Ontological Questions

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Abstract

Ontology, literally, is the study of being (from the Greek, 'to on', which derives from the verb, 'einai', 'to be'). Meta-ontology is the discipline concerned with examining the subject-matter and method of ontology. This thesis focuses specifically on the meta-ontological question of what the subject-matter of ontology is. Within the Anglo-American analytic tradition, ontology is predominantly approached from the point of view defended by Quine and Carnap, as the study of existence. In contrast to this predominant view, it is argued in this thesis that ontologists can grant the trivial existence of all the things in question, while they substantively dispute over the nature of things. This argument in a nutshell is as follows: If we accept that there is an intelligible translation between the neutral particular quantifier, which quantifies over all things, and the classical existential quantifier, and if we hold that the kind of existence captured by the classical existential quantifier is the only kind of existence, then it is plausible to argue that all things trivially exist *simpliciter*. Consequently, there seems to be no substantive work for ontologists to do concerning questions of existence. Further, it is maintained that the fact that questions of existence seem trivial does not nevertheless result in a disappointing overall project of ontology. For, ontologists can substantively dispute over the nature of things, even though they hold that all things trivially exist *simpliciter*.

I dedicate this thesis to my parents, Junlian Zhou and Guixiang Zheng, who support a regular country boy like me to pursue higher education and to become a philosopher.

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Chapter 1

Introduction

Ontology is literally the study of being (from the Greek, 'to on', which derives from the verb, 'einai', 'to be'). Within the Anglo-American analytic tradition, ontology is predominantly approached from the point of view defended by W. V. Quine and Rudolf Carnap, as the study of existence. Ontological disputes, according to this approach, are disputes over the existence of things (e.g., the dispute over whether ordinary objects such as tables and chairs exist). But most recently, the subject-matter of ontology has become a more controversial topic in the growing field of meta-ontology, the discipline concerned with the subject-matter and method of ontology. Aside from the Quinean-Carnapian approach, contemporary philosophers such as Kit Fine (2009), Jonathan Schaffer (2009), and Kathrin Koslicki (2015b) defend alternative approaches to ontology, according to which questions of ground or questions of fundamentality are substantive ontological questions.[1] A typical case for this is the Euthy-

[1] Although both Fine and Schaffer are proponents of the notion of ground, Koslicki (2015a) argues that ground is not a unified notion. Instead, Koslicki (2015b) prefers to construe the ontological questions that Fine and Schaffer may favour (i.e., the questions that Fine and Schaffer may conceive as questions of what grounds what) as questions concerning multiple dimensions of relative fundamentality. For a historical study of the notion

phro dilemma. In Plato's dialogue, *Euthyphro*, both Socrates and Euthyphro presumably agree that there are things that are loved by the gods and things that are pious, while they dispute over whether the fact that things are loved by the gods is because of, or in virtue of, the fact that things are pious. By using Fine's terminology, this dispute is over whether the fact that things are pious grounds the fact that things are loved by the gods.[2]

In this thesis, I am not going to examine these different approaches to ontology one by one; but rather, I will provide my own approach to ontology in the spirit of Fine, Schaffer, and Koslicki, according to which disputes over the existence of things are trivial, while disputes over the nature of things can be substantive. I develop this alternative approach to ontology in the following three chapters.

In Chapter 2, I study two recent proposals concerning the logic of existence. The first, also known as 'free logic', defended by Henry S. Leonard (1956), Karel Lambert (1960), and many others, rejects the existence presuppositions which characterized previous logics. The second proposal concerning the logic of existence, which is called 'neutral quantification logic', is given by Richard Routley (1980) and can be construed as an extended version of the first proposal. Neutral quantification logic requires us to abandon both the existence presuppositions characteristic of traditional logical systems and the association between quantification and existence. Consequently, in addition

of relative fundamentality or ontological dependence, see Corkum (2008); and for surveys and remarks on this notion, see also Koslicki (2012a, 2013).

[2]Here, I employ Fine's notion of ground which takes grounding relations to be explanatory relations between facts, but I leave open the plausibility of having a broader notion of ground which includes things whatsoever, such as propositions, concrete particulars, properties, etc., as the relata of grounding relations (e.g., Schaffer 2009).

to quantifiers in classical first-order logic (e.g., the classical existential quantifier), neutral quantification logic introduces quantifiers that are existentially neutral and proposed to quantify over all things (e.g., the neutral particular quantifier). As we will see in Chapter 3, Routley's dual quantification (i.e., existentially neutral quantification plus existentially loaded quantification) can be part of the apparatus for establishing the trivial existence of all things.

In Chapter 3, I try to defend the trivial existence of all things by using David Lewis' (1990) translation of Routley's dual quantification into classical existential quantification. According to Lewis' translation, the non-classical neutral particular quantifier is supposed to quantify in the same way as the classical existential quantifier does. If this translation goes through, and if we follow Quineans and hold that the kind of existence captured by the classical existential quantifier is the only kind of existence, then it is plausible to argue that all things trivially exist *simpliciter*. This argument, if it is successful, entails an interesting result: ontologists can become existence allists, who grant the trivial existence of all things, and given this argument, there seems to be no substantive work for ontologists to do concerning questions of existence.

After defending the trivial existence of all things, in Chapter 4 I proceed to argue that while ontologists can grant the trivial existence of all things, their disputes over the nature of things are nevertheless substantive. My argument in this chapter is specifically targeted to Amie Thomasson's (2007b) neo-Carnapian deflationist approach to questions of nature, which attempts to show that questions of nature (*viz.*, questions of the form, 'Is x essentially y?') are trivial. On Thomasson's view, questions of nature are identical with ques-

tions of metaphysical necessity (*viz.*, questions of the form, 'Is x necessarily y?'), where the modal features are construed by her only as reflections of certain constitutive semantic rules (or their consequences) in the object-language. Consequently, questions of nature are not substantive in the sense that they are easily answerable merely by conceptual and/or empirical means. As an alternative to Thomasson's deflationist approach, I am sympathetic to Fine's notion of nature or essence, which is inspired by Aristotle. Following this alternative approach, questions of nature are *not* questions of metaphysical necessity and they are immune to Thomasson's neo-Carnapian deflationism. On Fine's account, questions of nature are not identical with questions of the form 'Is x necessarily y?'. Rather, they are equivalent to questions of the form, 'Is it true in virtue of the identity of x that x is y?', which captures some feature of questions of nature that is missed by the previous analysis of these questions. I argue that once the significance and correctness of Fine's Aristotelian notion of nature is recognized, questions of nature will turn out to be substantive at least in the sense that they are *not* easily answerable by some conceptual and/or empirical means.

Chapter 2

The Logic of Existence

While the notion of existence is often treated as central and controversial in the study of ontology, it should be noted that this notion is a basic notion in logical theories as well. Because of its importance, there are logical theories which aim to solve the problems arising from some implicit misuse of the notion of existence. These logics are what we call 'the logics of existence'. My purpose in this chapter is to offer a brief survey of the following two recent proposals concerning the logic of existence: free logic and neutral quantification logic. Regarding these two logics, free logic is developed on the basis of classical first-order logic, and neutral quantification logic can be construed as an extended version of free logic. The history of this logical movement starts with Leonard (1956), who initially pointed to two presuppositions of existence (the presupposition of general existence and the presupposition of singular existence) that could be found in traditional logic and in classical first-order logic respectively. Since then, logicians such as Lambert (1960) have started

to explore a logic that is free of the existence presuppositions with respect to both singular terms and general terms, namely 'free logic'. Two decades later, another logical theory defended by Routley (1980), which is called 'neutral quantification logic', emerged as an extended version of free logic in the literature. For some reason as I will explain in §2.2, neutral quantification logic requires us to abandon not only the two existence presuppositions but the association between quantification and existence as well. Moreover, this logic, which introduces dual quantification (i.e., existentially neutral quantification plus existentially loaded quantification), will be part of our apparatus for establishing the trivial existence of all things in Chapter 3.

Here is my plan for this chapter. In the first section (§2.1), I introduce Leonard's notion of the presupposition of general existence as well as his notion of the presupposition of singular existence and show some basics of free logic thereafter. In the second (§2.2), I address the motives and semantics for Routley's neutral quantification logic. I conclude with some general remarks on the neutral quantification logic (§2.3).

2.1 The Two Existence Presuppositions in Old Logics and the Choice of Free Logic

Leonard (1956) reveals the two existence presuppositions—the presupposition of general existence and the presupposition of singular existence—that traditional logic and classical first-order logic have retained respectively. Here, by general existence, Leonard means 'the existence with respect to general

terms', e.g., the existence of men; in contrast to general existence, by singular existence, he means 'the existence with respect to singular terms', e.g., the existence of Santa Claus. That is to say, according to Leonard, traditional logic has a tacit existence presupposition with respect to general terms, while classical first-order logic has made this presupposition explicit but commits itself to another existence presupposition with respect to singular terms. In what follows, I briefly address these two existence presuppositions.

First, the presupposition of general existence can be seen in the traditional supposition that *the A-I inference* is valid, namely that traditional logic supposes that we can validly infer from the truth of *A claims* to the truth of *I claims* (Leonard 1956, 50). *A claims* are claims of the form, 'All S is P' (in classical symbols, $\forall x(Sx \supset Px)$). *I claims* are claims of the form, 'Some S is P' (in classical symbols, $\exists x(Sx \wedge Px)$. Accordingly, the A-I inference in classical symbols is as follows:

(1) $\forall x(Sx \supset Px) \supset \exists x(Sx \wedge Px)$.

But (1) loses its validity, if at least 'S' is substituted by a general term which is true of nothing (i.e., the antecedent of this inference is vacuously true and its consequent is false). The traditional solution to this problem is to restrict 'S' and 'P' to general terms which are true of at least one existent. That is, in traditional logic, the validity of the A-I inference requires *general terms* to have *existential import*. This is the presupposition of general existence that can be found in traditional logic. Such a presupposition has two problems: (Pi) it limits the scope of the application of logic to concrete cases (i.e., general terms without existential import fall outside the scope of traditional logic), and (Pii)

it cannot differentiate the inference to which existence is relevant from that to which existence is irrelevant (e.g., existence is relevant to the A-I inference but irrelevant to A-¬O inference[1]) (cf., ibid., 51).

Second, whereas classical first-order logic has made the presupposition of general existence explicit, it leaves the presupposition of singular existence tacit. We can observe this point by looking at the following inference:

(2) $Pt \supset \exists x Px$ (where 't' is a singular term).

This inference is valid in classical first-order logic and is usually called 'the existential generalization rule'. However, (2) does not hold, if 't' is substituted by a singular term without existential import, say, 'Pegasus', and 'P' is substituted by '= Pegasus' (i.e., the antecedent of this inference is true by the identity principle but its consequent is false, given that Pegasus does not exist). Likewise, the dual of the existential generalization rule,

(3) $\forall x Px \supset Pt$,

called 'the universal instantiation rule', faces the same fate. To see this, we can replace 'P' by '$\exists y(x = y)$' and 't' by 'Pegasus'. In this case, the antecedent of (3) is true but its consequent is false. Classical first-order logic takes the above two rules to be valid, while such validity requires that *singular terms have existential import*. This shows that singular existence is presupposed in classical first-order logic.

[1] *O claims* are claims of the form, 'Some S is not P', (in classical symbols, $\exists x(Sx \wedge \neg Px)$. The inference from the truth of *A claims* to the truth of $\neg$*O claims* is valid, regardless of whether the general terms in such claims are true of existents or not.

However, as Leonard points out, no classical logicians would like to hold that the preceding inferences about Pegasus are valid, though they have to admit that this *form* of inferences is valid (ibid, 53). This seems to be a problem for classical first-order logic. In order to avoid this problem, classical logicians take various strategies to show that the inferences about Pegasus do not have that form, namely the form of (2) or (3). A standard strategy that classical logicians attempt to adopt is to restrict substituents of 't' to referential singular terms, namely those which refer to existents. But this strategy is very much like the traditional solution to the problems for the presupposition of general existence: it ends up limiting the scope of the application of logic to concrete matters and failing to differentiate logical inferences to which existence is relevant from those to which existence is irrelevant. Of course, there are other strategies available for classical logicians to avoid the current problem. To save space for my discussion of neutral quantification logic, however, I will not address these other strategies here. But needless to say, Leonard and the later proponents of free logic accuse all of these escaping strategies of being unsatisfactory.

Since the existence presuppositions that traditional logic and classical first-order logic have retained significantly affect the application of these logics to concrete cases as well as their rigidity, logicians such as Leonard and Lambert find it necessary to have a new logic which is free of such existence presuppositions with respect to singular terms and general terms, namely free logic. In this new logic, we allow for free symbols or non-referential terms, *viz.* those which do not or fail to refer to any members of the domain of quantification in

classical first-order logic. Moreover, the vocabulary of free logic is the same as that of classical first-order logic, except that free logic introduces the one-place existential predicate 'E'. This existential predicate can be regarded either as primitive or as defined; if the existential predicate is treated as defined, its definition is as follows:

(4) $Et =_{df} \exists x(x = t)$.

But it is worth noting that the existential predicate is not necessary for an axiomatic system of free logic, e.g., the first axiomatic formulation of free logic given by Lambert (1963/2002) contains no existential predicate. To see this, notice first that (2) and (3) are invalid in free logic and the correct replacements for (2) and (3) are the following:

(5) $(P(t/x) \wedge Et) \supset \exists x P$,

where '$P(t/x)$' reads as 'the result of replacing all occurrences of a free variable x in P by a singular term t' and the same for (6).

(6) $\forall x P \supset (Et \supset P(t/x))$.

By adding 'Et' to (2) and (3), free logic avoids the presupposition of singular existence in classical first-order logic. Similarly, free logic is free of the presupposition of general existence in traditional logic by substituting (7) for (1):

(7) $Et \supset (\forall x(x = t \supset Px) \supset \exists x(x = t \wedge Px))$,

Now we are ready to see how the existential predicate is eliminable in free logic. For this, note that (6) is equivalent to (8):

(8) $\forall y(\forall x P \supset P(y/x))$.

Likewise, (5) and (7) could be formulated without the existential predicate as well.

So far, I have shown above that traditional logic and classical first-order logic have implicit existence presuppositions with respect to general terms and singular terms respectively, and that free logic avoids such presuppositions by making the existential import explicit in those existence-related inferences.[2] In the next section, I proceed to survey Routley's neutral quantification logic which extends free logic by introducing (existentially) neutral quantifiers.

2.2 The Motives and Semantics for Neutral Quantification Logic

Based on Leonard's, Lambert's, and many other free logicians' criticisms of old logics, Routley (1980) points out that old logics have the following two limitations: (Li) the inability of old logics (except free logic) to express and unproblematically assign truth-values to subject-predicate claims, where the subject term is without existential import (i.e., the existence presuppositions with respect to general terms and singular terms); and (Lii) the inability of old logics (including free logic) to formalize quantificational claims about non-existents (i.e., the association of quantification and existence). Regarding these

[2]To save space here, I am ignoring various semantics for free logic.

two limitations, (Li) is familiar to us, since we have already seen above how traditional logic and classical first-order logic presuppose general existence and singular existence respectively. But this limitation is more specifically stated on Routley's account—it is concerned with whether old logics (except free logic) are able to express and assign truth-values to claims such as, 'Santa Claus lives at the North Pole', where the subject term 'Santa Claus' does not or fails to refer to an existent. By contrast, (Lii) might strike us as surprising, given that in both classical first-order logic and free logic quantification is assumed to be associated with existence and there seems to be no problem for this assumption, for we may just follow Quine and hold that to exist is to be the value of a bound variable (cf., Quine 1948, 34). In light of this point, I shall in what follows start by clarifying (Lii).

According to Routley (1980, 77), (Lii) will bother us if we pay attention to an extension of a natural semantics for free logic. In free logic, non-referential terms are seriously considered and the ranges of constants and free variables have been widened to include non-existents, namely things outside the domain of classical quantification. Moreover, as part of a natural model for free logic, things outside the domain of quantification in classical logic, D, can be seen as members of another outer domain, D_o. If it is so done, then D is a domain over which bound variables range and D_o is a domain over which free variables range. The interpretation function I for every constant t, $I(t)$, is a member of D_o, and it for every n-place predicate P, $I(P)$, is a set of n-tuples of members of D_o. Now note that the ordinary explanation of crucial semantical notions (e.g., validity) requires quantification over the outer domain, D_o, namely absolute

quantification over all things (ibid., 78). That is to say, quantification over D_o is permissible in the semantical meta-language of free logic. It follows that such quantification should be permissible in the object language as well, if free logic contains sufficient sources of expression and is honest (ibid., 78).

Various replies might be given to undermine the last step of reasoning. For example, one might argue that a semantics for free logic can be given to only make use of the inner domain, D, and hence we can leave open whether claims such as, 'Santa Claus lives at the North Pole', have determined truth-values. Routley nevertheless takes these replies to be evidence which shows that free logic is still intended to operate within the mistaken reference theory of meaning, according to which all truth-valued claims are referential (ibid., 52, 78).[3] If Routley is right about quantification over the outer domain and about the denial of the reference theory of meaning, then quantification ought to be disassociated from existence. Consequently, the application of old logics (including free logic) appears to be unduly limited: since they merely allow for quantification over existents, quantification in broader scenarios such as in intensional contexts is missed by old logics.[4]

[3]For this, note that Routley is a hardcore Meinongian and holds the Independence Thesis, according to which the having of properties does not imply or presuppose existence. It follows that on this view the truth-value of a subject-predicate claim which is just about having properties (Meinongians call such claims 'Sosein claims') is irrelevant to whether the subject term refers to existents. For instance, the claim, 'Santa Claus lives at the North Pole', is true regardless of whether the subject term, 'Santa Claus', refers to existents.

[4]For quantification in intensional contexts, consider the following Geach-ish example:

> (GE) Hob thinks a witch blighted Bob's mare, and Nob thinks she killed Cob's sow. (Cf., Edelberg 2006, 481)

On the Geach-ish reading, (GE) can be true even though there exist no witches in the world, and even though neither Hob nor Nob has mistaken any real person for the witch they both believe. Moreover, (GE) is a typical intersubjective identity claim: the pronoun 'she' identifies a witch existing in Hob's superstitious beliefs with one existing in Nob's. Free

Widening the range of bound variables to that of free variables (in free logic) means that we need to introduce new quantifiers that are existentially neutral and more generally speaking, a new logic, namely neutral quantification logic. The vocabulary of neutral quantification logic is the same as that of free logic, except that neutral quantification logic has two sets of quantifiers: existentially neutral quantifiers ($\exists^N$, which reads as 'some' or 'there is', and $\forall^N$, which reads as 'all') and existentially loaded quantifiers ($\exists^E$, which reads as 'there exists', and $\forall^E$, which reads as 'all existent'). Existentially neutral quantifiers are a kind of quantifiers that *do not* indicate the existential status of the quantified items. On the contrary, existentially loaded quantifiers *do* indicate the existential status of the quantified items. Moreover, existentially loaded quantifiers can be defined in terms of existentially neutral quantifiers but not the reverse: $\exists^E x Fx =_{df} \exists^N x(Fx \wedge Ex)$; and $\forall^E x Fx =_{df} \forall^N x(Ex \supset Fx)$, where the existential predicate 'E' is defined as that in free logic.

A model for the language L of neutral quantification logic is a triple $\langle D, D_e, I\rangle$, where D ('outer domain') is a non-empty set, which can be construed as a set of all items; D_e ('inner domain') is a possibly empty subset of D, which can be taken as a set of concrete particulars[5]; and I is an interpretation function s.t. for every individual constant t of L, $I(t) \in D$, and for every n-place predicate P of L, $I(P) \subseteq D$. The valuation function v assigns truth-values to closed formulas as follows (others are the same as those in classical first-order logic):

logic is not going to be enough to give an account of (GE): we need to quantify over the intensional objects (the non-existent witches). I credit this point to Allen Hazen.

[5]Here by the notion of concrete particulars, we mean 'things located in space and time' or 'actuals' as apposed to 'mere possibles' and 'impossibles'.

$v(\forall^N xA) = 1$ iff for all $d \in D$, $v(A(t/x)) = 1$ (otherwise it is 0); $v(\exists^N xA) = 1$ iff for some $d \in D$, $v(A(t/x)) = 1$ (otherwise it is 0); $v(\forall^E xA) = 1$ iff for all $d \in D_e$, $v(A(t/x)) = 1$ (otherwise it is 0); and $v(\exists^E xA) = 1$ iff for some $d \in D_e$, $v(A(t/x)) = 1$ (otherwise it is 0). In neutral quantification logic, the following three inferences corresponding to those which are in old logics hold:

(8) $\forall^N x(Sx \supset Px) \supset \exists^N x(Sx \wedge Px)$.

(9) $P(t/x) \supset \exists^N xP$.

(10) $\forall^N xP \supset P(t/x)$.

No qualification of the antecedents of (8), (9), and (10) is needed for avoiding the invalidity of these inferences and thereby free from the problems for traditional logic and classical first-order logic that I mentioned earlier. Besides, if the quantifiers in (5), (6), and (7) are read as existentially loaded quantifiers, then (5), (6), and (7) are valid in neutral quantification logic as well.

Up until now, I have shown Routley's motives for inventing neutral quantification logic and the vocabulary and semantics of this logic. Neutral quantification logic is an extended version of free logic in the sense that neutral quantification logic extends the domain of bound variables to that of free variables in free logic. This effort apparently breaks up the orthodox association between existence and quantification. But as I will argue in the next chapter, we can in some way combine Routley's approach to quantification with the Quinean approach to existence. If this is done, then we will have a chance to establish the trivial existence of all things.

2.3 Concluding Remarks

In this chapter, I have provided us with a brief survey of free logic and neutral quantification logic. These two logics, as we have observed, both make explicit the presuppositions of existence that could be found in traditional logic and in classical first-order logic respectively. The neutral quantification logic goes further: quantification and existence become two separate notions in this logic, and we are allowed to quantify over non-existents by using the neutral quantifiers. Although I am sympathetic to Routley's neutral quantification logic and will use it as part of the apparatus for establishing the trivial existence of all things, his notion of existence seems to me more like the notion of concreteness—on Routley's account, existents amount to concrete particulars, while non-existents further divide into possibles, those which are logically possible, and impossibles, those which are logically impossible (ibid., 7)—which, as we will see in later chapters, confuses the notion of existence with the notion of nature or essence. Once this confusion has been dissolved, it will be clear that Routley's extended quantification can be useful for us to defend the trivial existence of all things.

Chapter 3

In Defense of Existence Allism

Quine (1948) gives a one-word answer—'Everything'—to the question, 'What is there?', where 'thing' is a blanket term which denotes a certain value of a bound variable. On an interesting reading of this position, we could say that everything whatever trivially exists, given that 'everything' is simply 'all there is' (cf., Prior 1962, 120). Let us call this position 'the naive existence allism' (NEA). This position is naive, because it simply indicates that the domain of unrestricted quantification includes all there is, without informatively telling us what are exactly included in the domain. Moreover, as we have seen in the previous chapter, according to some non-classical logic such as Routley's neutral quantification logic, quantifiers can be existentially neutral and range over non-existents. If this is the case, then 'everything' does not just mean 'all there is' and (NEA) is thus refuted. In this chapter, I defend an advanced version of existence allism (AEA), according to which all things, including controversial objects such as properties, absurd objects, past and future things,

etc.[1], trivially exist *simpliciter*. That is, I defend a position which holds that: (a) all things including controversial objects exist; (b) the existence of all things is trivial; and (c) there is only one kind of existence (I use the expression 'existence *simpliciter*' to denote the single kind of existence). (AEA), if it is plausible, entails an interesting result: all ontologists can become existence allists. Existence allists grant the trivial existence of all things, and given (AEA), there seems to be no substantive work for ontologists to do concerning questions of existence.

This chapter divides into two main parts. In the first part (§3.1), I recall Routley's notion of dual quantification and then address Lewis' translation of Routley's dual quantification into classical existential quantification, which, as we will see, is crucial to my argument for (AEA). In the second ($§3.2 - 3.3$), I lay out my argument for (AEA) and defend its validity (§3.2) and soundness (§3.3). I conclude with some remarks on the subject-matter of ontology (§3.4).

3.1 Preliminaries

Since I will make use of Routley's notion of dual quantification and Lewis' translation of dual quantification into classical existential quantification to construct my argument for (AEA), I shall provide a quick survey of this apparatus before I lay out my argument.

I begin by briefly recalling Routley's notion of dual quantification as stated in his neutral quantification logic. Traditionally, the proponents of a Quinean

[1]Here I should restrict the notion of controversial objects in the sense that I want this notion to exclude the objects whose expressions include predicational parts denoting (part of) their nature, e.g., concrete possible worlds. I will clarify this point later in this chapter.

approach to ontology hold that there is only one sort of quantification. Although we have both an existential quantifier and a universal quantifier, these provide just two ways of expressing the same kind of quantification and are interdefinable (i.e., $\exists xFx = \neg\forall x\neg Fx$ and $\forall xFx = \neg\exists x\neg Fx$). We also have several idioms of existential quantification—'some', 'there is', 'there exists', etc.—but they are nevertheless synonymous.[2] In contrast to this traditional view, as I mentioned in the previous chapter, Routley (1980) proposes that there are two different sorts of quantification: existentially neutral quantification and existentially loaded quantification. Existentially neutral quantification is a kind of quantification that does not indicate the existential status of the quantified items; existentially loaded quantification goes otherwise. For example, Routley has two distinct particular quantifiers: the neutral particular quantifier ($\exists^N$), which is existentially neutral and should be read as 'some' or 'there is', and the existential particular quantifier ($\exists^E$), which is existentially loaded and should be read as 'there exists'. The existential particular quantifier is merely a restriction of the neutral particular quantifier: there exist Fs iff some items are Fs and exist (in symbols, $\exists^E xFx =_{df} \exists^N x(Fx \wedge Ex)$, where

[2]One can challenge this standard Quinean view. Jody Azzouni (2010) argues that whereas we get the impression that quantifier expressions such as 'there is' and the term 'exist' have no difference in meaning, we have the common coupling of ontologically relevant uses of the latter but not that of the former. Eg., we may say, 'There are good orcs in Tolkien's writings, but of course orcs don't exist.' In this case, 'exist' is used in an ontologically relevant manner; by contrast, 'there are' occurs ontologically irrelevantly. Quineans could argue in response as follows: Azzouni's example merely shows that 'there are' and 'exist' are restricted into different contexts rather than that they are used in different manners. That is, these two terms themselves do not bear different meanings or uses, but rather, they are simply restricted to two different contexts: 'there are' and 'exist' are restricted to the context of Tolkien's writings and into the context of the world in which this utterance occurs respectively, though the second context is not explicitly asserted by the speaker. To see this, we can exchange these two terms in the given claim without changing its meaning: 'Good orcs exist in Tolkien's writings, but of course there are no orcs (in this world).'

'E' is an existential predicate). So the neutral particular quantifier is able to quantify over all kinds of things, including controversial objects such as round squares. As a result, Routley is able to claim, 'There are round squares' (in symbols, $\exists^N xRx$). The existential particular quantifier, however, is supposed to quantify only over items whose existence is assumed to be uncontroversial such as physical objects. For instance, according to Routley, we can say, 'There exist stones' (in symbols, $\exists^E xSx$). Similarly, Routley has two different universal quantifiers, namely the neutral universal quantifier ($\forall^N$) and the loaded universal quantifier ($\forall^E$). The loaded universal quantifier is definable in terms of the neutral universal quantifier by importing the existential predicate (in symbols, $\forall^E xFx =_{df} \forall^N x(Ex \supset Fx)$). But since particular quantification and universal quantification are interdefinable (i.e., $\exists^N xFx = \neg\forall^N x\neg Fx$ and $\forall^N xFx = \neg\exists^N x\neg Fx$; $\exists^E xFx = \neg\forall^E x\neg Fx$ and $\forall^E xFx = \neg\exists^E x\neg Fx$), I will just focus on the former in this chapter: in what follows, when I mention Routley's dual quantification I have in mind specifically Routley's dual particular quantification.

Regarding Routley's dual quantification, Lewis (1990) argues that it can be translated into classical existential quantification. Lewis' argument, which I call 'the Translation Argument', in a nutshell is the following: Assume that mutual intelligibility is the desideratum of translation. This assumption rules out sameness of meaning as a possible desideratum of translation. After all, Routley's dual quantification is not the same as classical existential quantification. He sees a distinction between neutral quantification and loaded quantification that classical logicians do not see. Thus, if we translated Routely's

dual quantification into classical existential quantification as though they were synonymous, then Routley's two kinds of quantification would be synonymous too (in the sense that they are both the same as classical existential quantification); this, however, leads to a contradiction. When Routley claims 'Some things are Fs but they do not exist' he means what classical logicians would mean by saying 'Some things are Fs but it is not the case that some things are Fs' or 'Some things exist but it is not the case that some things are Fs' (cf., Lewis 1990, 26). Given that this is so, sameness of meaning is an inappropriate desideratum for the translation between Routley's dual quantification and classical existential quantification, and we should consider mutual intelligibility as the desideratum of our translation scheme instead. Unlike sameness of meaning, which disallows disagreements between the two logical theories in question, mutual intelligibility as the desideratum of translation preserve the coherence of such disagreements.

There are two possible translations between Routley's dual quantification and classical existential quantification. The first possible is that Routley's loaded quantifier is translated into the classical existential quantifier. However, on Lewis' view, this first translation scheme is unintelligible: under this translation, when Routley quantifies neutrally, he does not quantify in the only way (i.e., the loaded way) there is to quantify; that is, he quantifies without quantifying (ibid., 27-28). So the first proposed translation fails.

This point can be rephrased as follows: First, given the first translation, we get $\exists^E xFx = \exists xFx$ (here '$\exists$' represents the classical existential quantifier). We also have $\exists^E xFx = \exists^N x(Fx \wedge Ex)$, according to the definition of the loaded

particular quantifier. Then, we obtain $\exists^N x(Fx \wedge Ex) = \exists x Fx$. Now we see that, without importing existence, $\exists^N x Fx$ is unintelligible in the classical sense, given that quantification is on a par with existence in classical logic. This argument could be challenged. But I want to temporally set aside any possible concerns of this argument at this point, since I will defend Lewis' translation scheme when I defend the soundness of my argument for (AEA) in §3.3.

Now let us consider the second possibility: Routley's neutral quantifier is translated as the classical existential quantifier. The second proposed translation scheme looks more promising than the first. This is because, under the second translation, when Routley quantifies neutrally, he quantifies just as one quantifies in the classical way; and when Routley quantifies in the loaded way, he restricts his quantifiers to range over the entities that he takes to be 'existent'. Moreover, classical existential quantification is also intelligible to Routley: he can understand classical existential quantification just as neutral quantification (ibid., 29-30).

We may understand this part of the argument as follows: First, given the second translation, we get $\exists^N x Fx = \exists x Fx$. We also have $\exists^E x Fx = \exists^N x(Fx \wedge Ex)$, according to the definition of the loaded particular quantifier. Then, we obtain $\exists^E x Fx = \exists x(Fx \wedge Ex)$. Now we see that both $\exists^N x Fx$ and $\exists^E x Fx$ are intelligible in the classical sense (i.e., $\exists^N x Fx$ and $\exists^E x Fx$ can be understood as $\exists x Fx$ and $\exists x(Fx \wedge Ex)$ respectively), though Quineans such as Lewis may take the existential predicate 'Ex' to be analogous to a predicate like '$in \cdots$' (e.g., 'in the actual world', 'in the fridge', etc.), which restricts the

domain of quantification in particular ways, though they might feel reluctant to say what the existential predicate exactly means. Accordingly, the distinction between Routley's neutral and loaded quantification would be understood by Quineans as no more than the distinction between actual, particular, present, spatiotemporal/concrete, and all the rest (cf., ibid., 30). It should be noted here that the distinction in question understood in this Quinean way is not a categorial distinction which distinguishes two different kinds of existence and does not consequently indicate two different ontological status; this shows that there remains a disagreement between Quineans and Routley—Quineans do not see the categorial distinction between two different kinds of existence that Routley sees. To see this, note that Lewis explicitly holds that (as a modal realist) possible objects have the same ontological status as actual objects, and that (as an eternalist) past or future objects have the same ontological status as present objects; moreover, Quine commits himself to the existence of sets (abstract objects), via the indispensability argument.[3] Aside from the Quinean-Lewisian approach to the existential predicate, another plausible way to read this notion is to say that the existential predicate is identical with the concrete predicate, which is one of the nature-denoting predicates, denoting (part of) the nature of things. This matter, as I will clarify in the next section, coincides with an important distinction between existential questions and predicational questions. Moreover, since this part of the second translation scheme corresponds to one of the premises in my argument for (AEA) below, I will elaborate and defend this point later in §3.3. On the other hand, $\exists x Fx$

[3]For extensive discussion of the connections and differences between Lewisian and Meinongian existence, see Bernard Linsky and Edward Zalta (1991).

is intelligible to Routley as well, for he can understand $\exists x Fx$ just as $\exists^N x Fx$.

Insofar as mutual intelligibility is the desideratum of translation, the second translation seems to achieve this desideratum. Therefore, it is plausible to think that Routley's neutral quantification corresponds to classical existential quantification, and the following translation apparently holds:

(T) $\exists^N x Fx = \exists x Fx$.

Here, we need to note that (T) does not mean that $\exists$ and $\exists^N$ are equivalent or have the same meaning. If we ignore the disagreements between Routley's dual quantification and classical existential quantification and translate these idioms as though they were synonymous, as I pointed out previously, we will run into a contradiction. Rather, since we have assumed that mutual intelligibility is the desideratum of translation, (T) requires only that both Routley and classical logicians can understand each other in the way proposed by (T). In that case, when Routley quantifies, he simply quantifies as classical logicians do, and vice versa. In particular, Routley uses $\exists^N$ to quantify over all things just as classical logicians uses $\exists$ to quantify over all things that exist. The mutual intelligibility required by (T) is enough for the argument that I will construct below, because all that is needed for present purposes is that we are able to use Routley's neutral particular quantifier to express the sorts of things that are expressed by using the classical existential quantifier.

3.2 The Allist Argument and Its Validity

Interestingly, Lewis' Translation Argument leads us to (AEA). By importing (T), we can establish an argument for (AEA) as follows:

(1) (T) holds.

(2) There is only a single kind of existence, *viz.*, that expressed by '$\exists$'.

(3) (T) holds and there is only a single kind of existence, *viz.*, that expressed by '$\exists$'.

(4) If (3), then '$\exists^N$' expresses the same single kind of existence as '$\exists$'.

(5) So '$\exists^N$' expresses the same single kind of existence as '$\exists$'.

(6) $\exists^N$ quantifies over all things including controversial objects.

(7) So all things including controversial objects exist *simpliciter*.

Moreover, given that the single kind of existence is just what is expressed by '$\exists^N$' or '$\exists$', and that $\exists^N$ quantifies over all things including controversial objects, it follows then, not only that all things including controversial objects exist *simpliciter*, but also that all things including controversial objects *trivially* exist *simpliciter* in the sense that such existence is so straightforward and easy to come by as long as $\exists^N$ is in use. That is, the following claim holds accordingly:

(7)* So all things including controversial objects *trivially* exist *simpliciter*.

The rest of this chapter will focus on this argument, which I call 'the Allist Argument'. I shall begin by defending its validity, and then turn to defending the truth of its premises. I will conclude at the end of this chapter by arguing that the moral of the Allist Argument is that ontologists can grant that there is only a single kind of existence, namely that which can be expressed either by the classical existential quantifier or by the neutral particular quantifier; and given this, there seems to be no substantive work for ontologists to do concerning questions of existence.

Let us begin by testing the validity of the Allist Argument. For this, one might argue that even if all of the premises are granted to be true, the conclusion is false. It is clear that one has good reason to grant the truth of all the premises: Premise (1) is simply the conclusion of Lewis' Translation Argument. Given that the Translation Argument looks good, premise (1) is plausible. Premise (2) states the standard Quinean view of existence. Premise (3) is simply the conjunction of premises (1) and (2). Premise (4) is plausible, since this conditional brings out a straightforward inference to the effect that, if premise (3) is true and its truth immediately follows from the truth of premise (1) and the truth of premise (2), then we can replace the classical existential quantifier by the neutral particular quantifier in the subject place of premise (2). Premise (5) is obtained by applying the conditional elimination rule or detachment. Premise (6) is plausible since it is a direct explication of Routley's neutral particular quantifier. So all of the premises are plausible. But even though one took all these premises to be true, one might challenge the strong version of the conclusion, (7)*, by arguing that there are things

that exist non-trivially and that the question of whether or not they exist is philosophically interesting. A potential counterexample to the claim made by (7)* would be the existence of concrete possible worlds (cf., Fine 2009, 158), since the question of whether there are concrete possible worlds appears to be non-trivial and philosophically interesting. Ordinary people have no idea whether concrete possible worlds exist or not, not to mention whether the existence of concrete possible worlds holds trivially. Only philosophers talk about concrete possible worlds and carry on disputes over their existence. If this counterexample is successful, then (7)* turns out to be false even though the truth of all the premises is granted. So the Allist Argument appears to be invalid.

To answer this objection, existence allists might argue that they simply do not understand why the question of whether concrete possible worlds exist should be construed as non-trivial. They could contend that the existential quantifier quantifies over all kinds of things and so surely it also quantifies over concrete possible worlds. This fact is arguably sufficient to establish the triviality of the claim that concrete possible worlds exist. That is, since all things can be quantified over and there is only a single kind of existence, namely that denoted by either '$\exists^N$' or '$\exists$' (if we grant the premises of the Allist Argument), all things including concrete possible worlds trivially exist. Given that this is so, it seems that anyone who wants to reject the conclusion of the Allist Argument has to oppose at least one of the premises of this argument (e.g., premise (6)).

However, it might not be necessary that opponents of existence allism, especially those who hold that it is a controversial and philosophically interesting question whether concrete possible worlds exist, as well as those (actualists or ersatzers) who claim to deny that concrete possible worlds exist, would have to reject the truth of premise (6). The subject-matter of the dispute in question would be just over what is included in the scope of 'all things' in premise (6). According to this understanding of the dispute in question, the disagreement would be over whether concrete possible worlds are (unproblematically) included in the scope of the 'all things' in premise (6).

In light of this point, my response is that the proposed counterexample shows not that the question of whether concrete possible worlds exist is non-trivial and philosophically interesting, but that the question of what the nature of possible worlds (i.e., concreteness) is is non-trivial and philosophically interesting.[4,5] In other words, whereas the non-trivial and philosophically in-

[4]The distinction between the existence and the nature of things has been pointed out by many philosophers. E.g., Thomas Aquinas, in *De Ente et Essentia* (*On Being and Essence*), argues for a distinction between an object's nature and its existence. In the contemporary literature, Fine (1995c) notes that it is wrong to identify the being of what an object is (i.e., its nature) with its existence. Similarly, E. J. Lowe (2006) differentiates questions about the nature of entities to which the descriptions of the world apply from questions about how to describe the world.

[5]As Lewis (1986) points out, there are various ways to understand the notion of concreteness (e.g., spatiotemporal location, causal interaction, particularity, etc.). But for simplicity, we temporarily construe being concrete as being located in space and time. Moreover, the essentialist view of concreteness, according to which concrete entities are essentially concrete, is confronted with challenges. In contrast to this view, Linsky and Zalta (1994, 1996) as well as Timothy Williamson (1998) independently argue that in some cases entities are just possibly concrete, say located in space and time at some world or other. E.g., a possible fat man or a possible river that is not concrete at our world but concrete at some other (possible) world(s). Even though I am sympathetic to this objection, it seems to me that we cannot thus argue that possible worlds are contingently concrete: we beg the question if we claim that possible worlds are not concrete at our world but concrete at some other (possible) worlds. Nor have I come across any alternative ways to prove that possible worlds are contingently concrete. Given this, I tentatively suppose that possible worlds are essentially

teresting question in this case is apparently the existential question of whether there are concrete possible worlds, I want to adopt the view that it is in fact more plausible to hold that the predicational question of whether possible worlds are concrete that is non-trivial and philosophically interesting. In order to clarify the distinction between existential and predicational question, I differentiate between purely existential questions and all the other existential questions which include other components as well and so are not purely existential. In our current case, for example, the question, 'Do concrete possible worlds exist?', is not a purely existential question. The purely existential question in the vicinity is 'Do possible worlds exist?', and the non-existential part is 'Are possible worlds concrete?'. The ontologically significant question concerning the nature of possible worlds, in contrast, is predicational rather than existential. Philosophical disputes concerning this predicational question can be substantive. For example, Lewis holds that possible worlds, just as the actual world, are worlds containing concrete entities and so concrete as well. In contrast to Lewis, ersatzers contend that possible worlds are abstract representations of ways the actual world could have been (Lewis 1986, 136).

The dispute between Lewis and ersatzers, however, has been oversimplified for current purposes. First, as I mentioned previously, Lewis takes the concrete/abstract distinction to be ambiguous and not to be a useful device for the purposes of stating his own position (ibid., 81-86). Also, according to my reading, the dispute in question seems to arise originally from Lewis' identification between ways for things to be with things themselves. On Lewis' view,

concrete or non-concrete.

possible worlds are initially 'ways things could have been' and they are things of the same kind as the actual world, namely 'I and all my surroundings' (Lewis 2001/1973, 84, 86). Along this line of thought, Lewis (1986, 86) argues that given modal realism and the principle of economy, it is advantageous to identify ways with worlds. Against this view, ersatzers such as Robert Stalnaker (1976) have argued that the way things are or might have been is a property of things which should be distinguished from things themselves. For this reason, while ersatzers agree that possible worlds are ways things might have been, they argue that possible worlds are different from the actual world in the sense that the former are ways represented by theories, or by pictures, or by some magical entities, depending on what version of ersatzism they hold, while the latter amounts to the real world at which we live. Either way, however, the dispute is concerned with the nature, rather than the existence, of possible worlds. So we get:

> (NPW) Both Lewis and ersatzers agree that possible worlds exist and their central dispute is over the nature of possible worlds.

Even so, it is worth noting that Lewis himself rejects (NPW). For this, he explicitly claims as follows:

> ···It's wrong to say that the ersatz modal realists and I agree at least that possible worlds exist, and disagree only about whether those worlds are abstract or concrete. That understates the extent to which they disagree with me (and with one another). We agree that there are entities fit to occupy certain theoretical roles, but that is all. The ersatzers just do not believe in what I call worlds; and sometimes—depending on which version of ersatzism we consider—I just do not

> believe in what they call worlds. Compare the foolish suggestion that all of us at least agree that God exists, although we disagree about His nature···Given *that* much disagreement about 'His' nature, there's nothing we all believe in! (Lewis 1986, 140)

In the cited paragraph, Lewis seems to claim, to say that modal realists and ersatzers agree that a certain type of entity exists (*viz.*, possible worlds), while disputing over what the entity's natures are, would be to overstate their agreement and to understate their disagreement. Their agreement, on Lewis' view, is that they both think that there is a certain type of entity which fits to occupy some theoretical roles. But on my reading of the dispute under discussion, I do not see how (NPW) overstates the preceding agreement. It seems to me very plausible that both modal realists and ersatzers agree that there are entities, namely what they call possible worlds, fit to play some theoretical roles (as Lewis claims), while they disagree about what possible worlds are like, *viz.*, about what the nature of possible worlds is (or, in Lewis' words, the disagreement is that they have different understanding of what they call (possible) worlds). That is, on my view, (NPW) claims no more than what Lewis takes the disputants to agree or disagree about; nor does (NPW) claims less than that. Therefore, whereas Lewis claims to reject (NPW), we have good reason to think of (NPW) instead as a satisfactory characterization of the dispute in question.

The issue is nevertheless more complicated than what I have described above. Regarding this, note that although Lewis holds that possible worlds are concrete just as the world at which we live, he maintains that possible worlds correspond to certain mathematical entities in some ways and calls

such mathematical entities 'ersatz possible worlds' (cf., Lewis 2001/1973, 90). This, however, by no means indicates that Lewis takes certain mathematical entities to be possible worlds or thinks of possible worlds as reducible to certain mathematical entities. Rather, Lewis just claims that there is a certain one-one correspondence between possible worlds and certain mathematical entities, say, ersatz possible worlds, and that any such correspondence claims, if credible, could give us a nice grip on possible worlds by the corresponding ersatz representations (ibid., 90). Given that this is so, it seems to follow that Lewis claims to admit the representations of possible worlds, namely ersatz possible worlds, which are ways possible worlds are. But as I mentioned before, he in fact denies that there is a difference between things and ways things are. This view, although I concede that it appears to involve inconsistency, is compatible with (NPW). For, even if Lewis held that both possible worlds and their representations, say, ersatz possible worlds, exist, the dispute between Lewis and ersatzers could still be construed as over the nature, rather than the existence, of possible worlds: unlike ersatzers who typically hold that possible worlds are just abstract representations, Lewis contend that possible worlds are concrete just as the world at which we live, though on his view possible worlds in some ways correspond to their ersatz representations, say, ersatz possible worlds. Given all this, and if my preceding response to the apparent counterexample under discussion (i.e., the apparently non-trivial and philosophically interesting question of whether concrete possible worlds exist) is plausible, then in our current case it is the predicational part of the question (i.e., 'Are possible worlds concrete?') rather than its purely existential part

(i.e., 'Do possible worlds exist?') that is non-trivial and philosophically interesting. In this sense, the example of concrete possible worlds is compatible with (7)* as well as all the premises of the Allist Argument.

Another apparent counterexample against (7)*, even though we grant the truth of all the premises, is the existence of tropes (i.e., abstract particulars or particular instances of properties). In the literature we have trope theorists or believers such as Keith Campbell (1981, 1990) and opponents of trope theories such as David Armstrong (1978) disputing over whether tropes exist. Given that both positions are endorsed by solid philosophical arguments, their dispute is presumably philosophical as well as substantive. It follows that the question of whether tropes exist appears to be non-trivial and philosophically interesting. But by applying the existential/predicational distinction that I sketched previously, we can reply that in this dispute the question, 'Do tropes exist?'(i.e., 'Do abstract particulars exist?', or 'Do particular instances of properties exist?'), is not a purely existential question. The purely existential question in the vicinity is rather the question, 'Do properties exist?'. In addition to this purely existential question, there are various predicational questions which concern the nature of properties, if properties exist, such as 'Are properties abstract?', 'Are properties concrete?', 'Are properties particulars?', 'Are properties universals?', etc. The purely existential question, 'Do properties exist?', is one which both Campbell and Armstrong answer in the affirmative. But when it comes to the various predicational questions, their disagreements surface. That is, Campbell holds that properties are abstract particulars, namely tropes, while Armstrong contends that properties are uni-

versals. Moreover, even for ontologists (e.g., nominalists) who claim to deny that properties exist at all, they in fact accept that properties exist, i.e., they answer the pure existential question, 'Do properties exist?', in the affirmative. Their dispute with trope theorists or believers in universals is rather with respect to the question of what properties are like, i.e., what their natures are. For example, the nominalist would hold that properties are classes (or collections of some kind) of concrete particulars, or 'shadows cast by predicates'.[6] Because of all this, we get:

> (NPR) The trope theorist, the universalist, and the nominalist can all agree that properties exist and their central dispute is over the nature of properties.[7]

[6]The nominalist might argue in response that my proposal seems to be a distortion of nominalism: most nominalists are skeptical of the existence of properties. They do not want to say that properties exist, and are classes or words: they want to say that properties do not exist, and only classes or words do instead. Given that this is so, my preceding proposal apparently fails to satisfy the nominalist's needs. Here I have two answers to this objection. First, I answer that the disagreement between me and the preceding nominalist is merely terminological: they claim to deny that properties exist at all, but on my reading they grant the existence of properties and argue about the nature of properties. Along this line of thought, for example, one may argue that although the nominalist claim to reject the existence of properties, they do not deny that properties exist *per se*: they merely deny that properties exist as fundamental entities (cf., Schaffer 2009, 365). For, according to an interesting reading of nominalism, the nominalist hold that properties are reducible to classes or words and hence are unreal, namely that properties do not exist as fundamental entities. On their view, classes or words exist as things more fundamental than properties. If this is the case, then the core issue here is still about the nature, rather than the pure existence, of properties, i.e., about whether properties are fundamental or derivative. Second, I answer that my characterization of the dispute between nominalists, trope theorists, and believers in universals has philosophical advantages (namely that I can capture that they are all arguing over a single subject matter)—whether or not each participant in the dispute agrees with my characterization of their position. In other words, according to my approach, the nominalist should characterize their own position as one which agrees that properties exist but disagrees with realists over what properties are. I am making a recommendation to the nominalist as to how they should conceive of their own position, independently of whether this is the characterization they themselves would use to state their own position.

[7]I recognize that given our different understandings of the nature of things such as

Therefore, given the existential/predicational distinction that I am proposing, neither the example of concrete possible worlds nor the example of tropes need be construed as incompatible with the truth of (7)*, if we grant the truth of all the premises of the Allist Argument.

The strategy I have just outlined with respect to possible worlds and properties can be generalized and used with respect to other possible counterexamples as well. In addition to these apparent counterexample arguments against the *trivial* existence of all things, I anticipate that some will object to existence *simpliciter* in the conclusion. They will argue that there are other kinds of existence in addition to the kind of existence represented by the classical existential quantifier. This objection must be addressed, but not here. For, the objection along these lines is not an objection to the validity of the argument but an objection to premise (2). So I will postpone my reply to this objection until I defend premise (2). Now that this concern is dissolved, it becomes clear that if all the premises are taken to be true, then the conclusion of the Allist Argument is true. The argument as a whole is therefore valid.

properties and possible worlds, we may hold different identity conditions/criteria for such things (especially because identity conditions/criteria for concrete objects might not be applicable to at least some abstract objects, e.g., Leibniz's Law cannot explain why two properties are the same). Further, given that this is so, we may, then, have different answers to questions concerning the number of such things. To see this, suppose that abstract objects are abstractions from concrete objects and that the identity criterion for abstract objects is as follows: two abstract objects are to be the same iff they are necessarily associated with the same things under their respective means of abstraction (Fine 2002, 49-50). Now we consider two cases: properties as tropes and properties as classes of concrete particulars. If we take properties to be abstract particulars, then the number of the properties of being cat is the same as the number of cats. Or, if we take properties to be classes of concrete particulars, then the number of the property of being cat is smaller than the number of cats.

3.3 The Soundness of the Allist Argument

Since I have shown that the Allist Argument is valid, I turn now to defend the soundness of the argument. Among the five premises, the truth of premise (5) relies on premises (1), (2), (3), (4), and the conditional elimination rule or detachment. Given that the conditional elimination rule or detachment is one of the basic logical rules about which we do not need to worry, the truth of premise (5) would be salient if I could show premises (1), (2), (3), and (4) to be true. Also, premise (3) is true as long as we can show that premises (1) and (2) are true, given that premise (3) is simply a conjunction of premises (1) and (2). Moreover, we have observed that premise (4) as a conditional holds, for it simply substitutes the two quantifiers which are assumed to be translatable. Finally, premise (6), which is asserted in Routley's neutral quantification logic, should be justified further; in particular, the motivations for Routley's approach require additional attention. Thus, with respect to the soundness of the argument, we need to consider the truth of premises (1), (2), and (6).

I begin by examining premise (1). Premise (1) asserts that (T) holds. (T) is based on Lewis' Translation Argument. So if anyone who questions (T) should be able to point to a weakness in Lewis' Translation Argument. Here is an example. Priest (2011) objects that the Translation Argument is methodologically flawed. He argues that just as no one would suggest that we should translate the concepts of the Special Theory of Relativity into the notions of Newtonian Dynamics (or vice versa), there is no reason why there should be a translation between non-classical dual quantification and classical existential quantification; they are simply different language games that we

need to learn separately (Priest 2011, 251). If my reading is correct, Priest's argument seems to assume that, if two theories are sharply different from each other, then there is no reason why there should be a translation between the notions of these two theories. Along this line of thought, since the Special Theory of Relativity and Newtonian Dynamics are radically distinct, no one would suggest that one should be able to achieve a translation between these two theories which preserves mutual intelligibility. Similarly, given their disparity, we have no reason to expect that a similar translation scheme would be available for non-classical dual quantification and classical existential quantification. In response to Priest's argument, I want to note that, although I am sympathetic to the assumption that Priest invokes, there is in fact a disanalogy between the two translation schemes under discussion. I admit that we are faced with various sorts of complexities when attempting to translate between different languages. In some special cases, it even appears to be impossible to translate between two languages, since they hardly overlap and their differences are too sharp to be reconciled. However, according to our reading of neutral quantification logic and classical first-order logic which correspond to the two quantification theories in question, while they involve disagreements, these two logics have lots of common features and especially a shared ground: as we discussed in the previous chapter, for example, neutral quantification logic merely in some way extends free logic and free logic is established on the basis of classical first-order logic by making the existence presuppositions explicit. It is the common features and theoretical ground that both neutral quantification logic and classical first-order logic share that motivates Lewis

and us to consider intelligible translations between non-classical dual quantification and classical existential quantification. In particular, Lewis does find an intelligible translation between these two quantification theories, namely the second translation which holds (T). Given that this is so, the difficulty with the translation between non-classical dual quantification and classical existential quantification might not be so sharp as the difficulty with the translation between the Special Theory of Relativity and Newtonian Dynamics. In other words, unlike Lewis' Translation Argument, which has provided a mechanism by which to translate between the two quantification theories, presumably no such mechanism can be found in the case from physics.[8] Priest's analogy as well as his whole objection seems to fail for these reasons.

In response to my reply, however, Priest might further argue that there is something wrong with Lewis' mechanism—Lewis' proposed translation between non-classical dual quantification and classical existential quantification is false—and hence my foregoing response begs the question. To see this, recall first that in the Translation Argument, Lewis argues that the first translation, according to which Routley's loaded quantification is supposed to be translated into classical existential quantification, is unintelligible. For, under this

[8]The situation might not be quite as bleak as we have described it to be. Suppose we want to say that two different and incompatible theories in physics are both trying to characterize one and the same phenomenon, e.g., acceleration. It follows that there should be some way of expressing in terms that is compatible with both theories that they are directed at characterizing the same phenomenon, instead of merely talking past each other. Thus, the situation here can be taken as similar to the situation in logic where we want to be able to say that both classical first-order logic and neutral quantification logic are in the business of trying to characterize one and the same phenomenon, e.g., existence. However, this alternative understanding of the two cases under discussion does not undermine my response to Priest's objection, since such understanding is congenial to our view that there could be an intelligible translation between non-classical dual quantification and classical existential quantification.

translation scheme, when Routley quantifies neutrally, he does not quantify in the only way (i.e., the loaded way) there is to quantify; that is, he quantifies without quantifying. Against this view, Priest contends that the first translation is intuitively correct, given that both Routley and classical logicians intend $\exists^E$ or $\exists$ to capture the phrase 'there exists' (ibid., 251-252). Moreover, as regards the unintelligibility of $\exists^N$ under the first translation, Priest takes it to be a limitation of the language of classical existential quantification rather than a problem with the translation. Specifically, Priest argues that the proponents of neutral quantification logic have a richer language than classical logicians, whereas classical logicians are unable to express neutral quantification represented by $\exists^N$ by means of classical existential quantification; this is the reason why, when translated into the language of classical existential quantification, Routley's neutral quantification turns out to be unintelligible (cf., ibid., 252). I reply that Priest's argumentative strategy is ill-conceived for two reasons. First, the fact that both Routley and classical logicians intend $\exists^E$ or $\exists$ to capture the phrase 'there exists' is not enough to justify the correctness of the first translation, given that both Routley and classical logicians also intend $\exists^N$ or $\exists$ to capture the phrase 'some', or 'there is'. Second, it seems unreasonable to blame languages when our attempts at translating between two idioms turn out to be unsuccessful. We know that we might face difficulties when we translate between different languages, but our job is to overcome such difficulties and to achieve mutual understanding. In our current case, even if we grant that the language of classical existential quantification is not as rich as that of non-classical dual quantification, this does not necessarily

preclude our chances to find a successful translation between these two languages. But the first translation is unintelligible. Given that we have assumed mutual intelligibility to be the desideratum of translation, any unintelligible translations in this case are supposed to be construed as failed, no matter what reasons we may have for such unintelligibility. It follows that the first translation should be rejected. Consequently, Priest's further attempt to show the flaw in Lewis' mechanism with respect to the translation in question turns out to be unsuccessful. The truth of premise (1) is therefore preserved.

Second, let us consider premise (2). Premise (2) claims that existence is just the single kind of existence captured by the classical existential quantifier. This is the standard Quinean view of existence, which we may call 'Quine's Dictum'. Regarding this premise or dictum, Routley and Priest in their neutral quantification logic disassociate quantification from existence; they could therefore object that genuine existence is not captured by any kind of quantificational idiom at all. On their view, quantification's existence loading depends on the existential predicate. That is, as I mentioned before, existentially loaded quantification is, according to their approach, defined in terms of existentially neutral quantification plus the existential predicate. This objection shows the central divergence between neutral quantification logic and classical first-order logic (i.e., whether quantification is associated with existence), an issue which is too complex to settle properly here. But since I follow Lewis' Translation Argument, I endorse a particular interpretation of the formal system given by the neutral quantification logic, which Routley might dislike and Priest definitely disavows, given that Priest explicitly objects to Lewis' Translation

Argument.

There are two core issues about this particular interpretation which I should emphasize here: First, we interpret the neutral particular quantifier just as a more tolerant classical existential quantifier, which quantifies over all kinds of things including controversial objects, but still indicates the existential status of things that are quantified over. Second, we could follow Lewis and interpret the loaded particular quantifier just as a restricted neutral particular quantifier, which does not indicate another kind of existence but merely situates things that are being quantified over into certain particular contexts (e.g., 'beers in the fridge'). Under this interpretation, the neutral particular quantifier is associated with existence and the loaded particular quantifier only restricts the contexts that are being considered in particular existential claims. Alternatively, given the existential/predicational distinction that we made previously, we could also construe the existential predicate as identical with the concrete predicate which denotes (part of) the nature of things. If so, then the loaded particular quantifier should be better understood as an instrument to identify the nature, rather than the existence, of things. Accordingly, although we grant the correctness of the formal system given by the neutral quantification logic, we hold that the one and only kind of existence is fully captured by the classical existential quantifier or the non-classical neutral particular quantifier and that the existential predicate merely indicates particular contexts relative to which existential claims are to be evaluated, or—as we prefer to say—identifies the nature, rather than the existence, of things, without suggesting that there is another kind of existence. Given that this is

so, the neutral quantification logic, at least as interpreted here, does not affect the truth of premise (2).[9]

Another premise that we need to consider is premise (5). Premise (5) claims that the neutral particular quantifier quantifies over all things. Routley affirms this point in his neutral quantification logic. So in order to reject premise (5), one would have to argue against Routley's logic. A full treatment of this issue would be too ambitious for the present context. However, more needs to be said to defend the motivation behind the introduction of the neutral particular quantifier. In classical first-order logic, there is only one particular quantifier, namely the classical existential quantifier, which does not require separating existence from quantification. With this point in mind, some might object that we do not need the neutral particular quantifier, insofar as we already have the classical existential quantifier. In response to this concern, I argue first that since I interpret the neutral particular quantifier just as a more tolerant classical existential quantifier, I do not separate existence from quantification, though I use (at least partly) the formal system given

[9]People might also oppose premise (2) by arguing that although there seems to be only a single kind of existence, the term 'exist' is equivocal, namely that 'exist' has different meanings when applied to entities belonging to different categories. For instance, Gilbert Ryle (2009/1949, 12) argues that this is the case because it is very odd to say, 'There exist prime numbers and Wednesdays and public opinions and navies.' But I do not think this sort of views are promising. Intuitively, it is highly dubious whether the oddness of the conjunctions in question justifies Ryle's position that 'exist' has different meanings. For, given their sharply different natures, the mere conjunction of a claim concerning prime numbers, Wednesdays, public opinions, and navies seems sufficient to generate some oddness. As Peter van Inwagen (2009) notes, any sentences about prime numbers and Wednesdays and public opinions and navies would sound odd, if such sentences do not just cite and comment on other odd lists (like what we are doing now). In light of this point, Ryle's example appears to show merely that the nature of the items under consideration is significantly different, rather than the view that 'exist' is equivocal. I suspect that other similar strategies for defending the equivocality of the term 'exist' would face the same fate.

by the neutral quantification logic. This means that, whereas I do not share Routley's view that quantification is disassociated from existence (his motives for doing this, as I mentioned in the previous chapter, are mainly that he wants his logic to be applicable to a broad range of intensional cases), I am happy to incorporate the neutral particular quantifier into my picture, for this quantifier, according to my interpretation, is nothing more than a more tolerant classical existential quantifier. My use or interpretation of the neutral particular quantifier simply follows Lewis' Translation Argument. Since the Translation Argument was defended, I can assume that premise (5) is true as long as the neutral particular quantifier is interpreted in the way that I outlined above.

Second, I argue that my particular use of the neutral particular quantifier is of great merit: by going the existence allist route, we can make sense of ontological disputes in a way that the Quinean cannot. For example, the nominalist, the trope theorist, and the believer in universals, according to my approach, can all assent to the existential claim, 'Properties exist', where existence is here construed in the neutral way. But they disagree over the predicational question of whether properties are concrete or abstract, particular or universal. So really my neutral existential quantifier allows ontologists to assert that a certain kind of thing exists, while remaining neutral on, or disagreeing over, the question of what the nature of the thing in question is. By contrast, the Quinean would not be able to do justice to such predicational questions as genuine non-existential ontological questions; they would, otherwise, have to paraphrase these predicational questions as some form of

existential questions. That is, the Quinean would have to hold that the dispute over the predicational question of whether properties are concrete or abstract, particular or universal, is nothing more than the dispute over the existential question of whether concrete or abstract properties exist, or that of whether particular or universal properties exist. However, as I showed in §3.2, this Quinean analysis seems misleading. For, these apparent existential questions can be read as not purely existential—as they consist of predicational parts—and on this reading, it is their predicational, rather than purely existential, parts that are non-trivial and philosophically interesting. Furthermore, my analysis of the dispute in question has advantages which the competing analyses do not seem to have, namely that I can capture why the theorists in question are carrying on a dispute over a single phenomenon, rather than that they are merely talking past each other (we can more clearly see this point in the subsequent chapter). This result robustly endorses the truth of premise (5).

So far, I have defended the truth of premises (1), (2), and (5). As I said before, premises (3) and (4) simply follow from premises (1) and (2). Given that the truth of premises (1) and (2) has been defended, premises (3) and (4) can be assumed to be true as well. Therefore, the Allist Argument is sound.

3.4 Concluding Remarks

In this chapter, I have defended (AEA), according to which all things including controversial objects trivially exist *simpliciter*. Specifically, I have defended

the validity of the Allist Argument as well as the truth of each of its premises. In these final remarks, I bring out some interesting consequences of (AEA) concerning the subject-matter of ontology. Traditionally, Quineans hold that ontology is the study of what exists. But if my Allist Argument goes through, then ontologists can adopt existence allism, according to which the existence of all things are trivially asserted. For this reason, there seems to be no substantive work for ontologists to do concerning questions of existence. This view more or less coincides with Fine's (2009) and Schaffer's (2009) insights concerning the subject-matter of ontology. Fine points out that ontology is not concerned with the kind of existence represented by the existential quantifier, because he thinks of ontological claims as universal claims (e.g., 'All numbers are real') in which the existence of the entities in question is always presupposed (otherwise, ontological claims would all turn out to be vacuously true). Similarly, Schaffer argues for existence permissivism, according to which Quinean existential questions are trivial. If we are right in holding that there is no substantive work for ontologists to do concerning questions of existence and if we hold that the only kind of existence is that which is captured by the existential quantifier, then we should also consider whether ontology is concerned with something other than existence. To use Fine's framework, we might say that the work of ontology focuses instead on the elucidation of 'ϕ' in $\forall x(Fx \supset \phi x)$, whatever '$\phi$' stands for. I personally think this is the right direction. According to this approach, the main task for ontologists will be to say more about the predicate 'ϕ', which on this view is distinct from the

single kind of existence that is captured by the classical existential quantifier.[10] Relatedly, Fine, Schaffer, and Koslicki (2015b) have provided alternative approaches to ontology, which suggest that substantive ontological questions are questions of fundamentality.

[10]Fine (2009) argues that the substantive and philosophical aspect of ontological claims lies in the existential predicate rather than in the use of the existential quantifier. It follows that questions of ontology are questions of reality. Moreover, according to Fine (2001), questions of reality are associated with questions of grounding; that is, for something to be real is to have that thing figure some fact that grounds other facts. So on his view realist ontology is the study of the fundamentally real. My view of ontology, insofar as I hold (AEA), is different from Fine's since I only admit the single trivial existence captured by the existential quantifier and thus disallow the ontological predicate 'ϕ' as denoting another kind of existence.

Chapter 4

The Substantivity of Questions of Nature

In the previous chapter, I defended an advanced version of existence allism, according to which all things including controversial objects trivially exist. This position, however, is not a kind of ontological deflationism, in attempting to trivialize or to make easy the overall project of ontology. In contrast to ontological deflationism, I maintained that there are substantive ontological questions, namely those which are concerned with the nature or essence of things and which on my view should be distinguished from questions of existence. But in order to save energy and space to defend the trivial existence of all things, I assumed in the preceding chapter that questions of nature or essence (which I called there 'predicational questions' as opposed to existential questions) are substantive, without extensively defending the substantivity of these questions against the deflationist alternatives. This leaves much work for

my current chapter. In what follows, I try to defend the substantivity of questions of nature and my defense is in particular targeted to the neo-Carnapian deflationary approach to questions of nature proposed by Thomasson (2007b, 2013), which attempts to trivialize questions of nature by some neo-Carnapian means. On Thomasson's view, questions of nature or essence are just questions of metaphysical necessity, where the modal features are construed by her merely as reflections of certain constitutive semantic rules (or their consequences) in the object-language (I shall specify this point in §4.1). If this is the case, then asking and answering questions of nature turn out to be no more than certain conceptual or linguistic practices and/or such practices plus some empirical discoveries (if any). That is to say, questions of nature as questions of metaphysical necessity are trivial and/or empirical and the ontological study of the nature of things itself does not seem to provide us with any surprising results that require us to revise our previous beliefs or practices in identifying the things in question. As an alternative to Thomasson's deflationary approach, I am sympathetic to Fine's (1994, 1995a, b) neo-Aristotelian definitionalist conception of nature or essence. Following this alternative approach, I argue that questions of nature or essence are *not* questions of metaphysical necessity and they are immune to Thomasson's neo-Carnapian deflationism, whereas I leave open the plausibility of Thomasson's normativist construal of questions of metaphysical necessity, or more broadly modal questions. This strategy, if it is successful, will prevent us from falling prey to Thomasson's neo-Carnapian deflationism and help us retain the substantivity of questions of nature (at least in the sense that such questions are not easily answerable only

by conceptual and/or empirical means), even though we hold that questions of existence are trivial.

This chapter divides into three main parts. In the first part (§4.1), I address Thomasson's normativist modal account of nature or essence and lay out her argument for the non-substantivity of questions of nature. In the second ($§4.2 - 4.3$), I criticize the coarse-grainedness of the standard modal accounts of nature or essence by means of Fine's counterexample and introduce his neo-Aristotlelian definitionalist account of nature or essence as a promising alternative. In the third ($§4.4 - 4.5$), I argue that the definitionalist account of nature or essence is not only conducive to establishing the substantivity of questions of nature against Thomasson's deflationary approach, but also compatible with the triviality of the existence of all things that I defended in the previous chapter. I conclude that the triviality of questions of existence does not result in a disappointing overall project of ontology (§4.6).

4.1 Thomasson's Normativist Modal Account of Nature

Thomasson (2007b, 2013) proposes a normativist modal account of nature or essence. To bring out her normativist modal approach to nature or essence, Thomasson first assumes that the talk of (metaphysical) nature or essence is identical with the talk of metaphysical necessity, where metaphysical necessity is commonly distinguished from pure logical necessity on the one hand and

from nomological necessity on the other.[1] It follows that to account for nature or essence is to account for metaphysical necessity. Given this, the task is, then, to address the normativist approach to metaphysical necessity.

Thomasson's normativist approach to metaphysical necessity requires us to accept first that language has its rules which govern our usage of terms, though the rules may not all be statable in the meta-language and competent speakers are supposed to merely master at following the rules rather than to be capable of reciting them. Also, the rules as such are constitutive rules in the sense that the subjection to such rules is constitutive of using a term as apposed to a homonym. There are several different kinds of constitutive rules, including syntactic rules, semantic rules and pragmatic rules. In addressing the normativist approach to metaphysical necessity, Thomasson's focus is on the constitutive semantic rules, especially the rules with respect to the 'application conditions' (*viz.*, those under which a term is to be applied or refused) and the 'coapplication conditions' (*viz.*, those under which a term (typically a name or a sortal term) may be reapplied to one and the same object). Moreover, the rules in the current context are those in the object-language rather than in the meta-language. This is because even if we hold a normativist view of claims

[1]Different philosophers may draw these distinctions in different ways. Lowe (1998), for example, takes a pure logical necessity to be a proposition true in virtue of the laws of logic alone; by contrast, on Lowe's account, metaphysical necessity is to be a proposition true in every logically possible world. Another account of metaphysical necessity is mentioned by Fine (1994): Fine takes metaphysical necessity to be a proposition true in virtue of the identity of all objects. A typical example of metaphysical necessity which is not purely logical necessity is 'Water is H_2O'. For, to a first approximation, there is no logical contradiction involved in 'Water is not H_2O', while it is metaphysically impossible that water is not H_2O. In addition, generally speaking, nomological necessity is the necessity under the laws of nature. It is unclear which notion of metaphysical necessity that Thomasson has in mind, but this is okay since my argument against her will not heavily rely on her precise understanding of this notion.

about metaphysical necessity, such claims are not claims in the meta-language and hence do not apparently state any rules for using language but simply for using certain terms in a language. Based on the preceding apparatus, Thomasson construes claims about metaphysical necessity, or more broadly modal claims, as ways of conveying certain constitutive semantic rules (or their consequences) in the object-language. To see how this approach goes, let us consider below two examples of claims about metaphysical necessity.

Consider first the following *de re* and apparently *a priori* modal claim: 'Necessarily, Hilary Clinton has her genetic origin.'[2] On Thomasson's view, this claim can be understood as a way of conveying a constitutive semantic rule in the object-language for reapplying the name 'Hilary Clinton', when the rule is applied. A statement of the rule can be as follows: If the name 'Hilary Clinton' has been successfully used to denote a person x, then reapply that name to any y only where 'the same person' applies to both x and y. The coapplication condition for the sortal term 'person' may in turn require that 'the same person' be applied to both x and y only where they trace to the same genetic origin.[3] If this is the case, then some claims about metaphysical necessity appear to serve to express certain constitutive semantic rules for using our terms in the object-language.

Second, let us consider a typical *de re* and *a posteriori* modal claim: 'Nec-

[2]Thomasson (2007b, 145) notes that this claim can be read as knowable *a priori*, if we presuppose that Hilary Clinton is a person and put the claim in the rigid form: '(If Hilary Clinton is a person), necessarily, Hilary Clinton has her genetic origin.'

[3]Here, it is unclear why Thomasson thinks that there is not an *a posteriori* element in discovering that genetic information or sameness of origins is even relevant to determining that 'the same person as' applies in a particular case. But since this is not the main issue that I want to address as regards Thomasson's examples, I in what follows will just pretend to regard the case of Hilary Clinton as an *a priori* case.

essarily, water has the chemical structure H_2O.' According to Thomasson, the same strategy can be used to account for this claim only by acknowledging that the proposed rules could be schematic, awaiting certain empirical facts to fill them out. That is, we can begin by having this schematic rule: whatever the actual chemical structure of x turns out to be, apply 'water' to x only where there is x that has that chemical structure. After laying out this schematic rule, we can, then, fill out the preceding schematic rule with the empirical fact that the actual chemical structure of water is H_2O and get: necessarily, water has a chemical structure, namely H_2O. Therefore, we have seen a case where a *de re* and *a posteriori* claim about metaphysical necessity appears to convey a consequence of a certain (schematic) constitutive semantic rule for using our term in the object-language combined with an empirical fact.

It has become clear thus far how Thomasson's normativist account of metaphysical necessity looks like. We are now able to see the consequences of this normativist view as to the substantivity of questions of nature as well as the prospect of the overall project of ontology. On the normativist view, the facts about nature or essence (i.e., the facts about metaphysical necessity) that ontologists try to uncover are just hypostatizations out of modal truths, where modal truths are expressions of certain constitutive semantic rules for using our terms (or their consequences) in the object-language. It follows that to address questions of nature only requires us to make explicit such constitutive semantic rules and their consequences that may be in combinations with empirical facts. That is to say, on Thomasson's normativist account, there are in fact no deep and real things in the world to be discovered about nature or essence (i.e.,

metaphysical necessity) alone and the ontological disputes over the nature of things turn out to be mere conceptual and/or empirical disputes. The only kind of work for ontologists to do concerning nature or essence, on this view, is to articulate the constitutive semantic rules for our usage of terms (or their consequences) in the object-language, to determine the relations among the rules for our usage of a range of related terms (or their consequent relations), and to point to the potential inconsistencies in such rules. Along this line of thought, ontologists' different answers to questions of nature within their ontological theories would be simply the results of conveying different constitutive semantic rules for applying and/or reapplying terms in the object-language, or their consequences that may be combined with certain empirical facts. Once such rules are made explicit and/or the relevant empirical facts (if any) are at hand, the answers to questions of nature (e.g., the question, 'Is water [essentially/necessarily] H_2O?') are straightforward and easy to come by. Questions of nature are *not* substantive because such questions are easily answerable only by conceptual and/or empirical means.

To sum up, given her normativist modal account of nature or essence, Thomasson's argument for the non-substantivity of questions of nature (I will call it 'the Non-Substantivity Argument' for short) can be formulated as follows:

(1) Questions of nature are identical with questions of metaphysical necessity.

(2) Questions of metaphysical necessity are not substantive.

(3) Questions of nature are identical with questions of metaphys-

ical necessity and questions of metaphysical necessity are not substantive.

(4) If (3), then questions of nature are not substantive.

(5) So questions of nature are not substantive.

In the subsequent section, I will show that whereas the Non-Substantivity Argument is valid, it is unsound. My focus will be on premise (1), attacking it by using Fine's (1994) famous counterexample, though I am suspicious of the truth of premise (2) as well—I will leave it open to save space for addressing my worry about the truth of premise (1).

4.2 The Coarse-Grainedness of the Standard Modal Accounts of Nature

The Non-Substantivity Argument is obviously valid. Suppose that both premise (1) and premise (2) are true. It follows immediately that the conjunction of premise (1) and premise (2), namely premise (3), is true. Premise (4) brings out a straightforward inference to the effect that, if premise (3) is true, then we can replace questions of metaphysical necessity by questions of nature. So given the first supposition, premise (4) is true. The conclusion follows from premise (1) through (4) by applying the conjunction introduction rule and the conditional elimination rule or detachment. Therefore, if all the premises of the Non-Substantivity Argument are true, then the conclusion is true. With this point confirmed, we have no doubt about the validity of the Non-Substantivity

Argument.

Since the validity of the Non-Substantivity Argument has been tested, I turn now to examine the soundness of this argument. My focus in this section is on premise (1). Premise (1) identifies questions of nature with questions of metaphysical necessity. For this, Thomasson seems to grant the correctness of the mainstream *de re* modal accounts of nature or essence, without explicating how these accounts go. On my reading, there are several subtly different versions of the modal account of nature or essence. The most naive version is this:

> The Naive Modal Account of Nature (NMAN):
>
> An object x essentially has a property (or has that property as its nature or essence) iff x necessarily has that property.

Based on (NMAN), there are two more complicated variants of this account, both of which add another condition to the right-hand side of the biconditional:

> The Existential Modal Account of Nature (EMAN):
>
> An object x essentially has a property (or has that property as its nature or essence) iff x necessarily has that property if x exists.

> The Identical Modal Account of Nature (IMAN):
>
> An object x essentially has a property (or has that property as its nature or essence) iff x necessarily has that property if x is identical with itself.

But as Fine (1994) points out, (IMAN) could be treated as identical with the other two accounts: either it is the case that, if the self-identity of an object

has existential import, then (IMAN) collapses to (EMAN); or it is the case that, if the self-identity of an object has no existential import, then (IMAN) collapses to (NMAN). Given that this is so, to object the standard modal accounts of nature only requires us to consider objections to (NMAN) and (EMAN).

There are two important points to note before I address Fine's main objection to the standard modal accounts of nature. First, it is important to note that Fine's objection to these accounts is to their sufficiency rather than their necessity. That is, Fine recognizes that if an object has a property as its nature or essence, then it necessarily has that property (or has that property if the object exists), but he rejects the reverse. Second, it is worth noting that the target of Fine's initial objection is (EMAN) and the objection can be extended to (NMAN) thereafter.

Fine's objection in a nutshell is as follows: Consider Socrates (S) and the set which contains Socrates as its sole member (SS). It is obvious that, according to the standard modal-theoretic views, S necessarily belongs to SS, since SS necessarily exists if S exists and S necessarily belongs to SS if both S and SS exist. Given that this is the case and if we accept (EMAN), then we have to say that S has a property of being a member of SS as S's nature or essence. But intuitively, it is not part of S's nature or essence that S belongs to SS, for to be a member of SS is presumably irrelevant to our characterization of S's nature or essence. This result seems to contradict (EMAN), since we have a case where some entity necessarily has a feature, while that feature is not its nature or essence. Moreover, we should notice that although it is not part of

S's nature or essence that S belongs to SS, it is part of SS's nature or essence that SS contains S. (EMAN) is, however, too coarse-grained to illuminate such an asymmetry.

Under either of the following two modifications, the preceding objection is applicable to (NMAN) as well: The first possibility is to replace contingent existents by necessary existents. Thus instead of having S and SS we can have number 1 and the singleton set containing number 1. The second possibility is to add an existence condition to the talk of nature or essence. That is, instead of talking about whether S has the property of being a member of SS as its nature or essence we can talk about whether S has that property as its nature or essence *if* S exists.

Given that premise (1) just surfaces the standard modal accounts of nature, the above difficulty indicates that premise (1) might be false. Further, there seem to be no obvious ways for modal theorists to get around this difficulty. As Fine anticipates, one might add a relevance condition to (EMAN) or (NMAN) by arguing that for an object to have a property as its nature or essence, that property must be somehow relevant to that object. Nevertheless, there seems to be nothing in logic that can be used to justify the asymmetry of relevance in the case of S and SS, where the required relevance lies in the concept of nature rather than in any concepts of necessity.

In response to this worry, Zalta (2006) argues that the asymmetry of relevance in question can be met by a revised version of quantified model logic, if we accept that there are two modes of predication, namely that there is a distinction between abstract objects and concrete objects *having* properties.

For, according to Zalta's theory of abstract objects as well as its underlying logic, S as a concrete object does not necessarily exemplify the property of being a member of SS, while SS as an abstract object does necessarily exemplify the property of containing S. However, since the Meinongian motivation for distinguishing two modes of predication is not shared by the theorists of the standard modal accounts of nature and by their followers such as Thomasson, Zalta's solution is not available for Thomasson to address Fine's counterexample to premise (1).[4]

In addition to the responses to Fine's counterexample motivated by some non-standard conceptions of metaphysical modality, Joseph Almog (2003) representatively argues that the standard modal approaches to nature or essence are correct and there is something wrong with both Fine's counterexample and the counterexample in his (Almog's) own earlier works (1991, 1996). Almog's earlier counterexample to show that an object necessarily but not essentially has a property is roughly this: Consider S's property of being a human (H)

[4]In the literature, there is another non-standard modal approach to nature or essence defended by Fabrice Correia (2007). Correia refines the standard metaphysical modalities by introducing the so-called 'local'/'global' distinction and argues that local modalities are immune to Fine's objections to the standard modal accounts of nature or essence. According to this approach, an object x essentially has a property (or has that property as its nature or essence) iff x necessarily has that property if x is to be the object that it is (the right-hand side of the biconditional should be symbolized as: $x = x \Rightarrow Fx$, where '$\Rightarrow$' expresses the Priorean strict implication, which requires that its being the case that $x = x$ and its being not the case that Fx be incompatible). But as Fine (2007) points out, if this were the right way to symbolize claims about nature or essence, then it would also be right to symbolize such claims as $Gx \vee \neg Gx \Rightarrow Fx$ for any object-free G. The problem, then, is that the sense in which it might be right to claim that Socrates must have his parents if Socrates is the object that he is does not seem to be the sense in which it is right to claim that Socrates must have his parents if Socrates is a philosopher or it is not the case that Socrates is a philosopher (Fine 2007, 88). This indicates that Correia's condition—if x is to be the object that it is—should be construed as x having some feature that constitutes x's nature or essence rather than its being the case that $x = x$. Correia's non-standard modal account of nature becomes circular in this sense.

and S's (relational) property of originating from sperm x and egg y (SE). Intuitively, H is relevant to *what* S is, while SE is not relevant to what S is but merely a necessary relation that S bears to *how* S is throughout his ways. It follows that S seems to have a necessary property, namely SE, which is not S's nature or essence. On Almog's more recent view, both the example of S and SS and the example of H and SE are based on a mistaken presupposition that an object's nature or essence can be completely captured in intrinsic terms, which excludes necessary *relations* as possible candidates. In the example of S and SS, Fine denies that S's belonging to SS as a necessary relation is part of S's nature or essence. Similarly in the example of H and SE, the early Almog denies that SE is essential. The more recent Almog thinks that this is wrong, because the necessary relations that an object bears to others should be counted as part of its nature or essence in the sense that such relations are at the source of that object's nature or essence. For example, on the more recent Almog's view, it is only because S was originated from his gametes in the way that S was that S is a human and not the reverse. Furthermore, according to the more recent Almog, the reason why some other necessary properties such as being such that $5 + 7 = 12$ which arise from certain necessary truths are not part of S's nature or essence is not that those properties are S's necessary but non-essential properties, but that those properties are not S's genuine properties at all. Because of all this, the more recent Almog holds that all of S's necessary properties are essential.

In response to the more recent Almog's argument, I argue that Fine's example of S and SS does *not* presuppose that we should exclude necessary

relations as the possible candidates for an object's nature or essence. For it is clear that in Fine's example, the necessary relation that SS bears to S is part of SS's nature or essence, though it is not part of S's nature or essence. So Fine does not eliminate all the necessary relations as possible candidates for nature or essence but just some of them. In other words, as I mentioned before, Fine only objects to the sufficiency of the standard modal accounts of nature and holds that these modal accounts of nature in terms of metaphysical necessity (or that plus existence condition) do not exhaust the notion of nature. Moreover, regarding the association between necessity and nature or essence, even if we granted that an object bears a certain necessary relation as its nature or essence if that necessary relation generates that object as what it is, it would be hard to see in what sense the necessary relation that S bears to SS generates S as what it is and hence becomes S's nature or essence. Therefore, the more recent Almog's argument does not touch Fine's objection to the modal accounts of nature.

So far, I have addressed and defended Fine's objection to the standard modal accounts of nature, which shows that the premise (1) of the Non-Substantivity Argument is false. In the next section, I will introduce a more promising alternative account of nature, namely Fine's neo-Aristotelian definitionalist account of nature, which will hopefully be a useful device for establishing the substantivity of questions of nature.[5]

[5]Here I recognize that to establish the substantivity of questions of nature in this way might not be enough to persuade proponents of the standard modal notions of nature or essence, for they would simply not share Fine's intuition that there is an interesting asymmetry in the cases under discussion. But since I am sympathetic to Fine's intuition and I want to focus on addressing the first premise of Thomasson's Non-Substantivity Argument, I leave the truth of premise (2) open and set aside the preceding concern.

4.3 Fine's Neo-Aristotelian Definitionalist Account of Nature

As for the notion of nature or essence, Fine (1994) holds a view, which derives from Aristotle, that giving a definition of a term is not only parallel but also *identical* with giving an account of the nature or essence of an object.[6] They are parallel, on Fine's view, because a definition of a term, such as 'bachelor', is obtained just in case a sentence, such as 'All bachelors are unmarried men', is true in virtue of the meaning of that term; likewise, the nature or essence of an object, such as a bachelor, is obtained just in case a proposition, 'All bachelors are unmarried men', is true in virtue of the identity of that object. They are identical, according to Fine, because to define a term requires us to specify the meaning of that term and a satisfactory specification of its meaning should clarify what the meaning (essentially) is, namely that the specification should provide us with an account of the meaning's essence.

Regarding the identity of giving definition and giving an account of nature or essence, however, one might doubt whether we could obtain the nature or essence of an object by giving a definition, even though one held that we could know what a meaning is by some definition. For, one might hold that only terms or concepts can be defined, not objects. The problem for this view, according to Fine, is that it is hard to see what is so special about terms

[6]We should note here that to say that giving a definition of a term is identical with giving an account of the nature or essence of an object is different from saying that definition itself is the same as nature or essence. Intuitively, the notion of definition is distinguishable from the notion of nature or essence, given that definition is some expression constituted by terms, while nature or essence belongs to objects. So instead we should claim that definition is identical with explanation of nature or essence.

and concepts that only they can be given definitions, but not objects. In contrast to the foregoing view, for example, it seems perfectly fine to define the object water in terms of its chemical composition. Moreover, to endorse the idea of real definition (i.e., definition of an object), Fine tests the case of the definitions of numerals in natural language. It is usually supposed that for example the numeral '2' should be defined in terms of 'the successor of 0 and 1'. But it is unclear why definitions of this sort are taken to be correct. In order to clarify this point, on Fine's view, one way out is to think that philosophers of mathematics have reason to define the number 2 in terms of the successor of 0 and 1; the reason does not arise from any linguistic evidence but from numbers and the system of numbers.

With the identity of real definition and explanation of nature or essence having been explained, I turn now to articulate, on Fine's view, how the definitionalist notion of nature or essence can be properly expressed and construed. According to Fine (1995a), the notion of nature or essence can be expressed in two different ways. The first possibility is that the notion of nature or essence can be expressed by means of a predicate modifier (i.e., 'essentially P'). Alternatively, the second possibility is that the notion of nature or essence can be expressed by means of a sentential operator (i.e., 'it is true in virtue of the identity of x that$\cdots$'). Although the predicational form of expression is of greater expressive subtlety, Fine adopts the sentential form because of its convenience and elegance.[7] The sentential operator 'it is true in virtue of the

[7]For further detail of Fine's discussion of these reasons, see Fine (1995a, b). I am neutral on the question of whether the notion of nature or essence is better expressed by a predicate modifier, or by a sentential operator.

identity of x that$\cdots$' denotes a primitive relation between an object x and a proposition. In this framework, explanation of nature or essence, which is identical with real definition, is construed by Fine as a proposition to be true in virtue of the identity of a certain object. Claims about nature or essence of this sentential form are, therefore, relativized to their source, namely an object x, where the truth of a proposition is dependent on the identity of that object. Now it is easy to see that Fine's definitionalist account of nature or essence can address the relevance asymmetry in the case of S and SS: while it is true in virtue of the identity of SS that SS contains S, it is not the case that it is true in virtue of the identity of S that S belongs to SS.

The definitionalist notion of nature or essence can be construed in different ways as well. An important distinction that Fine draws regarding nature or essence is the constitutive/consequential distinction. The nature or essence of an object is constitutive, on Fine's view, if it is not obtained in virtue of a (logical) consequence of certain more fundamental nature or essence of that object; otherwise, the nature or essence is consequential. For example, being an unmarried man is the constitutive nature or essence of a bachelor, while being an unmarried man or a mountain is the consequential nature or essence of a bachelor. The consequential nature or essence, however, will lead to an immediate difficulty if it is not constrained in some way. For, given that logical truths are logically entailed by any propositions whatever, it follows under the consequentialist conception that it is true in virtue of any objects that 2 is self-identical. This violates the intuitive principle that the truths which figure in an object's nature or essence must be relevant to what that

object is. To overcome this difficulty, Fine designs the so-called 'generalizing away' procedure by using an intuitive understanding of the notion of relevance: y is relevant to x if it is true in virtue of the identity of x that $y = y$. Given that for logical truths such as 2 is self-identical, it is true not only in virtue of the identity of S, but also in virtue of the identity of any object whatever, that 2 is self-identical, it follows on the preceding notion of relevance that such logical truths are irrelevant to an object S's nature or essence and hence generalized away.[8]

As some final remarks in this section, I first concede that Fine's definitionalist account of nature does not yet resolve all the relevant difficulties. For example, Fine himself recognizes that there is considerable doubt about how to understand the notion of constitutive nature or essence, though he nicely addresses the notion of consequential nature or essence. Moreover, as Koslicki (2012b) points out, Fine does not answer the question concerning the derivation of propositions stating necessary but non-essential properties of objects (e.g., triangles' being three-sided) from propositions stating essential properties of objects (e.g., triangles' being three-angled), for this sort of derivations cannot be completely captured by logical entailments. But these challenges can be met by further developing Fine's theory, for example, Koslicki helps resolve the foregoing derivation difficulty by bringing in Aristotle's concept of demonstration.[9,10] Thus given its significant advantage over the standard

[8]For further discussion of this difficulty and Fine's solution, see Fine (1995a, b) and Koslicki (2012b).

[9]For further detail of this part of discussion, see Koslicki (2012b).

[10]Koslicki (2013) points to another difficulty with Fine's definitionalist account of nature. Her thought is that since on Fine's account no entities numerically distinct from the empty set can figure as constituents in its constitutive essence, the empty set would have to be

modal accounts of nature in addressing the relevance asymmetry in cases of nature or essence, we still have strong reason to prefer Fine's definitionalist account of nature over the modal accounts. In the following two sections, we will also observe that Fine's definitionalist account of nature can work as a useful device for establishing the substantivity of questions of nature and is compatible with my allist approach to existence.

4.4 The Substantivity of Questions of Nature

The notion of substantivity can be understood in several different ways. One way to characterize this notion is to say that a certain kind of questions are substantive, by using Theodore Sider's (2011) terminology, if such questions are not sensitive to choices among equally good joint-carving candidates, viz., if there are no different but equally good ways to answer such questions. Or, one might say that when giving different answers to such questions, the disputants are not simply talking past each other, each uttering truth in their

regarded as ontologically independent. Koslicki takes this result to be unattractive, when construed as obtaining an independence criterion of substancehood. For, on her view, presumably either all or none of the entities belonging to a certain category should be taken as substances. But as Koslicki herself notices, this result seems less strange, if the result is construed as obtaining an independence criterion of fundamentality and the empty set is taken to be absolutely fundamental or just more fundamental than other sets. Still, Koslicki thinks that ontological realists need to leave room for the distinction between what is primitive according to a particular theory and what is ontologically fundamental as a matter of fact. Given that the issue of fundamentality is too complex to settle properly here, I set aside the preceding difficulty for current purposes. However, it is worth noting that the problem of empty set is not just a problem for the Finean theory of nature or essence—it is a general problem for the metaphysics of set theory. There is the so-called 'small set problem', which says that the notion of set is often explained as the result of uniting many things into one, but this sort of explanations do not work if we want to talk about small sets, namely the empty set and unit sets. But given that they do not do much mathematical work, one can plausibly have a set theory which does not include small sets (e.g., Hazen 1991). If this is the case, then the problem of empty set seems avoidable.

own languages. This sort of notions of substantivity have been characterized and defended by Sider. Although I shall pay some attention to this sort of notions of substantivity, my focus in this section will be on the notion of substantivity used in Thomasson's neo-Carnapian approach to questions of nature, according to which a certain kind of questions are substantive, if such questions are not easily answerable merely by conceptual and/or empirical means.[11] As I mentioned earlier, Thomasson holds that questions of nature are non-substantive because claims about nature are simply expressions of certain constitutive semantic rules (or their consequences) in the object-language and questions of nature are easily resolvable only by making such rules or their consequences explicit. Against this deflationary approach, in what follows, I will argue that claims about nature are not fit to Thomasson's normativist paraphrases and questions of nature turn out to be substantive insofar as the notion of nature is correctly described in the definitionalist way.

Now let us test whether Thomasson's normativist paraphrases are applicable to claims about nature if we give a definitionalist account, rather than a modal account, of the notion of nature. To do this, we can reconsider the two cases that I mentioned in §4.1.

Reconsider first the *de re* and apparently *a priori* claim about the nature of Hilary Clinton. Since we have given up the standard modal accounts of nature or essence and adopted instead Fine's definitionalist account, the previous modal claim should be revised as follows: 'It is true in virtue of the identity

[11] Thomasson (2015) also adopts this notion of substantivity in defending her easy approach to questions of existence. But since this part of her work falls outside the scope of this section, I will not discuss this until I talk about the compatibility of the substantivity of questions of nature and the triviality of questions of existence in the next section.

of Hilary Clinton that Hilary Clinton has her genetic origin.' It is hard to see at this point how we could paraphrase this revised claim about the nature of Hilary Clinton by using Thomasson's normativist method. For, once the essentialist intuition that the notion of necessity does not exhaust the notion of nature or essence has been accepted and the sameness of nature and necessity has been rejected thereafter, the normativist intuition about modality—it is no accident that grammatically modal terms do not only include terms like 'necessary' but also terms like 'must' which are characteristic of deontic modalities and used in giving commands and rules—immediately becomes useless for establishing a normativist strategy to trivialize claims about nature. Moreover, there is intuitively no similar immediate connection between the sentential operator 'it is true in virtue of the identity of x that$\cdots$' and those deontic terms, even though claims about nature in some sense entail claims about metaphysical necessity. Perhaps one could still invent a rule or condition not for using terms but directly for characterizing the notion of nature in general: whatever x is, if x has a property as its nature, then it is true in virtue of the identity of x that x has that property. But this is no more than to restate Fine's conception of nature (though it only uses this conception as a necessary condition), without giving any support to the view that resolving questions of nature in these *de re* and apparently *a priori* cases merely requires some linguistic/conceptual work.[12]

[12]Presumably, Thomasson would just regard claims of the form, 'It is true in virtue of the identity of x that A', as another way of expressing claims of the form, 'It is essential to x that A', which in her view is equivalent to 'It is metaphysically necessary that x has the property specified in A'. Nonetheless, this is no more than to say again that the notion of nature or essence is exhausted by the notion of metaphysical necessity, without addressing Fine's counterexamples to such a view.

However, it is worth noting that the foregoing claim about the nature of Hilary Clinton is apparently an analytic claim, for if we grant that Hilary Clinton is a person, then the predicate term 'has her genetic origin' denotes a character which is a factor in the complex character denoted by the subject term 'Hilary Clinton' in the clause.[13] It follows that, by ignoring the sentential operator 'it is true in virtue of the identity of x that$\cdots$', the claim about the nature of Hilary Clinton is apparently tautological. Since any tautological claims are trivial, it seems plausible that the claim about the nature of Hilary Clinton is trivial. If this is the case, then we have here an example of claims about nature that are trivial. But if we take Fine's definitionalist account of nature or essence to be correct (and we have seen above that it is so), then we have no reason to neglect the sentential operator 'it is true in virtue of the identity of x that$\cdots$' in our evaluation of the claim in question. For as I mentioned earlier, it is the sentential operator 'it is true in virtue of the identity of x that$\cdots$' that makes it possible to relativize nature or essence to its source and to make sense of the dependence relation between the truth of the proposition and the identity of the object x that is missed by the modal accounts of nature or essence. More importantly, if we correctly describe the claim about the nature of Hilary Clinton as 'It is true in virtue of the identity of Hilary Clinton that Hilary Clinton has her genetic origin' rather than merely as 'Hilary Clinton has her genetic origin' (or 'Hilary Clinton necessarily has her genetic origin'), the proposed apparent tautology or triviality disappears, since the former expressed by means of the sentential operator makes sense of

[13]Here I am using Donald Williams' (1936) terminology.

the dependence relation between the nature and its source that the latter fails to.

To see this point, consider again the claim 'Hilary Clinton (or necessarily) has her genetic origin'. If we read this claim as tautological or trivially true, then so are the following claims as well: 'Hilary Clinton (or necessarily) has her genetic origin and 2 is self-identical', or 'Hilary Clinton (or necessarily) has her genetic origin or Hilary Clinton is a mountain'. But as I clarified before, the claim about the nature of Hilary Clinton expressed by means of the sentential operator eliminates similar logical consequences such as 'It is true in virtue of the identity of Hilary Clinton that Hilary Clinton has her genetic origin and 2 is self-identical', or 'It is true in virtue of the identity of Hilary Clinton that Hilary Clinton has her genetic origin or Hilary Clinton is a mountain'. Claims like those are not true according to the definitionalist account of nature, given that such claims involves content which is irrelevant to the nature of the object in question. So it is unreasonable to count the preceding claim about the nature of Hilary Clinton as a tautology insofar as Fine's definitionalist account of nature is correct.

Second, reconsider the *de re* and *a posteriori* case of the claim about the nature of water. As the case of the claim about the nature of Hilary Clinton, we should revise the previous modal claim about the nature of water as follows: 'It is true in virtue of the identity of water that water has the chemical structure H_2O.' Given what I said above, although this case involves an empirical fact about the chemical structure H_2O, it is hard to see how we could figure out a certain constitutive semantic rule for using the term 'water' in the object-

language combined with that empirical fact, in attempting to satisfactorily capture the dependence relation between the truth of the proposition 'water has the chemical structure H_2O' and the identity of the object, namely water. If this way is blocked and we have to adopt the definitionalist notion of nature, then this case only shows that resolving questions of nature in these *de re* and *a posteriori* cases requires philosophical (ontological) and empirical work.

Up until now, by using the above two cases as tests, I have shown that Thomasson's normativist approach is not fit to our Finean non-modal claims about nature. Consequently, this approach cannot be employed as a plausible deflationary approach to trivialize claims about nature or questions of nature insofar as Fine's definitionalist account of nature is correct.

In addition, there is a typical ontological dispute over the nature of things that can help us more clearly see the significance of Fine's definitionalist account of nature in illuminating the substantivity of the dispute in question. Koslicki (2015b) discusses the ontological dispute between the pure trope theorist and the impure trope theorist. Tropes are properties which are characterized by proponents of trope theories as abstract particulars (e.g., the redness of a tomato). Another notion in the vicinity is the notion of concrete particulars (e.g., a tomato). There are two versions of trope theories in the literature, namely the pure trope theory and the impure trope theory. In spite of their wide agreements on the existence of both tropes and concrete particulars and on several other issues, the core disagreement between the pure trope theorist and the impure trope theorist is roughly this: the pure trope theorist such as Campbell (1990) hold that concrete particulars, as bundles of tropes, are

reducible to tropes, while the impure trope theorist such as Lowe (2006) reject this point and contend that tropes are in some sense dependent on concrete particulars. By using Fine's definitionalist notion of nature as the apparatus, the current disagreement can be construed as follows: the pure trope theorist hold that it is true in virtue of the identity of concrete particulars that all concrete particulars are bundles of tropes, while the impure trope theorist reject this point and contend that it is true in virtue of the identity of tropes that all tropes are modes of concrete particulars.[14] Given that both the pure trope theorist and the impure trope theorist widely agree upon the existence of tropes and concrete particulars as well as many other issues on the one hand, but on the other hand reject each other's view of the nature of tropes and concrete particulars, the dispute between these two camps of trope theorists seems substantive at least in the sense that they are not simply talking past each other.

But nevertheless, the neo-Carnapian deflationist might wonder whether they could understand the dispute in question merely as a conceptual/linguistic dispute in the sense that the pure trope theorist and the impure trope theorist simply have different concepts of concrete particulars and tropes, or by using Thomasson's terminology, they simply apply different constitutive semantic rules for using these terms in the object-language. For example, the

[14]In a similar way, Koslicki characterizes this disagreement in terms of the notion of essential identity dependence: x is essentially dependent on y iff it is essential to x that x's numerical identity is determined by some relation that x bears to y. Based on this notion (as well as her notions of identity), the disagreement in question can be construed as follows: while the pure trope theorist hold that concrete particulars are essentially identity dependent on tropes, the impure trope theorist arrives at the opposite position, according to which tropes are essentially identity dependent on concrete particulars. For further detail of this discussion, see Koslicki (2015b).

neo-Carnapian deflationist could say that for the pure trope theorist, apply the rule: define the term 'concrete particulars' in terms of the term 'tropes'; and that for the impure trope theorist, on the contrary, apply the rule: define the term 'tropes' in terms of the term 'concrete particulars'. Whereas this radical move somewhat meets the deflationist needs, it sharply acts in opposition to our commitment to real definitions (as long as we accept Fine's definitionalist account of nature) and is too coarse-grained in the sense that it does not explain why the pure trope theorist and the impure trope theorist plausibly define these terms or objects in such ways. Intuitively, to look for satisfactory explanations for the proposed definitions requires us to accept at least some form of realism, as well as to do research on the relevant objects and their relations rather than merely on those terms and our usage of those terms. With such explanations having been given based on the objects and their relations, as Fine (1994) points out, the definition is, then, legitimately transferred from the real definition to the nominal definition, not vice versa. If this is the case, then our acceptance of Fine's definitionalist account of nature immediately keeps us away from all this neo-Carnapian deflationist approach to the ontological disputes over the nature of things such as the dispute between the pure trope theorist and the impure trope theorist in the current case.

In sum, I have argued in this section that, once Fine's definitionalist notion of nature has been accepted, Thomasson's normativist strategy for trivializing questions of nature does not work. Given that this is so, questions of nature appear to be substantive in the sense that they are not easily answerable merely

by conceptual and/or empirical means. The above example of the dispute between the pure trope theorist and the impure trope theorist, on Koslicki's and our Finean view, also shows that the disputes over the nature of things are substantive in the sense that the disputants are not simply talking past each other. Since my current talk of the substantivity of questions of nature is associated with my prior talk of the triviality of questions of existence, in the subsequent section, I will proceed to argue that my Finean argument for the substantivity of questions of nature is compatible with my allist approach to existence.

4.5 The Compatibility Problem

In the previous chapter, I argued that ontologists could grant the trivial existence of all things but still dispute over the nature of things. The thought was that, if we have a tolerant existential quantifier that quantifies over all things and the kind of existence captured by the tolerant existential quantifier is the only kind of existence, then it is plausible to argue that all things trivially exist *simpliciter*. For example, as I argued in the previous chapter, both the modal realist and the ersazters in fact suppose that possible worlds exist but they dispute over whether possible worlds are concrete or not. Here, given that I employed Fine's definitionalist notion of nature to argue for the substantivity of questions of nature, one might wonder whether my Finean argument for the substantivity of questions of nature is compatible with my previous allist approach to existence. Furthermore, if these two views are in fact compatible

with each other, what is the exact relation between the notion of existence and the notion of nature?

Since the relation between the notion of existence and the notion of nature, whatever it is, is pertinent to our discussion of the compatibility of the triviality of questions of existence and the substantivity of questions of nature (given that the compatible relation is itself a relation), let us begin by addressing the relation(s) between the notion of existence and the notion of nature. Regarding this issue, Fine (1995c) explicitly distinguishes the notion of nature from the notion of existence. On Fine's view, the nature of things on the one hand is more than the mere existence and need not include existence as its part on the other. The reason why the nature of things seems to be more than existence is obvious: even though we granted that existence is part of the nature of things, the nature of things is not exhausted by their existence (e.g., aside from its existence, having the chemical structure H_2O is part of water's nature). Although this point is plausible, I am more sympathetic to the other point that the nature of things need not include existence as its part. And my view is stronger than Fine's; on my view, existence *is not* part of the nature of things, because here I am following Quine and many others and hold that the only kind of existence expressed by the existential quantifier is not a property. But whereas existence is not part of the nature of things, I think that the trivial existence is supposed in the Finean claims about the nature of (kinds of) things.[15]

[15]In what follows, I will set aside our talk of the nature of a particular thing (by using a singular term or a definite description) for two reasons. First, to my knowledge, it seems that all the interesting ontological disputes over the nature of things are not disputes over the nature of a particular thing, but over the nature of kinds of things. Second, even for

To see this point, consider first the general form of the Finean claims about the nature of things: 'It is true in virtue of the identity of x that x has a certain property.' (In symbols, $\Box_x Px$.) But given that we are supposed to talk about not only the nature of a particular object but more importantly the nature of a certain kind of objects (especially in ontological disputes such as the dispute over the nature of possible worlds, the dispute over the nature of properties, etc.), we require that, if a certain property is a certain kind of objects' nature, not just some of a certain kind of objects but *all* of them have that property. Accordingly, for example, the claim about the nature of concrete particulars proposed by the pure trope theorist in the Finean terms should be expressed as follows: 'It is true in virtue of the identity of concrete particulars that all concrete particulars are bundles of tropes.' (In symbols, $\Box_x \forall x(Cx \supset Tx)$.) It follows that existence is presupposed in the claims about the nature of (kinds of) things; otherwise, the claims about the nature of (kinds of) things would turn out to be vacuously true (that is, if there were no such things, then the antecedent of the conditional would be false and the whole conditional vacuously true). This result coincides with Fine's (2009) thought that both the realist and the anti-realist have presupposed some sort of realism, namely the existence of (kinds of) things expressed by the existential quantifier, but they dispute over whether the things in question are real in the sense that for some way the things might be, it is constitutive of reality that they are that way.[16]

ontologists to dispute over the nature of God, the term 'God' can be plausibly read as a general term rather than a singular term or a definite description.

[16] As I mentioned in the previous chapter, Fine's notion of reality, which is associated with the notion of ground or fundamentality, should not be confused with our notion of existence,

If what I said above is correct, then the relation between the notion of existence and the notion of nature should be construed as follows: on the one hand, existence is not part of the nature of things, given that the only kind of existence is fully captured by the existential quantifier and hence not a property; on the other hand, our talk of the nature of (kinds of) things presupposes existence insofar as the notion of existence is understood as the one expressed by the existential quantifier. With the relation between the notion of existence and the notion of nature having been clarified, we can now see that the substantivity of questions of nature is compatible with the triviality of questions of existence. This is because, as I showed above, the Finean claims about the nature of (kinds of) things, if existence was not presupposed in them, would all turn out to be vacuously true and thus the substantivity of the talk of the nature of things under Fine's notion of nature would be lost immediately. So as long as we accept Fine's definitionalist notion of nature, to retain the substantivity of the disputes over the nature of (kinds of) things requires that we presuppose the trivial existence of all the (kinds of) things in question (if existence were not trivial, we would doubt whether it is plausible to presuppose the existence of all the things in question at all). Because of all this, the substantivity of questions of existence on our Finean account is not only compatible with the triviality of questions of existence, but more precisely demands that the existence of all things is trivial.

Even so, however, one might be skeptical about the compatibility of my Finean argument for the substantivity of questions of nature and some spe-

viz., the one that is expressed by the existential quantifier. For detailed discussions of Fine's notion of reality, see also Fine (2001, 2009) and Sider (2011).

cific deflationary approaches to questions of existence. My own logicist way to trivialize questions of existence is to say that the only kind of existence can be captured by the tolerant existential quantifier and all things exist just in case they are quantified by the tolerant existential quantifier—there is no more work concerning existence than quantification—therefore, questions of existence are trivial. It is easy to see that this logicist deflationary approach to existence is consistent with my Finean argument for the substantivity of questions of nature. For, this approach makes possible (perhaps) the most lightweight account of existence, which meets all the needs of the Finean account of the nature of (kinds of) things (i.e., existence is trivial and expressed by the existential quantifier), without involving any factors that might affect the substantivity of questions of nature (e.g., conceptual analysis). Comparatively, the neo-Carnapian deflationary approach to existence defended by Thomasson (2015) also satisfies the condition that existence is trivial and expressed by the existential quantifier, but the core point in her approach is that the term 'exist' has a fixed formal rule of use, which may cause skepticism as to whether other terms such as 'nature' have such rules of use as well. Although I have at least partly shown that Thomasson's normativist strategy does not work as long as Fine's definitionalist notion of nature is correct, it remains uncertain whether my Finean argument for the substantivity of questions of nature can be totally compatible with Thomasson's neo-Carnapian deflationary approach to existence. Similarly, for another deflationary approach to existence defended by Stephen Schiffer (2003), whereas it seems that Schiffer's easy transformations, which apparently derive existence (e.g., the transformation from the

claim that Fido is a dog to the claim that Fido has the property of being a dog), do not entail that (at least some of) the nature of the things in question (e.g., properties) can be trivially yielded as well, it is not certain whether this approach can be fully compatible with Fine's definitionalist approach to nature. But in spite of these uncertainties, it is clear that my Finean argument for the substantivity of questions of nature is at least compatible with my allist approach to existence defended in the previous chapter.

4.6 Concluding Remarks

In this chapter, by using Fine's neo-Aristotelian definitionalist notion of nature or essence as the apparatus, I have defended the substantivity of questions of nature against Thomasson's neo-Carnapian deflationary approach. On Thomasson's view, questions of nature or essence are just questions of metaphysical necessity, where the modal features are construed by her merely as reflections of certain constitutive semantic rules (or their consequences) in the object-language. If this is the case, then questions of nature can be easily answered merely by means of some conceptual and/or empirical means. Against this deflationary approach to questions of nature, I have argued, by employing Fine's definitionalist notion of nature, that questions of nature are not questions of metaphysical necessity and they are immune to Thomasson's neo-Carnapian deflationism, while I keep neutral whether Thomasson's normativist construal of questions of metaphysical necessity is promising or not. Furthermore, I have argued that my Finean argument for the substantivity of

questions of nature is compatible with my allist approach to existence. Given that the substantivity of questions of nature is defendable and ontology can be plausibly construed as the study of the nature of things, the trivial existence of all things does not result in a disappointing overall project of ontology.

Chapter 5

Conclusion

In this concluding chapter, let me briefly review what I have done in the preceding chapters and make it clear that my alternative approach to ontology is both natural and attractive.

What I have tried to do in the current project is to show (i) that all things can be taken as trivially exist, and (ii) that although ontologists can grant the trivial existence of all things, they still substantively dispute over the nature of things. My work started with a brief survey of the two recent proposals concerning the logic of existence—free logic and neutral quantification logic—and the latter, which is established on the basis of the former, was used in later chapters as part of the apparatus for establishing the trivial existence of all things. Also as some preliminary work, I introduced Lewis' Translation Argument, according to which an intelligible translation can be established between non-classical dual quantification and classical existential quantification. In particular, according to Lewis' translation, the non-classical neutral

particular quantifier is supposed to quantify in the same way as the classical existential quantifier does. This motivated me to defend the Allist Argument, which argues for the trivial existence of all things by construing the neutral particular quantifier as a more tolerant existential quantifier and taking the kind of existence captured by the existential quantifier to be the only kind of existence. With the trivial existence of all things having been defended, I then proceeded to show that while the existence of all things can be treated as trivial, the disputes over the nature of things are nevertheless substantive. For this, I was particularly targeted to Thomasson's neo-Carnapian deflationary approach to questions of nature, which attempts to trivialize questions of nature by some neo-Carnapian method, and defended against this approach by employing Fine's neo-Aristotelian definitionalist notion of nature or essence. If my analyses are correct, then questions of nature are immune to Thomasson's neo-Carnapian deflationism insofar as we understand these questions in terms of the Finean notion of nature or essence. Questions of nature are thus substantive in the sense that they are not easily answerable merely by some conceptual and/or empirical means.

Regardless of whether ontology is treated as substantive or trivial, hard or easy, ontology is predominantly approached from the point of view defended by Quine and Carnap, as the study of existence. But as I argued previously, my conception of ontology is in contrast to this standard view. On my view, ontology should be better understood as the study of nature, which is concerned with examining the nature of things. For, whereas ontologists claim to dispute over the existence of things, what they really (substantively) dispute about is

the nature of things (and grant the existence of the things in question). People might still feel skeptical about my conception of ontology and suspect that my examples in Chapter 3 might not be representative enough or just in some way distort the disputes over existence. Although I argued before that I did *not* distort the disputes in question and it is clear that my examples of disputes *are* typical ontological disputes in the literature, let me sketch here one more example: the apparent (substantive) ontological dispute over the existence of holes. This example will also indicate that my alternative approach to ontology seems simpler and more natural than the Quinean-Carnapian approach.

It seems like ontologists in the past decade seriously disputed over the existence of holes. Some ontologists such as Frank Jackson (1977) hold that holes do not exist at all. Like what Quine (1948) does to defend the non-existence of Pegasus, Jackson attempts to paraphrase all hole-committing claims as claims without any ontological commitments to holes (e.g., the claim, 'There are holes on the wall', is paraphrased as 'The wall is holed', or 'The wall has hole-surrounding parts'). But nevertheless, it is highly dubious whether all hole-committing claims are paraphrasable by this means (e.g., the claim, 'The hole in the tooth was smaller than the dentist's finest probe', is a case where the paraphrase strategy seems inapplicable; cf., Geach 1968, 12). Moreover, this sort of paraphrases are by any means artificial and cause unnecessary complexities. It even sounds awkward, when people utter claims like 'The wall is holed' to express the fact that there are holes on the wall. By contrast, it is pretty natural for people to straightforwardly talk about holes, to count them, and to describe and measure them (cf., Casati and Varzi 1994,

1). More interestingly, we also usually appeal to holes or variants of holes to explicate certain causal interactions (e.g., it is because of the tunnel in a mountain that trains can go through the mountain). Given all this, it seems to follow that we'd better take holes to be at least some odd existents (they seem odd because they appear to have features that ordinary existents may not have). Further, the main motive underlying the paraphrase strategy might be that holes and intensional objects such as Pegasus are not material things like trees and horses. However, as I argued previously, this sort of motives are not enough to justify that the things in question do not exist *per se*: to say holes do not exist as material things is to say something about holes' nature rather than their pure existence. This point becomes more salient, if we take a look at the various views that ontologists hold concerning holes' nature in the literature:

(HN1) holes are just ordinary material things (Lewis and Lewis 1970);

(HN2) holes are 'negative' parts of their material hosts (Hoffman and Richards 1985);

(HN3) holes are dependent particulars, whose existence is dependent on their hosts (Casati and Varzi 1994);

(HN4) holes are qualified portions of spacetime (Miller 2007);

(HN5) holes like properties are ways things are (Meadows 2013); etc.

In all these cases, ontologists seem to focus on disputing over what holes are

like, or what their nature is, while they (either explicitly or implicitly) grant the (trivial) existence of holes. As I said above, even for those people who claim to reject the existence of holes, they in fact just have some prejudice against the existence of things which are unlike material things (i.e., they deny that holes exist as material things). When construed in this way, this sort of denial of the existence of holes becomes simply a specific kind of views of holes' nature, and it remains controversial whether holes are material things or not.

What we can learn from the example of holes and other examples alike is that our acceptance of existence allism and of ontology as the study of the nature of things have significant advantages over the Quinean-Carnapian approach to ontology. First, our analyses of claims about odd objects such as holes are attractive and avoid the unnecessary complexities which characterize competing strategies. On our reading, when people utter claims like 'There are holes on the wall', they just mean 'There exist holes on the wall', where the existence of holes is expressed by a more tolerant existential quantifier quantifying over holes. No artificial and dishonest paraphrases are required in this reading. The underlying logic is also no more complicated than classical first-order logic.

Second, by distinguishing between disputes over existence and disputes over the nature of things, we can more clearly see the essence of ontological disputes and prevent ontological questions from falling prey to neo-Carnapian deflationism. As we have seen in the literature, the Quinean 'hard' approach to ontology (i.e., the approach according to which questions of existence are

substantive) faces crucial challenges: quantifier variance (Hirch 2002, 2009), trivial inferences (Hale and Wright 2001, 2009, Schiffer 2003, and Thomasson 2007a), normativist paraphrases (Thomasson 2015), and so forth. Although much effort has been expended in an effort to meet these challenges (e.g., Sider (2011) addresses the problem of quantifier variance), we might doubt whether the preservation of hard ontology requires us to pay more attention to questions of existence. Rather, if our insights are correct, then there is another route by means of which we can defend the substantivity of ontological questions against ontological deflationism, i.e. to accept existence allism and to think of ontology as the study of the nature of things. While further work remains to be done in this area, the alternative approach that I defend in this thesis already improves our understanding of the subject-matter of ontology.

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