one objective property which is wholly present in different locations. Therefore, they are not adequate to explain the problem of 'one over many.' What is ultimately left on the table to explain the problem of 'one over many?' I believe the answer lies in our linguistic abilities. In this chapter, I defend a theory of universals grounded on our linguistic abilities, and at the end, I assess my theory in the light of critiques mentioned in Chapters One, Two and Three against the rival theories.

3.1 An Analytic Quasi-Platonic Theory of Universals

In this section, I develop my idea about grounding a theory of universals on our linguistic abilities. This idea presupposes a Strawsonian approach to metaphysical debates. First, I briefly explain this approach to metaphysics. Second, I start my analysis by demarcating which of our linguistic abilities is to be focused on in my research: material inference. In the third step, I investigate material inferences to analyze how these inferences work. This step leads me to concepts and a conceptual network. Fourth, I study a specific view about the nature of concepts to find an appropriate view which facilitates evaluating material inference. Finally, I suggest considering singular concepts as universals and develop a theory of universals.

3.1.1 Analytic: Metaphysic as a Conceptual Framework

In *Individuals*, P.F. Strawson introduces the term "descriptive metaphysics." He states that "[d]escriptive metaphysics is content to describe the actual structure of our thought about the

world, revisionary metaphysics is concerned to produce a better structure” (Strawson 9). To clarify descriptive metaphysics, Strawson emphasizes that it is not different from philosophical, logical and conceptual analysis in intention, but different in the extent and generality (Strawson 9). He discusses what a metaphysician looks for is a structure that does not exhibit itself on the surface of language but far deeper, that “lies submerged” in it (Strawson 9). Descriptive metaphysics always involves in a deeper analysis of language usage than “what is revealed by the analysis of language in the ways that were pursued by the ordinary language philosophers” (Pelletier 3).

To deal with the fact of the sameness among particulars, I follow the line of Strawson’s descriptive approach to the structure of human thought. Studying language to grasp the fundamental characters of our thoughts that “lies submerged” in it is different from other linguistic approaches to the fact of universality mentioned in Chapters 1 and 2, which appeal to predication and the reference of common nouns. The argumentative strategy is that successful communication presupposes the existence of inter-subjectively shared concepts which can be used to explain the problem of ‘one over many.’ I believe that this approach differs from other approaches that analyze the fact of universality using linguistic entities such as predicates and common nouns.

3.1.2 Language and Reasoning: Material Inference

There are different kinds of linguistic activities, such as performing speech acts, reasoning and so forth. For the purpose of this thesis, I focus on the uses of language which deals with constructing and evaluating arguments. One can categorize different processes of arguing under the notion of reasoning. Given the objectives of my thesis, I focus on a type of reasoning that is made and evaluated by referring to “the conceptual contents of its premises and conclusions” (Brandom 97). This type of reasoning is called material inference. For instance, consider the following argument:

P: Saskatoon is to the north of Regina

Thus C: Regina is to the south of Saskatoon

So, there is an inference from ‘Saskatoon is to the north of Regina’ to ‘Regina is to the south of Saskatoon.’

There are at least two approaches to explaining the correctness of the conclusion of a material inference: A conceptual analysis and a formal logical analysis. According to the conceptual analysis, since there is an inferential connection between the concepts used in premise and conclusion, one can derive an appropriate conclusion from a relevant premise correctly

(Brandom 91). Instead, a formal logical analysis considers material inferences as enthymemes (enthymemes are an argument in which one premise is not explicitly stated) which means there is an omitted conditional in a material inference, and by considering this omitted conditional, an material inference converts to a *modus ponens* (Brandom 101). For example, in the case of Saskatoon-Regina, the omitted conditional is 'if 'Saskatoon is to the north of Regina' then 'Regina is to the south of Saskatoon,' and by having 'Saskatoon is to the north of Regina' one has 'Regina is to the south of Saskatoon.'

But why should one prefer a logical formal analysis to a conceptual one? Or, why should one prefer the logical form to the non-logical content? Before answering these questions, one should provide satisfying answers for three more questions. The questions are: How can one know that the argument is enthymematic in the first step? How can one grasp the omitted or hidden conditional in the first place? and, how can one make a conditional without concerning conceptual contents? The answer of last question can consider as the base for answering others. So, to answer these questions, I examine a case of material inferences. Consider the case of Saskatoon-Regina without the concept of 'north' and 'south.' In this case, there are two geographical positions in the Saskatchewan province in Canada. From these two positions can be constructed two relations: the SR-relation (Saskatoon to Regina) and the RS-relation (Regina to Saskatoon). There is a second order relation between these two relations that can state in terms of this conditional: if a stands in the RS relation to b, then b stands in the SR relation to a (or if $aRSb$ then $bSRa$). That seems a pure formal logical analysis, but how about the two Iranian cities of Tehran and Esfahan? There is the same relation between Tehran and Esfahan, and in fact there are many sites and geographical positions that satisfy the relation between Saskatoon and Regina. One can sign a tag (or a name) to this relation, and generalize this case to the countless same cases. In other words, based on geographical observations one can assign a general name to refer to the same geographical positions. And based on this general name, one can construct a second-order relation that can state in terms of a conditional. But, what is the difference between this analysis and a conceptual one? That is to say any general account of the enthymematic conditionals will have to draw on the same kind of conceptual connections.

In *Making It Explicit*, Robert Brandom considers these two analyses as the two ways of "understanding the relation between something implicit and an explicit expression of it" (Brandom 101), and he insists that there is no contradiction between these two analyses. It means that one can agree with the formalist view, but not analyze all inferences in terms of omitted conditionals.

Brandom suggests a pragmatist line of thought that starts with non-logical content to explain “how logical vocabulary such as the conditional is to be understood as permitting the expression of those implicit inferential commitments in an explicit fashion” (Brandom 101). In other words, expressions have conceptual contents which generate material transformation rules, and conditionals should be interpreted as the expressions of these material transformation rules (Brandom 104). Having concepts is, therefore, prior to constructing any conditionals in language. But what is a concept, and how can one grasp it? Although, for Brandom, concepts are analyzed in terms of inferential and pragmatic rules, by accepting the role of concepts to make material inferences, I seek different answers to these questions.

3.1.3 The Nature of Concepts

As explained earlier, material inferences need concepts and their relations since their validity depends on conceptual relations. Concepts are connected to many other concepts (Brandom 89) and generate a web that enable us to communicate. To understand the role of concepts in material inferences, one needs to have a clear idea about the nature of concepts and the web of concepts. Uncontroversially, concepts are considered the constituents of thoughts (which is distinct from being the subject matter of thoughts). One may rely on subjective and inter-subjective approaches to understand the nature of these constituents. In contrast to an inter-subjective attitude, a subjective attitude involves analyzing concepts as the results of the mind’s processes, i.e. an internalist approach. An inter-subjective attitude can be pursued by two distinctive approaches of pragmatic and realist. My discussion in this section is limited in principled ways. That is, I do not intend to argue in favor of or against any of these alternatives. Instead, I accept one of these alternatives, that is considering concepts as inter-subjective abstract object since this approach facilitates making and evaluating material inferences.

3.1.3.1 A Quasi-Platonic: A Realist Inter-Subjective Nature

The inter-subjective abstract object approach toward concepts is the realist one.⁷ Considering concepts as regular objective entities seems controversial and counter-intuitive. But, there are other

⁷ As I discussed, there are other alternatives that are not discussed in this thesis: the psychological-internal approach and the pragmatist approach. The psychological-internal approach is initiated by empiricists such as Locke and Hume, who consider concepts to be mental representations. Following this view, some scholars have come up with the idea that concepts are the psychological entities that are meaning (or content) of the internal system of representation

options for a realist to consider as the nature of concepts that are abstract objects. Some scholars propose Fregean senses as the rightful candidate for being concepts (Zalta 341-342). According to Frege, there is a distinction between sense and referent. Names possess sense, so different names possess different senses whether they have the same reference or not. This distinction enables us to meaningfully use expressions such as 'Pegasus' since these expressions have a sense although there is no referent for them (Dummett 1973 96-97). Frege considers these entities as abstract objects which belong to a 'third realm.' Karl Popper has the same idea of a 'third realm' that includes propositions as the abstract entities (Armstrong II 1978 128). There are also some difficulties with this approach, the main one being the accessibility of these objects. If concepts are used by people, then they should be accessible. Critics might ask in what way one can access such abstract objects. Similar to a transcendent approach, it seems absurd and problematic that there is a connection between two abstract and concrete realms.

To avoid the difficulty of crossing naturally different worlds, some scholars suggest that this view, concepts as abstract entities or Fregean senses, is not committed to accepting that there is a third realm. One can introduce the Realist approach to concepts in terms of the traditional Fregean view of sense as inter-subjective accessible abstract objects. The main point in dealing with Fregean senses as abstract entities is that these entities exist 'apart from' particulars. They comprise a reality independent of other things. None of these points logically result in the implication of the third realm. Furthermore, there is one more realist approach to the concepts that is considering them as the inter-subjective accessible functions (as abstract objects) which is not tied to the notion of third realm. To make a distinction between these two realist views, I name the first approach a 'hardline realist view' and the second one a 'moderate realist view.' Rudolf Carnap suggests that "intensions, for whatever entities are being considered, can be given a precise mathematical embodiment as functions on states, while extensions are relative to a single state" (Fitting §2.3). In other words, the Fregean sense can be given as functions. To explain what a function is supposed to do, it is worthy to consider the point Lewis mentions and refutes; properties

(Fodor 183). This approach presupposes the representational theory of the mind and an internal system of symbols called 'the language of thought hypothesis.' As a result, the concept of 'cat' is the meaning (or content) of an appropriate mental representation of our ordinary observations of particular cats. According to a Pragmatist approach, the concept's nature is the same as other abilities which cognitive agents have (Dummett 1993, 98). By referring to the pragmatic approach to concepts, the concept of 'cat' is our abilities—in other words, our behaviors and actions—to demarcate particular 'cats' from 'non-cats' and making a variety of expressions about cats.

as functions. The idea is that one can take properties as functions from worlds to sets of things. A function attributes to a world things that have the property relative to that world (Lewis 1986 53). I develop the moderate realist view by accepting the ontology of possible worlds. Therefore, drawing on Lewis' words, the moderate realist view of concepts maintains that concepts are senses, and senses are functions which attribute to a world extensions that are referents of senses relative to that world. In this thesis, I remain neutral and do not take side on these alternatives. I believe both of these approaches (the approach that takes concepts to be inter-subjective accessible function and, secondly, the approach that takes them to be intersubjective accessible abstract objects) can ground a theory of universals.

3.1.3.2 Theory of Universals: Universals as Simple Concepts

I accept that concepts are (inter-subjectively accessible) abstract objects or functions that enable us to distinguish one statement from another. Concepts are complex or simple; for instance, the concept of 'cat' is a simple concept and 'short spy,' 'brown cow,' and 'the desk that I am sitting behind it' are complex concepts. But, how can one draw the simple-complex distinction? The key points to make such a distinction is concepts' corresponding linguistic expressions and phrases. If a concept can be assigned to a compound phrase then the concept would be a complex one. There might be some exception here such as *astronomical objects*. Therefore, there should be a condition for exceptions. Here is the condition: if a concept assigned by a compound phrase refers to an unreducible type, then it should be considered as a simple concept. Following Lewis' suggestion and in the same way, I suggest that take the simple concepts to be those that correspond to universals (in the sense that the things which the simple concept is applied to are exactly those thing that instantiate the universals). Then, being involved in material inferences is not relevant to taking concepts as universals.

As I mentioned earlier, in this thesis I consider two approaches to Fregean sense that are the traditional Fregean sense excluding the third realm and the functional Carnapian sense. In both senses, I argue that universals are simple concepts and are as abundant as concepts. Concepts are (inter-subjectively accessible) abstract objects or inter-subjective accessible function that would assign extensions. Therefore, the numerically distinct this- and other-worldly things have a feature in common since they are subjects of our thoughts and the same concept is applied to this feature in common. This is the core of my theory of universals.

Universals as simple concepts and abstract objects, if one considers them the inhabitants of the third realm, (the hardline realist view) inherit the main problem of realist approaches to concepts, that is, the problem of accessibility. By excluding the third realm from the hardline view, this view is immune against this problem. In addition, the moderate realist view is not also involved in this problem. There is no difficulty here since functions, and more specifically linguistic functions, are accessible through using language and are not inhabitants of the ‘third realm.’ Although there is a more or less clear idea about the way in which one can access a function, the advocate of the hardline view must explain how one can access a Fregean sense.

There is a fact that throughout the history of science, there have been scientific theories that presuppose some objective entities (which are theoretically accessible) to explain formal or natural phenomena. For instance, consider the case of String Theory in physics that replaces the point-like particles by one-dimensional fundamental objects called strings to overtake the difficulties that are involved in accepting point-like particles. Also, as I mentioned in Chapter 1, Set Theory pursues the same strategy to solve mathematical problems by accepting sets, as the abstract entities not as a mere collection of things. The same approach is followed by Lewis; by adding inaccessible isolated concrete possible worlds and individuals to his ontology he is able to overtake some philosophical difficulties. For the advocates of these theories, the accessibility of these additional entities is not an important and essential point anymore when they serve the purpose of these theories well (which is solving problem). Universals as concepts are also in the same situation. Compared to the benefits, the inaccessibility of concepts is not a high cost to pay.

There is another difficulty that is the problem of emerging new concepts. One might say that scientific theories have some mechanisms to develop or to discover new areas and entities, or they have an articulated theoretical framework for postulating new entities. But how does one’s theory deal with the possibility of emerging new concepts? How can one grasp new concepts without having any access to them? It is important to mention that since both the hardline and the moderate realist views about concepts can be developed by accepting the ontology of possible worlds, the concepts can be considered throughout their complete memberships. By considering the relation of membership throughout all possible worlds, one already has all possible senses and functions. But, what if one does not accept the ontology of possible worlds?

To solve the problem of emerging new concepts without applying the ontology of possible worlds, I would like to draw on some ideas from philosophy of literature and apply them in

metaphysics. In “The Logical Status of Fictional Discourse,” John Searle argues that by pretending a speech act, an author creates a fictional character to refer (Searle 329). Peter Van Inwagen’s “creature of fictions” defends the thesis that there are things he calls “creature of fiction” and every one of them exists in the same meaning that other non-fictional things exist (Inwagen 299). Putting together these two ideas, one can come up with an ontological thesis that our ability to use language can bring things to existence, and these things exist as well as all other ordinary things exist. Accordingly, throughout the increase of ability of using language or mastery in using concepts, new concepts can emerge. The new concepts are abstract entities (or more specifically abstract artifacts) and exist in the same way as the ‘creature of fiction’ exists, just as an abstract entity. Concepts as abstract artifacts that are ontologically dependent on physical things can be considered as the third view about concepts which I name the derivative hardline view. This ontological thesis provides a possibility to access concepts (universals) that is using language. This idea is applicable in all different views about concepts which I have mentioned earlier. Thus, as long as one can perform linguistic inter-subjective actions, one has access to the concepts involved in these actions.

In conclusion, universals are simple concepts. Concepts as the constituents of thoughts are abstract objects in terms of three different views that are: Fregean senses by excluding the third realm, abstract artifact objects that inhabit in the same realm that we are, or functions from extensions to worlds. Through our linguistic actions we can access, discover, or grasp new contents or new functions. Since a Platonic view in metaphysics supports the existence of abstract objects and I apply a Strawsonian approach to metaphysics, I would call my theory an Analytic Quasi-Platonic theory of universals. In two senses, this theory can be considered as a realist theory of universals. First because my approach to concepts is realist, and second, in this theory there is room for objective features of particulars that are involved in issues such as causation. The point in my theory is that these numerically different objective individual features are unable to unify themselves under an objective immanent feature. That is the work that concepts do by throwing them in an appropriate extension. For instance, there is a feature in common among a red shirt, a red apple, a red dragon, a red priest, and J.R.R Martin’s red hat. Redness in the shirt, in the apple, in the dragon, in the red priest, and in Martin’s hat are not able to unify themselves under an objective universal thing that is objective universal *redness*. But, according to my theory there is an inter-subjective concept, the concept of redness, that can unify all of these rednesses.

3.1.3.3 A Taxonomy of Universals

A theory of universals based on ‘simple concepts’ is an abundant theory of universals. This abundant number of universals can be categorized into two different types. First, there are first-order universals that are universals which are attributed to this- and other-worldly simple things. Second, there are higher-order universals that are attributed to universals themselves. Higher-order universals are concepts about other concepts to which one can assign a compound phrase, but they are not reducible to simple concepts. Unlike Armstrong’s theory of universals, according to my theory, a combination of universals is not a universal itself. Since a combination of simple concepts are at best complex concepts which are not universals in my theory. Complex concepts can serve as the constituents of thoughts but being a constituent of thoughts does not mean being a universal. In addition, in Armstrong’s theory, a combination of universals serves the purpose of reducing an abundant theory to a sparse one, but since I accept universals as the abundant entities I do not need such type of universals. Armstrong also argues in favor of the existence of structural universals. I return to the topic at the end of this chapter more specifically, but briefly a theory of universals based on concepts does not need to apply structural universals to deal with properties such as *methane*. My theory does not need this type of universals since there are appropriate concepts to refer to a *methane* molecule. A question may arise: How does this theory deal with a property such as *having three carbon atoms*? Having properties such as *having three carbon atoms* is one of the reasons that Armstrong provides in favor of structural universals. However, for my theory the concept of *having three carbons* is not a simple concept, or in other words a universal.

3.2 An Analytic Quasi-Platonic Theory of Universals versus Critiques

Since my theory might be considered as a more modern version of a transcendental approach I would like to present Armstrong’s arguments against this approach. Then, I assess my theory by reference to Armstrong’s critiques against the transcendent realist theory of universals, Lewis’ argument against a theory of universals, the distinction between natural and unnatural properties, and the critiques that I have mentioned against nominalism.

3.2.1 Armstrong Against Platonism (Transcendent Approach)

Transcendent realism answers the question, “how different particulars can nevertheless ‘have’ very same properties and relation” (Armstrong I 1978 65) by referring to a relation between

particulars and transcendental objects which Plato calls Forms. Remember that Armstrong assesses different suggestions for the problem of ‘one over many’ by examining their analysis of ‘having the property, F.’ The logical schema of the strategy of transcendent realism to analyzing ‘having the property, F’ is as follows:

‘a’ has the property ‘F’ iff ‘a’ stands in a suitable relation to the Form of F (Armstrong I 1978, 64).

According to Platonism, particulars and Forms belong to different realms: particulars are sensible objects that belong to the sensible world and Forms belong to an intelligible realm that is (albeit not spatio-temporally) located outside of this sensible world. This results in some difficulties for this strategy. The first difficulty is the possibility of having a relation between a Form and its instances (particulars). Consider that this relation should connect two different entities of different realms, which means it must cross realms. How is that possible? What is the nature of this relation? There are two options suggested by Plato, the first advocate of this theory. His suggestions about the nature of the relations are ‘participation’ and ‘imitation’ (Copleston I 167).

If taken literally, ‘participation’ would mean ‘the action of taking part in something.’ If one applies this literal meaning to explain the relation between a Form and its instantiations, it implies that particulars are involved in an action of taking part in the Form. If the relation between Forms and its instantiations is participation (according to literal meaning of participation), then a problem emerges, which is how one can prove that these parts of Forms are all accounted parts of the same thing. Particulars with the same nature participate in a Form, and the Form is assumed to explain the sameness of these particulars. This case seems problematic. There is another problem when one asks how an objective ontologically different ‘green tree’ in the sensible world participates in two objective ontologically distinct Forms in an intelligible world which are ‘greenness’ and ‘being tree.’ If ‘participation’ does not have a literal meaning here, then what does it actually mean?

The same problem emerges for the next Platonic candidate: imitation. It is not clear how one can make the relation of ‘imitation’ between this-worldly and other-worldly entities. Without a clear answer to the question of ‘how,’ grasping the resemblance between particulars in terms of the same Form seems dubious. Plato has his own solution by assigning this job to a mysterious demigod called the demiurge. However, there are some scholars who believe the demiurge is a

symbol of reason's operation in the universe, but then it seems that the operation of reason in the case of eternal Forms is not less mysterious than a demigod. A Demiurge shapes things by considering their eternal Forms (Copleston I 178), so these this-worldly things are the imitations of those other-worldly things. What being can do the same job for a 20th century philosopher? Furthermore, if the relation between particulars and Forms is 'imitation' then since there is a resemblance between a Form (say Form of *hardness*) and appropriate particulars (say hard things) there should be an extra Form based on the resemblance between the Form and the particulars. One can continue this argument for the case of resemblance between the extra Forms and the original Forms and the particulars *ad infinitum*. Thus, transcendent realism involves in an infinite hierarchy of Forms.

Second, let us assume somehow there is a relation between Form and particulars. If there is an acceptable relation between Forms and the properties of things then there is no possibility to have a property without an assigned Form. In other words, if there is no Form of *hardness*, there should be no 'hard' objects (Armstrong I 1978 68). But the intrinsic properties of particulars would remain the same even if they failed to stand in an extrinsic relation to various Forms. And since *hardness* is (or supervenes on) an intrinsic property, a hard nut remains 'hard' even without an extrinsic relation with the Form of *hardness*. One might argue that by applying the relation of 'participation,' there should not be a 'hard object' without the Form of *hardness*. Because lacking the Form of *hardness* means that there were not 'hard particulars' to construct the Form of *hardness* by their participation. However, it seems that the reasonable reaction to this case is not applying the relation of 'participation' or 'imitation' since I have argued that there is no reasonable meaning for 'participation' and 'imitation' between parts of different realms.

Third is the problem with analyzing 'having the property, F.' Similar to the nominalist strategy, transcendent realism faces an infinite regress. By analyzing 'having the property, F' in terms of 'having a suitable relation to the Form, F,' one reinstates a higher-order Form that is *being in a suitable relation (participation or imitation) to the Form*, for instance analyzing 'having the property, *hardness*, in terms of 'having a suitable relation to the Form of *hardness*. Applying this strategy to analyzing 'a suitable relation to the Form' presents a higher-order of 'a suitable relation to the Form', *ad infinitum* (Armstrong I 1978 70-73). But, higher-order Forms are problematic issues that Plato has addressed as the unsolvable problem against theory of

Forms. It seems that this strategy face both infinite regression (by restating an extrinsic relation with a Form) and implying to higher-order Forms.

Fourth, as mentioned in Chapter 1, a causal relation should be understood in terms of intrinsic (vs. extrinsic) features of particulars. The problem is that causation is a function of intrinsic features of a particular and so if having properties is a matter of standing in extrinsic relations to Forms then the properties of a particular can have no causal role. Consider that translated causal propositions in terms of transcendent realism strategy do not keep the causal power for properties, or causal content of translated proposition. For instance, ‘having a suitable relation with the Form of *hardness*’ cannot cause ‘disturbing noises’ when a glass is thrown out to a garbage bin.

3.2.2 Critiques Against Platonism (Transcendent Realism)

Before assessing my theory against possible criticisms, I would like to answer an important question that may be raised about the relation between my theory and transcendent realism toward universals. In what sense is my theory different from transcendent theory of universals? There are two major differences here. First, according to Plato’s dialogues, universals are Forms, and Forms are incorporeal essences which exist apart from sensible things (Copleston I 168). Aristotle emphasizes that Plato considers Forms as the cause of essences of all other things which themselves are caused by the One (Copleston I 177). According to my theory universals are concepts, and concepts are Fregean senses which do not make causal effects on sensible particulars. This point lead me to the second distinction that is the difference between the relation that Forms make with particulars and the relation that Fregean senses make with particulars. Both of Plato’s candidates for such a relation carry a sharp distinction from the relation between Fregean sense and particulars. Senses unify the similar objective features that are instantiated by numerically different things by placing them in the same appropriate extension.

If universals are concepts then how do concepts prevent the difficulties that the transcendent theory of universals faces? The first difficulty that Armstrong mentioned for a transcendent realist theory of universals is the possibility of making a relation between a transcendent entity and its instances (particulars). Consider that this relation should connect two different entities of different realms, meaning that it should cross these realms. How is that possible? What is the nature of this relation? Since in my theory concepts as abstract objects are not tied to accepting an extra realm,

my theory prevents this difficulty. Seemingly, the problem of making a relation across realms is a rephrase of the problem of accessibility. I prepared some solutions for the problem of accessibility that can also be considered as my answers to the first critique of Armstrong, which would not be necessary to repeat here.

Second, the fact that my theory does not need to clarify a relation between two naturally different realms, this does not solve the problem of the absent relations. There are two ways to address the problem of absent relation in my theory: (1) in terms of analyzing ‘having a property, F’ and (2) in terms of a theory of referring. If for analyzing ‘having a property, F’ one needs to somehow make a relation between transcendent entities and the properties of things, then there is no possibility to have a property without an assigned abstract entity. In other words, if there is no transcendent entity of *hardness*, there should be no ‘hard’ objects. I would rephrase and answer this critique in terms of my theory. Consider that after a mysterious cosmic radiation, habitants of the Earth lose the concept of ‘hard.’ Is there any ‘hard object’ on Earth? I answer that since my theory accepts the existence of objective features in things, in a world without the concepts of ‘hard’ there are things that have the similar objective feature which was called *hardness*. Even in a world whose habitants do not use language, a world without a history of concepts, these objective features exist. In these worlds, there are ‘hard objects’ that have not been known by creatures who use language. The second way to address the problem of absent relation is based on a theory of referring. Consider that the relation of referring between the objective features and their extensions fail. Should one conclude that there are not things which have those objective features? The answer is no. The existence of any objective feature does not rely on its concept.

Third, there are problems with analyzing ‘having a property, F’ that are the regress problem and the failure in keeping causal power. First, transcendent realism results in a regress because of the analysis ‘having a property, F’ in terms of ‘having a suitable relation to a transcendent Form, F’ reinstates a higher-order property that is ‘being in a relation.’ Applying this strategy to analyzing ‘being in relation’ presents a higher-order transcendent Form. Second, it seems that translated causal statements in terms of transcendent realism strategy do not keep the causal power for properties, ‘having a suitable relation with the transcendent Form, *hardness*’ cannot cause ‘disturbing noises’ when a glass is thrown out to a garbage bin.

At first sight, since concepts are abstract objects (that means they are not immanent and intrinsic) they face the problems of regression (because they are not immanent) and the failure to

keep the causal power of properties (because they are not intrinsic). These critiques are based on two presuppositions, as Lewis argues: first, both problems are based on reducing the problem of ‘one over many’ to analyze the statement ‘having the property, F,’ or the process of predication. Second, the problem of failure to keep causal power is presupposing a specific approach to causation that analyzes causation in terms of intrinsic properties. Following Lewis’ point, the process of predication, analyzing ‘having’ in terms of things that are not types, is an infinite process since there is no unanalyzable predicate unless one accepts a predicate as a primitive one. Accordingly, all analyses of ‘having a property, F’ involve an infinite regress, and all of them can prevent the regression by accepting a primitive type and its appropriate predicate. Thus, being involved in an infinite regress is not a real threat against any possible analysis of ‘having a property, F.’ Therefore, reducing the problem of ‘one over many’ to analyzing ‘have the property, F’ does not bring light to the discussion. This reduction is not informative and can be omitted from the discussion on universals.

Since I deny this reduction my theory is not threatened by the problem of keeping causal power in analyzing ‘have the property, F.’ But one might still argue that the problem of keeping causal power in analyzing ‘have the property, F’ is not the main causal worry. The main causal worry is the fact that causally relevant properties need to be intrinsic to their bearers but Fregean senses are not intrinsic to their referents. It is true that Fregean senses are not intrinsic to their referents, but Fregean senses are not relevant in analyzing causal relations. Their jobs are unifying the objective features. Some of these objective features are intrinsic and are relevant for analyzing causal relations. In other words, concepts are not supposed to play any role here. One might say that if anyhow there is a connection between universals and causality then a theory of universals should ground such a connection, but your theory does not. This is a possible legitimate criticism of my theory that I intend to offer some explanations in the rest of this section.

Here is a presupposition of the connection between universals and causality: physics provides an inventory of natural properties, and not the laws of nature. Armstrong argues that what it is to be a law of nature should be constructed out of the second-order relations between first-order properties. He suggests that to give an account of causality, there are two involved theses, “first causality is reducible to nomic connection, and second in nomic connection one universal necessitates another” (Armstrong II 1978 148-149). Lewis says that one can set up a parallel version of this analysis by substituting natural properties and relations for first- and second-order

universals (Lewis 1983 39), but Armstrong's original analysis and the substituted one face the same difficulty caused by using the notion of necessitating. Instead, Lewis supports a regularity approach to the law of nature initiated by Ramsey and Mill. According to this theory, a law is a regularity that earns inclusion in, or regularities of, an ideal system of axioms and theorems. In other words, a regularity that is expressed by an axiom or theorem in this ideal system is a law of nature (Psillos 142).

Since my theory is consistent with the fact that things have objective intrinsic features the core idea of Armstrong's and Lewis' view about laws of nature and causality is acceptable without leaving the idea of concepts as universals. As mentioned in Chapter 1, the core idea of Armstrong's and consequently Lewis' view is the fact that the intrinsic features of things and their connections are relevant facts in analyzing causation. In my theory, I assert that these intrinsic features cannot unify themselves under a unique notion. Thus, there is no role for concepts to make a causal connection between things in terms of their intrinsic relevant features. Universality of an intrinsic relevant feature is made by its concepts, but this universality is irrelevant for analyzing causal relations.

One might argue that in this thesis I have critiqued nominalism, transcendent realism by applying Armstrong's arguments that are based on reducing the problem of 'one over many' to predication. If this reduction is not informative then why should a nominalist and a transcendent realist try to avoid these problems? First, nominalism participates in offering such a reduction since this approach suggests that the issue of sameness between numerically different things should reduce to predication. However, I admit that transcendent realism does not have to worry about these problems, at least regression, unless this approach cannot find a satisfying solution for the problem of higher-order universals. Second, all of the rival theories face difficulties that are not related to analyzing the statement 'have the property, F.' That means, at least, my theory keeps some advantages in comparison with its rivals.

3.2.3 The Problem of Structural Universals

As stated in Chapter 3, Lewis argues that there is no appropriate conception of these entities. To show this and consequently to refute the possibility of a theory of universals in virtue of Armstrong's suggested purposes for universals, Lewis suggests three different "conception[s] of what a structural universal is," then he provides some objections for each one to show that all the

conceptions of structural universals are not conceivable (Lewis 1986 87). Lewis argues that without any conception of an entity, one cannot endorse the existence of the entity and consequently the possibility of having a defensible theory of universals.

I accept Lewis's point that there is no appropriate conception of a structural universals based on its constitutive parts which are simple sparse universals. But, I believe that this point against structural universals may not convince me to leave my theory of universals since according to my theory there is no need to introduce a new type of universal to serve the role Armstrong suggests for structural universals. First, accepting the causal relations as second-order relations between first-order properties is the result of considering the causation in virtue of the regular appearance of properties. As I mentioned before, although I accept the core of Armstrong's view of causation as a presupposition, my theory is not tied up with the specific analysis of laws of nature which Armstrong advocates. Therefore, my theory is not committed to structural universals in terms of the first suggested work for this type of universals.

Second, Armstrong needs structural universals since he wants to keep an abundant and a sparse approach to universals together. As I mentioned earlier, simple concepts are abundant and non-reducible to each other, and the fact that simple concepts are abundant obviates the need for structural universals by itself. Consider the case of *methane* whose constituents are *carbon*, *hydrogen*, and *bonded*. Having the concept of *methane* depends on our mastery on using it throughout our intellectual activity. No one can have the concept of *methane* without this mastery only by combining the concepts of its constituents: *carbon*, *hydrogen*, and *bonded*. Thus, my theory does not need to introduce entities such as structural concepts.

Armstrong mentions a work for structural universals in terms of the issue of resemblance between universals (in other words higher-order universals). How can my theory deal with the issue? Concepts as abstract objective entities can be considered as the constituents of thoughts, and since they can be considered as the subject-matter of our thoughts, it is possible to grasp some concepts about concepts. I cannot see any difficulty here, but I need to highlight that concepts about concepts are not naturally different from others. They are only simple concepts about abstract objects. One might argue that according to my explanation, there are infinite higher-order concepts that seem unacceptable. I answer if one can accept an infinite number of other abstract entities such as sets (including set of sets), then why would I not accept an infinite number of concepts (that includes concepts of concepts)? One might ask why nominalism and transcendent

realism cannot make the same move in response to infinite regress objections. A nominalist cannot make the same move since the principle of nominalism is against it. A nominalist is not allowed to add any entities more than particulars. But, a transcendent realist might be able to make the same move that is not a threat for my own theory of universals.

The final issue that structural universals are supposed to deal with is the fact (according to Armstrong's view) that nature does not have the simplest constituents. Given that this view is uncontroversial, since universals are simple concepts (not reducible to constitutive parts) and not the properties of things, this fact that the final and the simplest constructive parts of the nature are not in our hands is no longer relevant. There is no inconsistency between having a world with unknown final units and having abundant abstract objects such as concepts about this world. Once scientists succeed in catching a final simple unit, a relevant concept will emerge. Choosing different suggested views about concepts (Fregean sense, function, and artifact abstract object) does not make any changes in dealing with this problem.

One might wonder if complex concepts are the right candidate to do the work of structural universals. Using Armstrong's terminology, a complex concept is more similar to a combined universal than a structural universal, because a combined universal is a grammatical combination of simple universals and a complex concept is also a grammatical combination of simple concepts. Their difference is the point that a combination of universals itself is universal but a combination of concepts is not a universal. On the other hand, a structural universal is not a mere grammatical combination of universals. It is something more than a mere sum of the parts. For instance, *methane* is constructed by *hydrogen* and *carbon*, but methane has some properties that is not identical with the combination of *hydrogen's* and *carbon's* properties. Therefore, complex concepts cannot be considered as structural universals since they are mere combinations of simple concepts. In other words, *methane* is a simple concept not a combination of the concept of *hydrogen* and *carbon*.

3.2.4 Universals as Concepts versus Armstrong's Critiques against Nominalism

In this section, I assess my theory in terms of the difficulties which Armstrong mentions against nominalism (as mentioned in Chapter 1). Since some of these critiques are not applicable for a realist theory of universals I omit them and consider only the relevant ones. Again, I emphasize that the three views about concepts to deal with this problem are not different from one another.

1. First, the problem of having coextensive, unique, and alien properties: Since having different concepts for the same objects is conceivable, coextensive concepts would not pose problems for my theory, for instance, *trilaterality* and *triangularity*. It is also conceivable that there are some concepts that only correspond with one object (for example ‘the Sun’), without corresponding objects (for instance ‘Pegasus’), and some concepts that this-worldly people do not have. Thus, the possibility of the existence of unique, non-instantiated, and alien properties cannot make any problem for this theory.
2. Second, the problem of absence of relation: All nominalist strategies try to analyze ‘having a property, F’ in terms of a relation that an entity has with others. Although I argued against reducing the problem of ‘one over many’ to analyze ‘have the property, F,’ the problem of absence of relation remains on the table since my theory explains the problem of ‘one over many’ by referring to a relation between concepts and things. My theory of universals analyzes ‘having a property, F’ in terms of ‘falling in the extension of its corresponding concept, F.’ Armstrong argues that one might consider cases according to which there is not such a relation, ‘a world without concepts’ being an example. Consequently, without the demanded relation one cannot say this thing have that property. But that is not the case. In a world whose habitants are microbes, rocks are still ‘hard’ objects. Consider that the ‘hard’ objects fall in the extension of the concept of *hardness* (which is our concept) in that world. Therefore, in a world where habitants are microbes, rocks only have some specific features that habitants of our world can call one of these features *hardness*.
3. Third, the problem of regression: This critique was addressed in section 4-3-1.
4. Fourth, the problem of keeping causal power: This critique was addressed in section 4-3-1.

3.3 Concluding Remarks

According to Armstrong’s view, a theory of universals should ground an explanation for the problem of ‘one over many’ and the relation between universals and causality. In this chapter, I have suggested a theory of universals based on linguistic grounds. According to this theory, inter-subjective concepts as Fregean senses are able to unify different appearances of a feature in different particulars. This is the first duty of a theory of universals. My theory has not had any problem with Armstrong’s main worry that is considering the causal power for intrinsic relevant

properties since there is room for objective intrinsic feature of things in my theory. However, universality of these features has not had any role to analyze causation.

My theory has had similarities and differences with its rivals. It has been similar to transcendent realism in term of solving the problem of ‘one over many’ by applying something distinct and more than particulars. It has been similar to immanent realism in terms of accepting objective features in things. And finally, my theory and nominalism have had resemblance in terms of applying linguistic approach. The difference between my theory and its rivals has been clear. My theory has applied different relations and entities in comparison with its rivals.

Conclusion

It is a fact about our world that numerically different (non-identical) objects have features in common. To explain how ‘particularity’ can bear ‘universality,’ there are three options available for a comprehensive philosophy. First, one can deny the fact. This option can be absurd. Second, arguing that this fact is brute and there is no accessible explanation for it. And finally, suggesting an explanation about this fact. By excluding the first and the second options, I have studied the third option to find an explanation for the problem of ‘one over many.’ More specifically, I have explored two mainstreams solutions of this problem: nominalism and realism.

According to nominalism, a solution for this problem does not need to apply any extra entities more than particulars. I have called this idea ‘the principle of nominalism.’ Furthermore, particulars can be counted as this-worldly things (actualism) or as this- and other-worldly things (possibilism). Considering these two points, a nominalist should analyze ‘having the same property, F’ in terms of this-worldly particulars or this- and other-worldly particulars. One can analyze ‘have the same property, F’ in terms of particular if they already analyzed ‘having the property, F’ in terms of particular. I have mentioned two main strategies to analyze having a property that are resemblance nominalism and class nominalism. In Chapter 1, I argued that both actualist and possibilist versions of nominalism face insoluble difficulties. These difficulties have emerged when one wants to apply the principle of nominalism and two mentioned strategies to analyze having a property. Four of these difficulties are more persisting, namely the infinite regression, the absence of relation, the failure to keep causal power in translations, and the failure to keep the same truth-value in translations.

If particulars are not enough to explain how ‘particularity’ bears ‘universality’ then one needs more than particulars to succeed. This point is where a realist starts. I have presented two realist approaches to this point: (1) these extra entities are transcendent from particulars, and (2) these extra entities are immanent in particulars. The first approach is transcendent realism and suggests that there are mind-independent universals that exist independently from particulars. Numerically different particulars have features in common since they stand in relation with the

same mind-independent transcendent things (or universals). To analyze 'having the property, F' in terms of a relation between particulars and universals, this approach faces the difficulty of absent relation, and the infinite regression (implement of higher-order universals). The second approach, immanent realism, implies universals are mind-independent entities which exist dependent on particulars. I have studied this approach more fully by referring to Armstrong's and Lewis' discussions on this topic.

Armstrong's arguments in favor of immanent universals is that to explain the problem of 'one over many' and to make a causal connection between sparse properties, there is no successful option except immanent universals. He introduces immanent universals based on states of affairs and argues how immanent universals do not face its rivals' difficulties by applying states of affairs to analyze 'having the property, F.' Lewis accepts immanent universals not because they are needed to explain the problem of 'one over many.' He argues that universals are not needed here since there are adequate explanations for this problem by excluding universals. But, one needs immanent universals since these entities are applicable to making a distinction between natural properties (spares properties) and unnatural properties (abundant properties).

I have concluded Chapter 3 by critiquing the immanent realist view. I have critiqued the immanent approach to universals. I have argued that there are some difficulties to accept states of affairs (x have the property, F). The most important difficulty is the fact that states of affairs are particulars and in the meantime extracting something universal by apprehension, abstraction, or convention from them is problematic. Consider that immanent universals are not separable from particulars, and the combination of universality of immanent universals and particularity of particular in a state of affairs keeps particularity. But, universals are supposed to answer how it is possible that 'particularity' bears 'universality,' and it seems to me that immanent universals are not the answer to this question since they are not imaginable unless they participate in a state of affairs that is particulars. Furthermore, immanent universals are supposed to be objective, but the objectivity of abstraction's and convention's results is controversial. As for Lewis' suggestion, I have argued that universals are redundant to make a distinction between natural and unnatural properties since there is an alternative way without applying entities such as universals. In addition, the importance of making distinction between properties lies in the distinction between two different ways that sparse and abundant properties characterize things. The second

distinction is dependent on a specific presupposition about the relation between properties and causality.

In Chapter 1, I suggested that particulars are not enough to explain how ‘particularity’ bears ‘universality,’ therefore universals should be there. In Chapter 2, I have argued against immanent versions of universals. What option is left then? I pursued the realist approach to universals by suggesting a linguistic ground for them. Following a conceptual framework that is constructed by considering a Strawsonian approach to metaphysics, I have analyzed material inferences to illustrate that concepts are needed to make inter-subjective valid material inferences. Among different theories of concepts, I presuppose a realist approach to concepts (concepts as abstract entities) which facilitates making and evaluating material inferences. I have suggested three versions of this realist view that are: a hardline realist view (concepts as Fregean sense excluding the third realm), a derivative hardline view (concept as abstract artifacts), and a moderate view (concepts as functions). Retaining a neutral position in relation to these views, I have argued that concepts are the rightful candidate to ground a theory of universals. Since the conceptual framework of my theory belongs to the Analytic tradition and my theories imply abstract entities, I have named my theory an Analytic Quasi-Platonic theory of universals.

My theory of universals has some resemblances and differences in comparison with the discussed theories. Both my theory and nominalism provide an explanation about the fact that ‘particularity’ bears ‘universality’ in term of language use. A nominalist uses the notion of ‘predicate’ and my theory applies Fregean sense and linguistic functions. The difference between my theory and nominalism is that a nominalist argues that particulars are enough, but I believe that they are not enough to unify themselves under a common notion. The resemblance between my theory and transcendent and immanent realisms is that they maintain particulars are not enough to explain the problem of ‘one over many.’ My theory resembles the immanent approach in accepting that there are objective intrinsic features of particulars, and these features are relevant in analyzing the relation between particulars. This leads me to another resemblance between my theory and the transcendent approach. Both of these theories unify these numerically different objective intrinsic features in terms of entities apart from the particulars which instantiate these features. The difference between my theory and transcendent realism is that this theory implies two separated realms, but my theory does not necessary involve the separated realms. In addition, the type of relation between Forms and particulars is sharply different from

the relation between concepts and particulars. The difference between my theory and immanent realism is that my theory present concepts as entities apart from particulars. My theory of universals also differs from all of the mentioned theories that is involving with a deep linguistic analysis. While nominalism uses ‘predicates’ and ‘common nouns’ to its analysis and Armstrong’s view of immanent realism uses analyzing ‘have the property, F,’ my theory involves an analysis of material inference and a conceptual network that is tied to them.

As I have mentioned earlier, there is an important presupposition in Armstrong’s and Lewis’ discussions about causal power of spares properties (universals). Although I accept the core of this presupposition in this thesis, there might be more relevant theories of causation that may not be investigated in this thesis due to limitations of space. This issue can be considered for the subject of further research, exploring how one can reasonably defend the claim that there is a connection between universals and law like regularities. If there is a defensible reason in favor of such a connection, then which theory of causation is more appropriate for the theory of universals based on concepts? The literature of causality includes some version of a theory of causation which can make more defensible connection with the theory of universals grounded on concepts.

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