A Defence of Quine's Criterion of Ontological Commitment and its Role in Disambiguating David Lewis' Modal Realism from Meinongianism: A Meta-Ontological Inquiry

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CHAPTER I
INTRODUCTION

This thesis tries to address and resolve two problems in Metaphysics. One falls in the area of modal metaphysics and the other falls in the area of meta-ontology. Accordingly, this thesis is divided into two parts: one that addresses an issue in modal metaphysics and the other that addresses an issue in meta-ontology. The issue that falls in the area of meta-ontology concerns Quine's criterion of ontological commitment (QCOC). This criterion was criticised by Israel Scheffler and Noam Chomsky[1]. The issue that falls in modal metaphysics concerns the supposed parallelism between David Lewis' Modal Realism (LMR) and at least some versions of Meinongianism (MS)[2]. The issue, whether LMR is met with any Meinongian feature in its (LMR's) ontology (Is Lewis a Meinongian?), has persisted for some time in modal metaphysics. In my view this problem can be resolved, if we can take up a meta-level enquiry by employing a criterion which doesn't make any ontological commitment to the entities of any of these theories (LMR and MS). QCOC is regarded as such a criterion and it (QCOC) is employed to show that the ontological commitments of LMR and MS can be disambiguated. But prior to such an application of QCOC, a serious problem needs to be addressed which was indicated by Scheffler and Chomsky. In fact, once QCOC is employed to disambiguate LMR from MS, the problem, raised by Scheffler and Chomsky, and alluded to earlier gets deepened. So, first the project is to resolve the issue indicated by Scheffler and Chomsky for QCOC and subsequently, use QCOC to disambiguate the ontological commitments of LMR and MS.

[1] Scheffler, Israel, and Noam Chomsky. (1958-59). "What is said to be." *Proceedings of the Aristotelian Society*, Vol. 59, pp. 71–82.
[2] Linsky B. and E. N. Zalta. 1991. "Is Lewis a Meinongian?." *Australasian Journal of Philosophy*, 69 (4):438–453.

I.1. Two problems: the referential theory of meaning and the paradox of negative existentials

Let us consider the two problems here and see how these different theories (Meinongian theory, Russellian orthodoxy and QCOC) may by considered as responses while addressing and resolving these issues. First problem is one that relates to the referential theory of meaning and the other problem is the paradox of negative existentials. According to referential theory of meaning, reference is the meaning. A term is meaningful just in case, that term refers something. The problem is that there are terms that don't refer anything and nonetheless those terms are meaningful. For example, the Golden Mountain is a meaningful expression whereas it doesn't refer anything. Many such expressions can be shown which are meaningful but don't refer anything. It is counterintuitive to say that such expressions are not meaningful. There are at least two options: either reject the referential theory of meaning or address the above mentioned problem. Before considering the different responses, let us sketch another problem: the paradox of negative existentials.

Consider what Russell says about existence as a property of things or objects. If we consider existence as a property then the problem of negative singular existential arises. The puzzle of negative singular existential is the following. Consider the sentences which deny the existence of non-existing entities. So here, let us consider the sentence: James Bond does not exist. Suppose we consider existence as a property of an individual. In the above mentioned sentence nonexistence is predicated to the designation or to the referent of the term James Bond. If so, then our world or reality consists of an object or an entity which is designated by the singular term James Bond and this entity has the property of nonexistence. The problem is, in some way or the other we identify an object or an entity in our reality and then we predicate the property of nonexistence. In other words, we are required to accept the reality of an entity which does not exist, so that we accept this sentence (James Bond does not exist) as expressing a true proposition. This puzzle of negative singular existential is an outcome of regarding

existence as a property of individuals. We can state the problem in the following way by taking into account the notion of reference.

Argument 1

(Premise 1) To deny the existence of something, one has to refer to that thing

(Premise 2) But one can only refer to things that exist

(Conclusion) Therefore, to deny the existence of something, that thing has to exist.

This argument can be restated in the following way.

Argument 2

(Premise-1) If one wants to deny the existence of something, then she needs to refer to that thing.

(Premise-2) If one refers to something then that thing exists.

(Conclusion) Therefore, if one wants to deny the existence of something then that thing has to exist.

Here, we need to remember that the underlying assumptions are: (i) reference is the meaning, and (ii) reference is always made to existing entities and not to unreal entities. Thus, there are two problems to be handled: (i) the problem relating to the referential theory of meaning and (ii) the paradox of negative singular existentials. One could respond to these problems at least in two ways: either retain the same entities in our ontology or introduce new kinds or varieties of entities. To put it differently, in order to address the above mentioned problems, either one needs to overpopulate the ontology with new kinds of entities or be as austere as possible in including more entities in the ontology. If one is too generous to overpopulate the ontology then she needs to show how her generous ontology would address and resolve the above mentioned problems. On the other hand, if one is too austere in overpopulating the ontology then she needs to show that how by accepting a very minimal set

of entities, she can address and resolve the above mentioned problems. If we see the issues from this perspective then the Meinongian project adopts a generous ontology and the Russellian project adopts an austere or orthodox ontology. I sketch below these Meinongian project first and subsequently the Russellian project.

I.2. The project of generous Meinongian ontology

Now, let us see how the generous ontology or the Meinongian project would explain the above mentioned problems. Meinongians would allow the plausibility for the following: broaden the notion of reality and say that somethings don't exist. This is achieved by making a distinction between being/subsistence and existence. Reality consists not only of existing entities but also of subsisting entities. Existing entities are those entities which are spatiotemporally located and examples for such entities are the Mount Everest, Tasmanian Tigers, London Bridge, Socrates, etc. However, the entities like Golden-mountain, Holmes, Pegasus, batman etc. do not exist. Nonetheless according to Meinong, these entities are real in some sense. They don't exist but they subsist. Once this distinction is accepted then how to explain the nature of this distinction remains to be the most significant project. Apart from this, how to work out the quantification[3] over them is also a significant problem to address. Quantification is an issue here. As there are two different kinds of entities when the quantification is carried out it shouldn't result in any inconsistent formulation. To make the point clear consider the following case.

[3] There are idioms of quantification in natural language which can be represented in a formal language. In natural language such idioms are stated as "there are something", "there exist things" and "something". These idioms in natural language can be represented in formal language through the quantifier variable idiom (Q-V-I) of the first-order-quantificational/predicate logic to talk about the entities. So, we have got the existential quantifier "(∃)", the variable "***x***" and the predicate expressions. The variable "***x***" stands for an entity and is attached to "(∃)" and thus it is a bound variable, and the predicate expressions are represented by using capital letters which is attached to the bound variable. For example, consider the sentence which is expressed in natural language: there are tigers. Under the method of quantification this sentence is given the following formal representation: (∃x) Tx.

Let us consider the criticism of a Russellian regarding the Meinongian ontology by way of considering a statement of the following sort: a *there are certain things of which it is true that there are no such things*. The Russellians say that this paradoxical formulation is counterintuitive. But viewing from the Meinongian frame this may not give rise to any serious trouble. Within that frame one needs to interpret the entire sentence in a different way. The Meinongians accept the formulation *there are certain things of which it is true that there are no such things*. Within the Meinongian framework this is not a wrong formulation. But from the point of view of the orthodox or Russellian ontology, this paradoxical formulation is a wrong formulation. Of course, as it appears, it is a clear case of paradoxical formulation. This paradoxical formulation arises because of acceptance of two realms of reality: subsistence and existence, In order to understand the problem, let us split this statement into two different parts.

1. There ***are*** certain things (of which it is true that)

2. There ***are*** no such things.

How to interpret this sentence in a right manner? It seems the following may work. The questions are the following. In what sense there are certain things? In what sense there are no certain things? The term which we need to be concerned is, ***are***. This particular term is used in two different senses in the same sentence which occurs in two different parts of the sentence. Paradoxical reading arises when the term ***are***, is used in the same sense in these two different parts of the same sentence. It seems, ***are*** in the first part of the sentence quantifies over the Meinongian objects that are not a subset of spatiotemporally located objects. ***Are*** in the second part of the sentence quantifies over the spatiotemporally located things. Thus, the second part says, spatiotemporal wise there are no such entities like James Bond, Sherlock Holmes etc. This can be said in a different way. ***are*** in the first part of the sentence points to the domain of subsistence exclusively. ***are*** in the second part of the sentence, points towards the Russellian realm or domain of existence. If we use the Meinongian terminology then what

the sentence is saying is something similar to the following. There subsists certain things of which it is true that there does not exist such things. This does not exhibit any kind of paradoxical reading. If this interpretation is accepted then the paradoxical reading can be managed. Now the problem is to explain and justify the difference between subsistence and existence which remains to be one of the most basic issues for any Meinongian. There subsists certain things of which it is true that there does not exist such things. Though this doesn't exhibit any inconsistent formulation, how to give a formal representation (through the quantification method) for this formulation is one of the problems to be handled by any Meinongian.

Here Meinongians consider existence as a predicate and this predicate will be represented as "***E!***"**.** When one quantifies over the entities that are in the domain of existence, the predicate "***E!***" is used to restrict the quantifier to this domain of existence. Now the project is to give an account of the property of existence. For this let us look at very briefly a version of Meinongianism proposed by Terence Parsons"[4]. Terence Parsons makes a distinction among properties: nuclear and extra-nuclear properties and uses this distinction to develop his own version of Meinongianism.

I.2.1. Nuclear properties and extra-nuclear properties

Nuclear properties are those properties which determine the nature of the object. Some of the examples for nuclear properties are the following: "is green", "is fat", "is golden", "is mountain", "is bald" etc.

Parsons suggests four kinds of extra-nuclear properties and they are the following

1. Ontological

[4] Parsons, T.1980. *Nonexistent Objects*. New Haven: Yale Univ. Press. pp 17-27.

e.g., “exists”, “is mythical”, “is fictional” etc.

2. Modal

e.g., “is possible”, “is impossible”

3. Intentional

e.g., “is thought about”

4. Technical

“is complete”, “is consistent”

Parsons makes another kind of distinction among properties: constitutive and consecutive. Constitutive properties are those properties of the object which are stated explicitly in the description of the object and pick out the object. Consecutive properties are those properties of an object which are implied by the constitutive properties. For example, the constitutive properties of golden-mountain is the property of being golden and being a mountain and the consecutive property of the same is being a material thing or being a physical entity. According to Parsons, for every set of nuclear properties, there is an object which exemplifies exactly the properties in the set. What advantage Parsons is going to get from the distinction between nuclear and extra-nuclear property is that it would allow him to say that nuclear properties don’t entail extra-nuclear properties. There are cases where an object has nuclear properties but not extra-nuclear properties. Now regarding the Golden Mountain, Parsons would say the following: there are objects that exemplify the nuclear property of being gold and the nuclear property of being a mountain but they don’t have the extra-nuclear property of existence. An object having nuclear property of being golden and being a mountain doesn’t entail that object having an extra-nuclear property of being existent. The object that lacks the extra-nuclear property of existence will fall in the realm of subsistence.

In general what we could conclude about the generous Meinongian project is the following. A Meinongian in order to handle the issue which is raised against the referential theory of meaning and also to address the issue of negative singular existentials, introduced new kinds of entities into his ontology. To handle the above mentioned problem, Meinongians have included in their ontology some different kind of entities; these are referred by the term Golden Mountain or by similar such terms. Newly introduced kinds of entities are called subsisting entities. Thus, for Meinongians, apart from the existing entities, there are also subsisting entities. Golden Mountain doesn't exist but it subsists. The term Golden Mountain refers to an entity that subsists. Reference can be made not only to the existing entities but also to the subsisting entities. So, the term Golden Mountain is a meaningful expression because it refers to the golden mountain which is a subsisting entity. Under this response, one is over populating the ontology, though it yields the required results. This approach saves the referential theory of meaning as it ensures that all the meaningful expressions have referent and there are no meaningful expressions which don't have a referent. Apart from this, this approach resolves the issue of negative singular existentials.

I.3. The orthodox Russellian strategy

Russellians accept (Premise-2) while rejecting the (Premise-1) of the above mentioned (in Sec I.1) Argument 1 and Argument 2. Russellians would say that reference is made only to existing entities and the reality consists of existing entities alone. Regarding the referential theory of meaning, Russellians would say that names or descriptions or any similar expression do not have to refer something, in order for them to be meaningful. Regarding negative singular existentials, according to Russellians, names or descriptions or any similar expressions which are normally regarded as referring devices don't have to refer to the entities which are supposed by these referring devices, to deny the existence of anything. If so, then the project is to show how the reference can be carried out.

Russell developed such a technique, where even without overpopulating the ontology, by assuming the kind of entities assumed by Meinongians, there is a way in which the expressions that don't refer anything can be meaningful. In other words, in order to handle the issues which are mentioned above (the problem relating to the referential theory of meaning and the problem of negative singular existentials), one doesn't have to accept the reality of a different sort of entities and thereby overpopulate the ontology. What one needs to do is that the terms (which do not refer anything) are to be understood and are to be read in a different way. Thus, Russell proposes the Theory of Descriptions where the expressions are rewritten to reveal their logical form. The expression "The Golden-mountain" is to be read as follows.

There exists an ***x*** such that (***x*** is Golden and ***x*** is Mountain) or $(\exists x)$ $(Gx \,\&\, Mx)$

Russellians also resolve the problem of negative singular existentials Regarding this Russellian move Quine says the following: the burden of objective reference which had been put upon the descriptive phrase is now taken over by words of the kind that logicians call bound variables.[5] Let us see how the burden of objective reference was imposed on bound variables and the advantage in doing so. According to Russell and Quine, Meinong wrongly supposed that in order for descriptive phrases and singular terms to be meaningful, they must refer something. But Russell developed a method where the burden of objective reference was detached from the descriptive phrases and singular terms and was imposed upon the bound variables. What was thought to be a referring expression traditionally, in this new method turns out to be a predicate expression and what works as the referring expression is the bound variable to which the singular terms are attached. Any singular term that deceptively seems to be a referring expression such as "Pegasus", according to Quine, can be converted into descriptive phrases and one can apply Russell's methodology on these terms. For example, the issue of committing to something that is Pegasus through the singular term "Pegasus", is

[5] Quine, W. V. 1948. "On What There Is", p.26.

addressed by Quine by converting "Pegasus" into a descriptive phrase "Pegasizes" or "the thing that Pegasizes" and applying Russell's technique that uses the Q-V-Idioms. This can be represented in the following way. It is not that there exists an ***x*** such that, ***x*** Pegasizes (~ (∃*x*) (*x* Pegasizes)). Quine extends the Russellian technique to formulate the criterion of ontological commitments.

I.4. Quine's Criterion of Ontological Commitments (QCOC), what is it for and what is it for this thesis

It is Quine who links quantification and existence to formulate a criterion for ontological commitments. What the methodology of quantification developed by Russell made us to recognize is that the use of the terms or expressions doesn't make us to commit to something. Employing this result of Russell's quantification method, Quine formulates the criterion of ontological commitments as "to be is to be the value of (bound) variable"[6].

> For Quine …it (his criterion of ontological commitments) allowed one to measure the ontological cost of theories, an important component in deciding which theories to accept; it thus provided a partial foundation for theory choice. Moreover, once one had settled on a total theory, it allowed one to determine which components of the theory were responsible for its ontological costs.[7]

If what is said by Philip Bricker is the main purpose of Quine's criterion of ontological commitments then it seems to me that when I am applying QCOC to disambiguate Lewis' Modal Realism from Meinongianism, there is a deviation from the original purpose. I apply QCOC to address an issue in my 3rd chapter (A Meta-Ontological Enquiry into the Parallelism between David Lewis' Modal Realism and Meinongianism). In this chapter I try to disambiguate the ontological commitments of David Lewis' Modal Realism from that of Meinongianism. I am extending this criterion for a different purpose and that is to show that

[6] Quine, W. V. 1939. "Designation and Existence." *The Journal of Philosophy* 36 (26): 701-709, p. 708.
[7] Bricker, Phillip. 2014 "Ontological Commitment", *The Stanford Encyclopedia of Philosophy* (Winter 2014 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/win2014/entries/ontological-commitment/>.

the mere use of the same predicate or the mere use of the same expressions by two theories doesn't have to mean that they are committed to same kind of entities.

One might ask that if you want to find out the ontological commitments of a theory just look into the theory and find out what the theory says that there is, why do we need or bring QCOC to this. It is true that if you want to find out what the theory says what there is or what its ontological commitments are then just see or find out what this theory says what there is. Why do we need QCOC? To this I would respond in the following way. If a theory is committed to certain entities then inevitably it is the case that the entities to which that theory is committed will be kept as the value of bound variable. If so then what we need to do is just look into the bound variable and see what entities would be the value of that bound variable. However, the very idea "looking into the bound variable" needs to be extended and explained adequately. The point of QCOC is that if a theory is committed to certain entities then those entities will be kept as the value of bound variable of the Q-V-Idioms. This aspect can be extended further to show what a particular theory is committed to. This is achieved in the following two steps.

1. Regiment the sentences in Q-V-Idioms

2. Determine to what the bound variable "x" stands for.

In order to do this, one needs to look into the bound variable and this looking into bound variable needs to be explained further which I have done in my 2nd and 3rd chapters. Another issue which this thesis tries to address falls in the area of modal metaphysics. Let me give a brief explanation about David Lewis' Modal Realism and its main tenets.

I.5. Modality, Possible Worlds and Modal Realism of David Lewis

The main purpose of modal metaphysics is to give a metaphysical foundation for modality or to explain modal concepts. Following concepts are the modal concepts, necessity, contingency, possibility and impossibility. They can work as the attributes in two ways as (1) *de dicto* modality and as (2) *de re* modality.

(1) *de dicto* modality

1. Necessarily two plus two equals four.
2. It is contingent that I work for a particular political party
3. It is possible that it will rain
4. It is impossible that there be a married bachelor

In *de dicto* modality we attribute or predicate a modal property to a proposition. The modal property of the first and fourth statement is of necessity. Second is of contingency and third is of possibility.

(2) *de re* modality

1. Manmohan Singh is contingently the Prime Minister of India
2. Manmohan Singh is necessarily a person

In *de re* modality matters of essential property and accidental property of an individual are expressed. Here we pick out an object and we identify the modal status of its (object's) exemplification of some property or other. Here we ask, how a particular object is related with a particular property: is that relation of necessity or of contingency. In the first statement the person Manmohan Singh is related with the property of being prime minister contingently. In such cases this particular person could have lacked this particular property, where as in the

second case Manmohan Singh is related with the property of being a person necessarily. In this case this person could not lack such kind of properties.

Logicians could provide semantics for a broad range of modal logics by appealing to the Leibinizian idea of possible worlds. According to the Leibnizian idea the talk of necessity and possibility is the talk about possible worlds. This development in the area of logic captured the attention outside its (logic) context. The point is this: if we can accept the Leibinzian idea that our world, the actual world, is just one of many possible worlds, we can explain the subject matter of modal claims. Modal operators do function like quantifiers over possible worlds. In *de dicto* modality, to say that a proposition is necessary is to say that that proposition is true in all possible worlds. To say that a proposition is contingently true is to say that while it is true in actual world there is at least one possible world where it is false. In the same way possible world metaphysicians claimed that we can make ascriptions of *de re* modality intelligible by invoking the Leibnizian idea of possible world. Just as propositions have truth value in possible worlds, we can suppose that objects exist in worlds and have properties in worlds. Now it will be possible for us to say that an individual *x* has a certain property *p* necessarily or essentially if and only if *x* has property *p* in actual world and also in all those worlds wherever it exists. An individual *x* has property *p* contingently iff *x* has *p* in actual world, but there is at least one world where *x* exists and lacks the property *p*. Here, there is a pre-philosophical belief which we all share. We all believe that the way things have gone is one of the many different ways that things could have gone. This is the fundamental pre-philosophical belief upon which the entire modal analysis is based.

Now we have two claims here, that *de dicto* necessity is the truth of propostions in all possible worlds and *de dicto* possibility is the truth of propositions in some possible worlds. And *de re* modality is also a kind of quantification over possible worlds. If an individual is related with a property necessarily then that individual has that property in all possible worlds and if an

individual is related with a property contingently then that individual has that property is some world. How to understand the idea that modality is the quantification over possible worlds. In explaining this possible world metaphysicians moved into two different directions and they are (1) reductive and (2) non-reductive analysis. In reductive analysis modal notions get analysed by way of non-modal notions. According to non-reductive analysis there is a network of inter-related modal notions and that the way to understand any particular modal notion is by understanding that notion's relation with other concepts making up the network. On the reductive side there is David Lewis' proposal and on the non-reductive side there is a proposal supported by Alvin Plantinga.

I.5.1. David Lewis' Reductive Approach

According to Lewis possible worlds are non-modal concrete particulars. Non-actual possible worlds are just like the actual world. Actual world is just "myself and my surroundings"- the concrete whole that is our physical universe. Possible worlds differ from actual world not in kind but only in what goes on at them. Possible worlds are comprehensive concrete wholes made up of objects entering into spatiotemporal and causal relations to each other. They are causally closed wholes and they all have the same metaphysical status and they are equally real. We call one of those worlds as actual world. According to Lewis, actual world is an indexical expression; meaning it is an expression whose reference depends on the context of its utterance. Just as we pick out our world by uttering the phrase "actual world", the inhabitants of other world pick out their respective world by uttering that phrase.

I.5.1.1. Pre-philosophical Intuition of modal realism

What could be the pre-philosophical belief behind the thesis of the plurality of the worlds? The idea that 'the things could have been in some other ways than the one which we have now here' is the core of the thesis of plurality of worlds. This pre-philosophical intuition which we make use in every day normal life is the fundamental presupposition that a modal

realist would employ to enumerate the nature of the possible worlds. An example could be the following. If the presentation could have been done by someone else, it would have been more interesting. Or, if it could have been about something else, it would have been more interesting. Here, the phrase *could have been* represents a possible situation in which what really happens would have been in a different way, precisely in this context in a more interesting way. In that possible situation a different person could make the presentation or a different person could make the presentation on a different topic. Again we can consider such kind of possibilities more and more. Again an example would be this, if I could have been a pilot, I could have travelled by flight every day. These kinds of feelings are very normal and we experience it more often, especially when we feel nostalgia about our childhood days. It seems that such kind of primitive beliefs are there at the bottom of modal realism. Following points can be considered as some of the basic principles of modal realism.

I.5.1.2. Possible worlds exist really

One of the basic principles which form the foundation for the Lewisian modal realism would be the proposal of the real existence of the possible worlds. Let us consider the same example here again. If the presentation could have been done by someone else, it would have been more interesting. As a whole about the presentation we can say that there could have been different ways in which it (the presentation) could have been conducted. There are things which correspond to the expression *could have been* conducted. It means, there are many ways that this particular presentation could have been done beyond the way it is done at present (actually). Last sentence is an existential quantification which says there exists many ways the presentation could have been done. This is what modal realism means. There are worlds which exist really in which the presentation can be performed in different ways.

Lewis says, "I believe that there are possible worlds other than the one we happen to inhabit...It is uncontroversially true that things might have been otherwise than they are. I

believe, and so do you, that things could have been different in countless ways."[8] This belief in the *things could have been different in countless ways* is the beginning point of modal realism. Lewis puts it in this way, "Ordinary language permits the paraphrase: there are many ways things could have been besides they actually are. On the face of it, this sentence is an existential quantification. It says that there exist many entities of a certain description, to wit "ways things could have been."... I believe permissible paraphrase of what I believe; taking the paraphrase at its face value, I therefore believe in the existence of entities that might be called "ways things could have been," I prefer to call them "possible worlds."[9]

I.5.1.3. There are no categorical differences between worlds

Worlds differ only in content not in kind. It means the objects or members of the worlds do not differ in kind. Only same sort of things can be found in other worlds too. Categorically they are the same. Suppose it is asked what sort of thing a possible world is, Lewis will say that, "I cannot give the kind of reply my questioner probably expects: that is, a proposal to reduce possible worlds to something else. I can only ask him to admit that he knows what sort of thing our actual world is, and then explain that possible worlds are more things of *that* sort, differing not in kind but only in what goes on at them."[10] The manner in which they exist is same. For example Suppose, there are only 100 individuals in this actual world. In that case in other possible worlds also same sort of individuals can be found. It is not the case that in other worlds there would be100 entirely different individuals. Let us consider the example here again. The world in which I am making the presentation now that is the actual world and the world in which some other person is making the presentation that is a possible world (or some others making the presentation on different topic) are not categorically different. It means we can find same individuals and not that some other individuals which we have never come across. These

[8] Lewis, David. 1973. *Counterfactuals*. Cambridge, MA: Harvard University Press. p. 84
[9] Ibid.
[10] Ibid.

worlds which are mentioned here differ not in kind but only in what goes on in them. They differ only in the way they stand in the spatiotemporal or causal relation. If there are no categorical differences between worlds then the question is, how to demarcate between worlds? Can't there be overlapping of the worlds? According to Lewis we can clearly demarcate between worlds and there is no overlapping of the worlds. Next point which constitutes one of the basic tenets of this version of modal realism would explain this.

I.5.1.4. Possible worlds are spatiotemporally isolated and have no causal relation between them

If possible worlds are not different from the actual world in kind then they (possible worlds) and parts (of the possible worlds) are concrete as the actual world and the parts of it are concrete. Possible worlds are spatiotemporally isolated from each other and they are concrete particulars which cannot be reduced to anything else. Possible world and its parts are much like the chairs and tables which we see now here. We find these objects in the space as isolated each other. There is no spatiotemporal or causal relation between worlds. The only spatiotemporal or causal relation we can speak of, is about the causal relation among the parts of a particular world. As the parts in the actual world stand in a spatiotemporal or causal relation, the parts in the other worlds stand in a causal or spatiotemporal relation.

This can be made clearer from Lewis' analysis of causation. He offers a counterfactual analysis of causation. For Lewis to say that a certain event *c*, causes another event, *e*, is to say that if *c* had not occurred, *e,* would not have occurred. For Lewis, a counterfactual conditional expressed in a world, *Wa*, is a claim about what goes on at another possible world. Let us call that possible world *Wb* about which the counterfactual claim is made. Here while *Wb* is different from *Wa*, former is similar with the latter in an important way. Here he introduces the idea of comparative similarity among worlds. There can be resemblance between worlds. It means *Wb* can resemble *Wa* more than some other world *Wz*. Resemblance between worlds is based on the particular matters of fact that obtain in different worlds, laws of nature that hold

at those worlds etc. Still Lewis considers the relation of resemblance as primitive. Based on this similarity relation we can order the world from less like our world to more like our world. Consider the following counterfactual statement as true. * If it were the case that *p*, then it would be the case that *q*. Counterfactual of this form will be true iff there is a p-world, *w*, such that *q* is true in *w* and *w* resembles our world more than any p-world where *q* is false. Consider the counterfactual conditional of causation. * If *c* were not to occur, *e* would not occur. This is true iff there is a possible world, *w*, such that neither *c* nor *e* occurs in *w* and *w* is closer to the actual world than any possible world where *c* does not occur but *e* does.

I.5.1.5. Actual is indexical

Actual world is just "myself and my surroundings". When we talk of the actual world we talk about only of our own world or about the world which we inhabit. That does not mean that there is an ontological difference between our world and some other possible world. Our world does not enjoy any different status from other possible worlds just by being actual. When we say that our world is actual world, it does not mean that our world has some property or nature which other worlds do not have. Term actual is used much in the same way the terms *here* and *now* or *at present* is used and it indicates one's position. Normally we say that what actually is the case and it means what goes on here which is a one possible way a world to be.

I.6. The Chapters of this thesis

Chapter II: Resolving Scheffler's and Chomsky's Problems on Quine's Criterion of Ontological Commitments

Quine's criterion can be stated in the following way.

> In general, an entity of a given sort is assumed by a theory if and only if it must be counted among the values of the variables in order that the statements affirmed in the theory be true[11]

[11] Quine, W. V. 1963. "Logic and Reification of Universals." *From a Logical Point of View: Logico Philosophical Essays*, 102-129, p. 103.

How an adherent of QCOC can explain the sentence or expressions like "a theory ***T*** is ontologically committed to entities ***E***s"? This could at least mean that the theory ***T*** accepts the reality of the entities ***E***s. But in order that QCOC be applicable to different theories or once this criterion is applied to certain theories then in the view of Scheffler and Chomsky, QCOC itself is committed to the entities of the theories to which it is applied. Otherwise, according to Scheffler and Chomsky, the applicability of QCOC cannot be made sense of. QCOC is inevitably committed to all the entities of all the theories to which it is applicable. Let us call such a problem the problem of inexorable ontological commitments. Here, QCOC cannot escape the ontological commitment to those entities of the theories to which it (QCOC) is applied. Another problem which arises from inexorable ontological commitments is the following. What if, the adherent of QCOC responds to this issue by saying that QCOC is committed to all the entities of all the theories to enhance the application and accept that such a commitment to those entities is unproblematic? This might even worsen the situation in the following way. Consider a theory which is indisputably false or a theory whose falsity is not in question. In such a situation, the very falsity of the theory doesn't preclude[12] QCOC to be applicable to that theory. If so, then QCOC is committed to the entities of false theories too. Such applicability makes QCOC to be ontologically committed to the entities of this false theory. If so, then in some way QCOC needs to accept the reality of such entities of false theories. This problem can be named as the problem of false existential inferences. These are the two issues which Scheffler and Chomsky raise against QCOC.

I will extend the above mentioned issue and show that there is another crucial problem which QCOC might face and let me call this problem as inexorable ontological commitments to rival entities. Here, we could consider a situation where there are two theories ***T*** and ***T***** which have conflicting ontological commitments. It means ***T*** is committed to certain entities

[12] Consider theory ***T**** and the entities of ***T****. Consider that theory ***T**** is a false theory. The very falsity of the theory ***T**** doesn't preclude QCOC to be applicable to ***T**** in the sense that how can QCOC stop itself to say that "***T**** is committed to the entities of the sort ***E****".

and ***T**** denies the reality of the same entities; then these theories are said to have conflicting ontological commitments. In such a scenario, the problem raised by Scheffler and Chomsky can be deepened and can be shown that QCOC is committed to rival entities, provided Scheffler and Chomsky are right in their approach. I try address and resolve these three problems in this chapter: (1) the problem of inexorable ontological commitments, (2) the problem of false existential inferences and (3) the problem of inexorable ontological commitments to rival entities. In order to address the issues here, I show that there is a functional difference in the ontological commitments of QCOC (meta-theory) and the object theories to which QCOC is applied. Here, considering the functional difference between QCOC and the object theories, we can talk of direct ontological commitments and indirect ontological commitments of the theories.

A theory is directly ontologically committed to the entities iff committing to such entities results in the determination of what is real/exists.

A theory is indirectly ontologically committed to the entities iff committing to such entities doesn't result in the determination of what is real/exists.

Using this distinction I respond to the problems of extended inexorable ontological commitment to the rival entities, false existential inferences and inexorable ontological commitment to the entities.

Chapter III: A Meta-Ontological Enquiry into the Parallelism between David Lewis' Modal Realism and Meinongianism

David Lewis' version of Modal Realism (henceforth LMR) is the view that other possible worlds exist in the same sense the actual one exists. The fundamental tenet of LMR is that possible worlds are spatiotemporally isolated concrete particulars. The upshot of LMR is the recognition of the concrete objects other than the one which inhabit the actual world. Full-fledged reduction of modality remains to be the *success* of such view: modal notions are

explained in terms of non-modal notions. There could have been talking donkeys or possibly there is a talking donkey is true because there is a talking donkey at some possible world ***W***. That world is spatiotemporally unrelated to us. So, in accordance with LMR, there are flesh and blood talking donkeys and flesh and blood philosophising cats. There are attempts to associate this particular aspect of LMR with Meinongianism (henceforth MS). Central to MS is the acceptance of the reality of entities which don't exist in the actual world. William G. Lycan argues that LMR is met with Meinongian features which Lewis rejects. Subsequently, Linsky and Zalta systematically show that though there are non-Meinongian features, some Meinongian features can still be found in LMR. In this chapter, I evaluate such various attempts to bring out Meinongian features in LMR. Are they correct in indicating Meinongian features in LMR? Lewis commits to Orthodox/Russellian Ontology. Is there any problem in having his LMR and committing him to Orthodox Ontology?

As the question is whether Lewis is a Meinongian or not, it is obvious that two different ontological theories are of concern: the Meinongian and the Russellian. Since the issues designated by this particular question overlap these two different ontological frameworks, an attempt to address such issues requires the consideration of these two different ontological frameworks. I am of the view that such an attempt might require us to use some criterion which itself is ontologically unbiased with respect to any of these two ontological theories. Such a criterion will help us to develop a neutral framework to address the issues indicated by this question. I will show that Quine's criterion of ontological commitment is such a criterion and would play a crucial role in assessing the attempts to show the Meinongian features in LMR. Here I simply assume Quine's criterion and I will use it for the purpose of determining the ontological commitments of Lewis' Modal Realism. I will show how this criterion can be used for carrying out such a project. If we are going to answer the question whether Lewis is a Meinongian or not through the employment of Quine's criterion then the

enquiry is at the meta-level. For such an enquiry there could be some other concepts which will help us to distinguish the ontological commitment which any of these two theories make. Here I introduce two notions: functionally isomorphic quantifiers and independent variable. This will help us to create a space or platform where we can bring these two theories together and can examine the ontological commitment of each.

In my Conclusion chapter, I briefly explain what the achievements are in resolving the two problems of my thesis.

CHAPTER II

RESOLVING SCHEFFLER'S AND CHOMSKY'S PROBLEMS ON QUINE'S CRITERION OF ONTOLOGICAL COMMITMENT

II.1. Preliminary remarks on Quine's Criterion of Ontological Commitment (QCOC)

1. "To be is to be the value of variable"[1]

2. "……we are convicted of a particular ontological presupposition if, and only if, the alleged presuppositum has to be reckoned among the entities over which our variables range in order to render one of our affirmations true"[2]

3. "The ontology to which an (interpreted) theory is committed comprises all and only the objects over which the bound variables of the theory have to be construed as ranging in order that the statements affirmed in the theory be true."[3]

4. "The entities to which a discourse commits us are the entities over which our variables of quantification have to range in order that the statements affirmed in that discourse be true."[4]

5. "To be assumed as an entity is purely and simply to be reckoned as the value of a variable"[5]

[1] Quine, W. V. 1939. "Designation and Existence." *The Journal of Philosophy* 36 (26): 701-709, p. 708.
[2] Quine, W. V. 1948. "On What There Is." *The Review of Metaphysics* 2 (5): 21-38, p.32.
[3] Quine, W. V. 1951. "Ontology and Ideology." *Philosophical Studies* 2 (1): 11-15, p. 11.
[4] Quine, W. V. 1951. "On Carnap's Views on Ontology." *Philosophical Studies* 2 (5): 65-72, p.67.
[5] Quine, W. V. (1948) 1963. "On What There Is." Reprint, *From a Logical Point of View: Logico Philosophical Essays*, Harper and Row, New York. 1-19, p. 13.

6. "In general, an entity of a given sort is assumed by a theory if and only if it must be counted among the values of the variables in order that the statements affirmed in the theory be true"[6]

These are the different ways in which the same criterion of ontological commitment was formulated by Quine over the period of a time. The aim of this criterion is not to say or enlighten about *what there is* or explain *what exists*. The aim of this criterion is to determine or fix what a particular theory says *there is* without committing itself to any particular ontology. In other words, without committing itself to any ontological assumption, this criterion tries to determine what a theory concedes as existing. In this sense, COC is applicable to any theory which itself does not make any explicit ontological commitment. This criterion does not try to engage with any particular theory (ontology) and thereby does not assume that theory and talk about what exists. This criterion tries to stand outside the theory and makes explicit what that particular theory declares as existing.

One of the ways to show that this criterion does not work is to show a situation where one of the sides (right or left of the, if and only if claim) does not hold but the other holds. That is to show a theory which violates this criterion. Can we think of such a theory which assumes at least an entity and still that entity is not counted among the values of variable employed in that theory? Putting it in the opposite direction; can we think of a theory which counts a particular entity among the values of the variables and yet that entity is not accepted by that theory? If we can show at least one of the above then obviously this criterion is false. This criterion could be true vacuously too. This could be true when both the sides are false. That is, when there is nothing to correlate with both sides of the connectives, in other words, this criterion is true in an empty universe. There could be another significant case for this criterion in which this criterion would be inadequate in fulfilling its job. That is both the left

[6] Quine, W. V. 1963. "Logic and Reification of Universals." *From a Logical Point of View: Logico Philosophical Essays*, 102-129, p. 103.

side and the right side work properly and still there is a case in which we won't be able to determine the ontological commitment of any particular theory. These are the different ways to show that this criterion does not work. In order to see whether this criterion works or not we would consider different theories in ontology such as the Russellian ontology, the Meinongian ontology and the Quinean Ontological Naturalism.

Upon the left side of the criterion, one could ask what it means to say that *an entity is assumed by a theory*. Or, when do we say that *an entity is assumed by a theory*? Upon the right side of the criterion, one could ask what does it mean to say that *an entity must be counted among the values of the variables in order that the statements affirmed in the theory be true*? Obviously both sides of the criterion do not mean the same. What the criterion says is that once the right side holds the left side must hold and vice versa. Violation cannot be made sense. There are different things at consideration here: what is said in the left side, in the right side and what the criterion purports to indicate (the ontological commitment itself). Let us see very briefly, how to make sense of the idea *an entity being assumed by a theory*.

If a theory ***T*** is some explanation about an entity ***E***, then ***E*** is assumed by the theory ***T***. One thing to be noted here is that, the assumption of ***E*** itself may not be the part of or may not be constitutive of the theory ***T***. What *constitutes* a theory or what is *the content* of a theory may not be abstracted from *what the theory is about*. The theory is about certain entities or events or some phenomena. *What the theory is about* itself need not be a part of that theory but of course could be a part of some theory (other than the one which is meant for or about). The assumption of the basic entity (which the theory is about) itself may not constitute any content to the theory. But if the theory is about some entity then it could be that, that entity is assumed by that particular theory. Very briefly this is what we can talk about the idea of an entity being assumed by a theory.

Now let us see the right side of the connective: *An [assumed] entity must be counted among the values of the variables in order that the statements affirmed in the theory be true*. How can we make sense of this? The right side seems to speak of something other than what the left side is concerned about. But as it was said earlier once two cases obtain then the equivalence must be held, i.e., the violation seems to be implausible. But they don't seem to say the same thing. The left side speaks about some basic assumption of the theory whereas the right side talks about the following different things. We can say that the right side talks about the true sentences which constitute the theory. It is also concerned with the propositional functions (quantifier-variable-idiom [QVI]). It is also concerned with some entity being the value of variable(s). For the sake of convenience let us put all of them together and let us call the procedure as regimentation procedure. Considering the context or the situation here, we can say that this regimentation procedure, of a particular theory, is codified in predicate logic. Once we do this regimentation, we can find out or determine the ontological commitment of a particular theory. What is supposed here is that the criterion obtains. In other words, some relation obtains between the assumption of a theory and the regimentation of that theory, and thus the application of the criterion will help us to determine the ontological commitment of the given theory. The point with which we are concerned is the point of regimentation of the sentences of a particular theory into Q-V-I of predicate logic. From the terminology itself, we can understand that quantifier variable idiom involves quantifiers- universal as well as existential, variables and predicate expressions. Regimentation is done employing predicate logic and the purpose of doing this is to determine the ontological commitment of a particular theory.

II.1.1. The issue of restriction upon variables

Let me just state first what is said by Quine and which are relevant to the current discussions. The concerns raised by Quine in these formulations can be generally called as the

issue of restriction upon variables and what is said in these formulations will be used to restate the issues raised by Scheffler and Chomsky against QCOC.

First formulation

> I cannot admit that there are some things which McX countenances and I do not, for in admitting that there are such things I should be contradicting my own rejection of them.[7]

Second formulation

> So long as I adhere to my ontology, as opposed to McX's, I cannot allow my bound variables to refer to entities which belong to McX's ontology and not to mine.[8]

The concerns that are raised in these formulations or suggestions are not directly related with the kind of problems indicated by Scheffler and Chomsky. If we look at the suggestions made by Quine, it is obvious that he was addressing a serious issue which one needs to take into account while someone disagrees with her opponent on what ***things*** are to be regarded as real. The point which one needs to take into account while someone has some ontological disagreement with the opponent is something that is related with the restriction of variables. When ***X*** disagrees with her opponent ***Y*** on what things exist, ***X*** (the one who disagrees) cannot allow her bound variable to range over the entities of ***Y*** (the one with whom the disagreement is made). These formulations or suggestions give some points which an adherent of quantifier-variable criterion of ontological commitments[9] needs to take into account while proposing the criterion. These points are directed towards the issue of restricting the variable which comes under the scope of existential quantifier: variable referring to an entity or the variable ranging over the ontology. We need to see why at all this restriction of

[7] Quine, W. V. 1948. "On What There Is", p.35.

[8] Ibid.

[9] Quantifier-variable criterion of ontological commitments is another name for Quine's criterion of ontological commitments.

variable is an issue for the one who is dependent on quantifier-variable criterion. In the above mentioned suggestions of Quine it can be said that a Russellian while she is disagreeing with a Meinongian, Russellian cannot allow her bound variable to refer to the entities of the Meinongian while the Russellian makes her ontological disagreement with the Meinongian. Even when the disagreement is made with the opponent, the restriction upon the variable is expected; otherwise it will lead to some kind of inconsistency. If the bound variable of ***X*** is allowed to range over or allowed to refer to the entities of the opponent ***Y*** then the entities of ***Y*** is getting included in the ontology of ***X***, which will affect the ontological commitment of ***X***. so some kind of restriction upon the variable is expected when sentences of different theories are stated in Q-V-Idioms.

Why variable restriction is an issue for QCOC or for the quantifier variable criterion? For this, we need to focus on the context of the development of the approach which uses Q-V-Idioms, in addressing the ontological issues. In Quine's framework, or in QCOC, what is kept as the sole vehicle of reference is bound variable and such an approach is inherited from Russell. According to Quine, the burden of objective reference which had been put upon the descriptive phrase is now taken over by words of the kind that logicians call bound variables.[10] Let us see how the burden of objective reference was imposed on bound variables and the advantage in doing so. For this let us consider, Russell's response to Meinong regarding the referential theory of meaning. According to referential theory of meaning, reference is the meaning. A term is meaningful just in case, that term refers something. The problem was that there are terms that don't refer anything and nonetheless those terms are meaningful. For example, the Golden Mountain is a meaningful expression whereas it doesn't refer anything. Many such expressions can be shown which are meaningful but don't refer anything. It is counterintuitive to say that such terms are not meaningful. There are at least two options: either reject the referential theory or address the above mentioned cases and retain it. In two

[10] Quine, W. V. 1948. "On What There Is", p.26.

different ways this was handled. First it was handled by Meinong and then a different solution was given by Russell. Meinong in order to handle the issue which is raised against the referential theory of meaning, introduced new kinds of entities. To handle the above mentioned problem, Meinong had included in his ontology some different kind of entities that is referred by the term Golden Mountain or by similar terms. Newly introduced kinds of entities are called subsisting entities. For Meinong, apart from the existing entities, there are subsisting entities too. Golden Mountain doesn't exist but it subsists. The term Golden Mountain refers an entity that subsists. Reference can be made not only to the existing entities but also to the subsisting entities. So, the term Golden Mountain is a meaningful expression because it refers the golden mountain which is a subsisting entity. Under this response, one is over populating the ontology, though it yields the required results. This approach saves the referential theory of meaning as it ensures that all the meaningful expressions have referent and there are no meaningful expressions which don't have a referent.

The other way in which the referential theory of meaning was saved was the one which is shown by Russell and the advantage of this approach is that it doesn't overpopulate the ontology. Russell developed such a technique or a method, where even without overpopulating the ontology by assuming the kind of entities assumed by Meinong, there is a way in which the expressions that don't refer anything can be meaningful. In other words, in order to handle the issue which is mentioned above (a term being meaningful without any referent), one doesn't have to accept the reality of a different sort of entities and thereby overpopulate the ontology. What one needs to do is that the terms or the expressions (which do not refer anything) are to be understood and are to be read in a different way. Thus, Russell proposes the Theory of Descriptions where the expressions are rewritten to reveal its logical form. The expression "The Golden-mountain" is to be read as the following.

There exists an ***x*** such that (***x*** is Gold and ***x*** is mountain) or $(\exists x) \quad (Gx \,\&\, Mx)$

Once we try to give a value for ***x***, any substitution instance of this sentence will turn out to be false. According to Russell and Quine, Meinong wrongly supposed that in order for descriptive phrases and singular terms to be meaningful, they must refer something. But Russell developed a method where the burden of objective reference was detached from the descriptive phrases and singular terms and was imposed upon the bound variables. What was thought to be a referring expression traditionally, in this new method turns out to be a predicate expression and what works as the referring expression is the bound variable to which the singular terms are attached. Any singular term that deceptively seems to be a referring expression such as "Pegasus", according to Quine, can be converted into descriptive phrases and one can apply Russell's methodology on these terms. For example, the issue of committing to something that is Pegasus through the singular term "Pegasus", is addressed by Quine by converting "Pegasus" into a descriptive phrase "Pegasizes" or "the thing that Pegasizes" and applying Russell's technique that uses the Q-V-Idioms. This can be represented in the following way. It is not that there exists an ***x*** such that, ***x*** Pegasizes. Or ~(∃*x*) (*x* Pegasizes).

It is to be noticed that when Russell and Quine were developing this methodology, they had taken for granted the robust sense of reality. The robust sense of reality was the universe of discourse which worked as the base for developing this methodology represented by Q-V-Idioms. Variables in any of these Q-V-Idioms were allowed to range over or were allowed to refer to the entities that stand within a robust sense of reality. For a referential theorist the problem is that there are singular terms which are meaningful but don't refer anything. One of the options here is to overpopulate the ontology by including new kinds of entities and say that these seemingly controversial singular terms are meaningful and they refer not the entities that exist but the entities which have some being namely, subsisting entities. But if one doesn't want to overpopulate the ontology, a different strategy is to be adopted. The methodology developed by Russell handles this issue: without overpopulating the ontology referential theory

of meaning is maintained without any difficulty. One of the strategies is to remove the burden of the reference which was put upon the singular terms to something else. Traditionally the sentences were visualized as having the following structure. A sentence has a subject term and a predicate term and traditionally always the subject term was regarded as standing for some entity or for some object. Seeing sentences having subject terms and predicate terms and the subject term standing for an entity, such a visualisation is to be abandoned. The problem with such visualisation is that it directly keeps the subject terms which are singular terms as referring to an entity or object. This might require one to be ontologically committed to such entities or objects to which this subject terms are regarded as referring. In some of the cases the commitment to some objects might not be a problem but in some case it will be a problem. The unproblematic cases are singular terms referring to an existing objects and being meaningful. The problematic cases are the one which is mentioned above: singular terms being meaningful but don't refer anything. I don't want to get rid of referential theory of meaning and at the same time I don't want to overpopulate my ontology. To achieve this I cannot simply say that referential theory of meaning works exclusively with those terms which have a referent. The simple reason is that it doesn't resolve the issue as it says nothing about the term being meaningful without having any referent. So the requirement was to develop a methodology to translate these sentences or expressions in which all the terms are regarded as referring expressions into different idioms or expressions in which the terms are not regarded as so. In such a methodology which seeks for a different paraphrase or idioms, the singular terms don't have to be meaningful by independently referring to an object and furthermore, it doesn't have any referring job assigned to it. In other words, these singular terms don't work as a referential apparatus in this new methodology. In other words, these terms are not meaningful autonomously referring to an object, besides they are meaningful only with the occurrence of bound variable. And the complete burden of reference is put upon the bound variables and the singular terms are attached to the variables or they occupy the place of

predicate in the Q-V-Idioms. And the sole vehicle of reference is bound variable or what works as the referential apparatus is bound variable.

Here, the advantage for the one who don't want to overpopulate the ontology is that for her the referring expressions, because of which she is to be committed to such entities that work as referent, are as less as possible. This will help her to minimize the kind of entities to which she is to be committed. Quine says, "the bound variables of quantification can be made to serve as the ***sole vehicle of direct objective reference***"[11] In fact, what one achieves through this methodology is that some kind of resistance to the old Platonic riddle of being which might reappear in philosophy in various forms: nonbeing must in some sense be, otherwise what is it that there is not[12]. In order to talk about non-being of something we must regard being of the same in some sense. It is a tendency to overpopulate the ontology for some or the other reasons. In the case of Meinong's referential theory of meaning: Golden Mountain must in some sense be/real, otherwise what is it that to which existence is denied or how is the expression ***Golden Mountain*** meaningful. The expression ***Golden Mountain*** is meaningful because it refers to Golden Mountain which has some being. On the other hand the methodology developed by Russell will put a resistance to such move by imposing the burden of reference to the bound variables which will reduce the referential vocabularies. Thus it will put a resistance on overpopulating the ontology. Distinctiveness of the strategy developed by Russell is that, for each term one doesn't have to include an entity in the ontology. These terms don't have to refer a particular entity but the reference is carried out by the variables to which these terms are attached in the place of predicate. That is why Quine says, "the burden of objective reference which had been put upon the descriptive phrase is now taken over by words of the kind that logicians call bound variables"[13].

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[11] Quine, W. V. 1947. "On Universals." *The Journal of Symbolic Logic* 12 (3): 74-84. p. 74. italics added.
[12] Quine, W. V. 1948. "On What There Is", p. 21.
[13] Ibid, p. 26.

It is this methodology which is getting extended to be used in the meta-ontology to develop a criterion for ontological commitments for any theory. That is what is aimed by Quine's criterion of ontological commitments. We should notice that the entire methodology when it was getting developed, mostly it got developed by assuming a robust sense of reality of Russell. This methodology was employed to respond to the Meinongian form of Platonic riddle of being by Russell exclusively under basic assumption of robust sense of reality. In such a scenario, at least two issues are to be addressed: one relates to the problem of QCOC being committed to the entities of different theories and the other is relating to the problem of restriction. The problem of QCOC being committed to the entities of different theories is the one which is shown by Scheffler and Chomsky that QCOC in order for it to be applicable must be committed to all the entities of various theories to which it is applied. It seems to me that this problem emerges from the idea that the objective reference is handled by the bound variable of quantification. Once such a strategy of using Q-V-Idioms is adopted to develop a criterion for ontological commitments then the question arises as to how the notion, of a variable referring an entity, is to be understood. If one is developing a criterion for ontological commitments of various theories then what would be the place of reference of the bound variable. It is such concerns that lead to the problems raised by Scheffler and Chomsky. Ontology and ontological commitments are directly linked to the range of the variable and the reference of the variable. QCOC employs Q-V-Idioms and thus in order for QCOC to be applicable it must refer something. From this particular concern of Quine regarding variable, Scheffler and Chomsky raise the problem. The problem of restriction is the one which is seen in Quine's two formulations: while I disagree with my opponent I shouldn't allow my bound variable to range over my opponent's entities. Quine mentions this in responding to Meinongians. But once QCOC is applied to different theories then how the variable restriction is to be carried out. These issues are discussed in detail in forth coming sections.

II.1.2. Problems raised by Scheffler and Chomsky[14]

One of the reasons that made philosophers to seek an alternative criterion for ontological commitments is due to the problems pointed out by Scheffler and Chomsky. The problems that are raised by Scheffler and Chomsky can be said to be a problem of the ontological commitments of Quine's criterion of ontological commitments. They try to apply the Quine's COC to itself. The advantage of this attempt is that it makes an enquiry into the assumptions of QCOC itself and it tries to find out what are the entities to which QCOC is committed. Nevertheless, it is to be examined how much they are right in fixing the commitments of QCOC or in carrying out the enquiry upon QCOC.

First let me state the problem raised by Scheffler and Chomsky against QCOC very briefly. After stating the problem, let me analyse the issue with examples and restate the problem. I will be using the same examples provided by Scheffler and Chomsky to restate the problem. How an adherent of QCOC can explain the sentence or expressions like "a theory ***T*** is ontologically committed to entities ***E***s". This could at least mean that the theory ***T*** accepts the reality of the entities ***E***s. But in order for QCOC to be applicable[15] to different theories or once this criterion is applied to certain theories then in the view of Scheffler and Chomsky, QCOC itself is committed to the entities of the theories to which it is applied. Otherwise, according to Scheffler and Chomsky, the applicability of QCOC cannot be made sense of.

[14] Scheffler, Israel, and Noam Chomsky, (1958-59). "What is said to be." *Proceedings of the Aristotelian Society*, Vol. 59, pp. 71–82.

[15] Applicability of QCOC is the following. QCOC is concerned with different theories. Once, what is said in the left side of the connective regarding theory ***T*** and its entities ***E*** obtains, then something else that is said in the right side will also obtain. This criterion doesn't work just in case, what is said in one of the sides doesn't hold whereas the other side holds. If the violation of this criterion cannot be thought of then there are some other advantages namely, fixing the ontological commitments of the theory ***T***. If there is some confusion in fixing the commitments of ***T*** and ***T****** then this criterion can be used to disambiguate the ontology of those theories. This is what we have done in the next chapter when we try to see whether Lewis is a Meinongian or not. This criterion is applicable because what is said in the left side and the right side of the connective obtain. The applicability of this criterion is that to what a theory is committed can be determined by converting the sentences of the theory ***T*** to Q-V-Idioms and by looking into the bound variables of that theory.

QCOC is inevitably committed to all the entities of all the theories to which QCOC is applicable. Let us call such a problem as inexorable ontological commitments. The problem of inexorable ontological commitment is that, according to Scheffler and Chomsky, in order for QCOC to be applicable, it (QCOC) must be committed to the entities of different theories to which it is applied. Here, QCOC cannot escape the ontological commitment to those entities of the theories to which it (QCOC) is applied. Another problem which arises from inexorable ontological commitments is the following. What if, the adherent of QCOC respond to this issue by saying that QCOC is committed to all the entities of all the theories to enhance the application and accept that such a commitment to those entities is unproblematic? This might even worsen the situation in the following way. Consider a theory which is indisputably false or a theory whose falsity is not in question. In such situation, the very falsity of the theory doesn't preclude[16] QCOC to be applicable to that theory. If so, then QCOC is committed to the entities of false theories too. Such applicability makes QCOC to be ontologically committed to the entities of this false theory. If so, then in some way QCOC needs to accept the reality of such entities of false theories. This problem can be named as the problem of false existential inferences. These are the two issues which Scheffler and Chomsky raise against QCOC. Phillip Bricker writes the following regarding the problem raised by Scheffler and Chomsky.

> [Ontological] commitment to *K*s is a relation to the *K*s themselves. Then, on plausible assumptions, the meta-ontologist cannot assert that a theory is ontologically committed to *K*s without being committed to *K*s herself; for the ***meta-ontologist's own domain of quantification*** must include at least one *K* in order for '*T* is ontologically committed to *K*s' to be true. And that is wrong……Suppose instead, then, that ontological commitment is a relation, not to the *K*s, but to the *kind K*……But, on plausible assumptions, it still has the untoward consequence that the

[16] Consider theory ***T**** and the entities of ***T****. Consider that theory ***T**** is a false theory. The very falsity of the theory ***T**** doesn't preclude QCOC to be applicable to ***T**** in the sense that how can QCOC stop itself in saying that "***T**** is committed to the entities of the sort ***E****".

> meta-ontologist cannot herself assert that a theory is ontologically committed to a kind *K* without being committed to *kinds*.[17]

I will extend their issue and show that there is another crucial problem which QCOC might face and let me call this problem as inexorable ontological commitments to rival entities. Here, we could consider a situation where there are two theories ***T*** and ***T**** which have conflicting ontological commitments. It means ***T*** is committed to certain entities and ***T**** denies the reality of the same entities. Then these theories are said to have conflicting ontological commitments. In such a scenario, the problem raised by Scheffler and Chomsky can be extended and one can show that QCOC is committed to rival entities, provided Scheffler and Chomsky are right in their approach. Let us see these problems one by one in a detailed manner.

Scheffler and Chomsky accept that the aim of this criterion is not to say what there is but to find out what a particular theory says what there is. However, they make an attempt to apply this criterion to itself. The stipulation which Scheffler and Chomsky have, while they make such an attempt is that as QCOC is applicable to all the theories and since QCOC itself is one of the theories then QCOC needs to be applicable to QCOC itself. They turn QCOC back to itself. According to Scheffler and Chomsky, this criterion can be true in two ways: firstly, if the universe is empty of entities, and secondly, if the universe is empty of theories. Although in the first case, it wasn't mentioned in what way the universe could be empty as it is mentioned in the second case, from their later analysis we could find that in the first case when they say that universe is empty, they consider the universe being empty of entities. Generally one can say that such situations (of universe being empty of entities and universe being empty of theories) do not obtain. We know that there are theories and there are entities assumed by the theories. Scheffler and Chomsky also concede that in Quine's framework (QCOC), this

[17] Bricker, Phillip. 2014 "Ontological Commitment", *The Stanford Encyclopedia of Philosophy* (Winter 2014 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/win2014/entries/ontological-commitment/>. italics added.

assumption is taken for granted. However, the significance of the concerns raised by Scheffler and Chomsky in the above mentioned manner can be furthered by asking the following question. When we talk about the assumptions of QCOC then in what way the universe of discourse[18] is to be fixed? To what entities QCOC is committed such that the applicability of QCOC is realized or is possible?

In the view of Scheffler and Chomsky, QCOC takes the following assumption for granted: there are theories and there are entities to which these theories are committed. Two questions would be relevant here: how to fix the ontological assumptions of QCOC and how to fix the universe of QCOC. According to Scheffler and Chomsky the intended purpose of QCOC makes sense, when "***existence*** of theories and the entities assumed by theories"[19] are taken for granted. There are two points here: ***existence*** of theories to which QCOC is applicable and the ***existence*** of entities assumed by those theories. For QCOC, there ***are*** theories and there ***are*** entities to which these theories are committed. Scheffler and Chomsky would say QCOC is committed to different theories to which QCOC is applicable and also QCOC is committed to the entities to which these different theories are committed. But then again QCOC being ***committed*** to different theories to which it is applied and QCOC being ***committed*** to the entities to which these theories are committed does not seem to be the same. What is purported by these two commitments doesn't seem to be the same. I think this difference is to be given adequate consideration by characterising it (the difference) further, while fixing the commitments of QCOC. It seems that Scheffler and Chomsky maintain some kind of laxity on this difference or at least they don't try to address this difference in a more clarified way. Here, in my view, the kind of laxity maintained by Scheffler and Chomsky on this difference, when they attribute or fix the assumptions of QCOC, cannot be accepted. This laxity runs throughout their analysis on QCOC. It seems that it is their assumption that this

[18] The terms "universe of discourse", "universe" and "domain of quantification" are used interchangeably.
[19] Scheffler, Israel, and Noam Chomsky, (1958-59). "What is said to be." p. 72. Italics added.

laxity is unproblematic. This laxity might portray QCOC's commitment to different theories and commitment to the entities of these theories as the same. Primarily we could say that for QCOC the following are not the same: there ***are*** different theories and there ***are*** entities to which these theories are committed. At least *prima facie* as they look, they are not the same. After giving an adequate explanation for this difference, we need to see what would consist of the universe of QCOC. Though Scheffler and Chomsky recognize this difference, this difference needs to be explored further when we try to fix the commitments of QCOC.

Regarding QCOC, we can say that there are theories because there are entities. Had there not been entities then there wouldn't have been theories. So, QCOC needs to be committed to entities as they are committed to different theories. It is to be explained that what does it mean to say that QCOC is committed to theories and QCOC is committed to the entities of these theories? Scheffler and Chomsky emphasise the point that QCOC is committed to entities of theories. Regarding Quine's criterion they say, "…, ***there must be some entity assumed by a theory*** if the criterion is to have point."[20] What is italicized indicates the commitment of QCOC itself. If so, then universe of QCOC will consist of various theories as well as various entities to which these theories are committed. Their worry upon QCOC seems to be very legitimate one when we consider some of the examples cited by them. Here Quine's initial remarks on the issue of restriction of variables can be used to restate the issue in Quine's own light. Such restatement is possible because Scheffler and Chomsky convert the examples which are used to show the problems in QCOC into Q-V-Idioms. Consider the following theory and QCOC needs to be applicable to it.

(2) $(\exists \boldsymbol{x})$ ($\boldsymbol{x}$ is Phlogiston)/ $(\exists \boldsymbol{x})$ (P$\boldsymbol{x}$)

By using QCOC one could say that, (2) assumes something that is phlogiston and (2) will regard that thing as the value of variable in order to make (2) true and according to

[20] Ibid. Italics added.

Scheffler and Chomsky QCOC is applicable to (2) in this manner. However, according to them, in order for QCOC to be applicable in this way QCOC itself needs to assume something that is phlogiston. Scheffler and Chomsky say, "To apply [QCOC] in this way is however, impossible unless something that is phlogiston is counted among the values of the variables of [QCOC] itself."[21] Thus, in the view of Scheffler and Chomsky the applicability of QCOC to other theories and in our present case to phlogiston theory leads to the following.

(3) $(\exists \boldsymbol{x})$ ($\boldsymbol{x}$ is assumed by ((2) $(\exists \boldsymbol{x})$ (P$\boldsymbol{x}$)) & $\boldsymbol{x}$ is Phlogiston)

The very applicability of QCOC upon phlogiston theory is possible because something that is phlogiston is assumed by QCOC itself. Or we can say as Phillip Bricker says meta-ontologist (here, the adherent of QCOC) cannot assert that something that is Phlogiston is assumed by Phlogiston theory, without meta-ontologist (here, the adherent of QCOC) herself being committed to something that is phlogiston. In the view of Scheffler and Chomsky the commitment of QCOC to the entity phlogiston can be made clear in the Q-V-I as it is represented in (3). Their point is that, the first conjunct of the Q-V-I cannot be made intelligible without the second conjunct. The variable $\boldsymbol{x}$ in these two conjuncts stands for an entity and this variable is to be allowed to stand for the same entity. This variable is bound by the existential quantifier. Once the variable is allowed to stand for or to refer to an entity then the very claim that is (3) by someone or some theory, commits that theory, to something that is phlogiston. As Phillip Bricker puts the meta-ontologist's own domain of quantification must include something that is phlogiston, in order to assert that *Phlogiston theory is committed to something that is phlogiston*. What Scheffler and Chomsky say can be stated in the following way by considering the suggestions of Quine: QCOC should allow its variable to range over the entities of (2) in order for QCOC to be applicable to (2). If so, the problem which QCOC would face can be captured in the formula or Q-V-I (3) and the problem is QCOC is

[21] Ibid.

committed to what (2) is committed. Under (3), the ontological commitment of QCOC becomes quite obvious that QCOC is ontologically committed to what (2) is ontologically committed. In the view of Scheffler and Chomsky, the very applicability of QCOC makes sense because of (3). (3) cannot be rejected in the following way, there is something that is phlogiston assumed by you (phlogiston theory) but there isn't anything like phlogiston for me (QCOC) and this may be represented in the following way.

(4) $(\exists \boldsymbol{x})$ ($\boldsymbol{x}$ is assumed by ((2) $(\exists \boldsymbol{x})$ $(P\boldsymbol{x})$) & $\boldsymbol{x}$ is not Phlogiston)

This would mean that $\boldsymbol{x}$ is allowed to refer to an entity phlogiston assumed by (2) and that entity is not phlogiston. Some kind of inconsistency can be seen in this. Inconsistency could be because of the following. First the variable $\boldsymbol{x}$ is allowed to refer to an entity and is asserted that it (entity) is assumed by a particular theory (phlogiston theory) and then the same entity is denied of being Phlogiston by referring to it through the same variable $\boldsymbol{x}$.

In addition to this, we should see what would happen if we can introduce a different variable, that is $\boldsymbol{y}$ instead of $\boldsymbol{x}$ into second conjunct of the Q-V-I (4). Introduction of a different variable needs to ensure that the reference isn't made to same entity. After introducing a different variable and subsequently successfully ensured that the reference isn't made to same entity, even then the adherent of QCOC needs to characterise the ontological commitment to that different entity (which is referred by $\boldsymbol{y}$): is the entity which is referred by a different variable $\boldsymbol{y}$ included in the universe of QCOC or is it not? However, the resolution to the issue raised by Scheffler and Chomsky might be in this: introduce a different variable and show that the reference is not made to same entity and characterise the ontological commitment to such entity. However, let us try to work out different Q-V-Idioms by introducing a different variable $\boldsymbol{y}$ and see what would be the results. Regarding the thing that is Phlogiston, probably the right thing to say is the following.

There is an entity such that that entity is assumed by Phlogiston theory but there is no such entity.

This can be represented in the following way. Any of the following formulations may work.

(5) $(\exists x) \sim (\exists y)$ (***x*** is assumed by ((2) $(\exists \boldsymbol{x})$ $(P\boldsymbol{x})$) & (*y* is Phlogiston))

(6) $(\exists x)$ (y) (***x*** is assumed by ((2) $(\exists \boldsymbol{x})$ $(P\boldsymbol{x})$) & ~ (y is Phlogiston))

But the problem with this is that at the end this formulation can be reduced to the following which is an inconsistent formulation.

(7) $(\exists x) \sim (\exists y)$ $(x = y)$

This shows that QCOC's denial of reality to any entity of a theory to which QCOC is applied might result in some kind of inconsistent formulation. Not only that QCOC has the problem as showed by Scheffler and Chomsky (inexorable ontological commitment and false existential inference), QCOC simply cannot deny the reality of any of these entities. Such denial will lead to some inconsistent formulations. Let us just see why the first conjunct of any of these Q-V-Idioms which is of the form "***x*** is assumed by T" cannot be regarded as false. It is so, even for false theories.

II.1.3. On the first conjunct of the Q-V-Idioms and a simple Argle-Bargle scenario

When we take into account the applicability of QCOC, QCOC needs to keep the first conjunct of any of the above mentioned sentences to be true. It might be that phlogiston theory is a false theory. However, at least one finds it difficult to say that phlogiston theory is not committed to something that is phlogiston. If the Phlogiston theory wasn't committed to something that is phlogiston then to what the theory was committed to, such that the theory in question proposed something. In most of these discussions, it seems that the following is

assumed: the falsity of a particular theory doesn't force the meta-ontologist to say that the given theory which is false isn't committed to what this false theory claims to be committed to. It might be that this false theory (phlogiston theory) was committed to something which wasn't there or to something which was unreal. This theory became false because to what this theory was committed, wasn't real. However, this false theory is committed to something which it is claimed to be committed, even if to what it was committed was unreal. This very commitment itself is that which made that particular theory false. Had the theory wasn't committed to what it claimed to be committed to, how it would be possible to ascribe falsity to the theory?

Let us just consider a simple scenario to see what is happening here. Let me call this simple scenario as Argle-Bargle scenario. Argle and Bargle walk for a long time in a desert. Bargle had previous experiences of being in the desert lands and her curiosity over the affairs of desert land had made her to study about the affairs in the desert land. Unfortunately Argle had no experience and hadn't read anything about the affairs in the desert land. As they walk in the desert, both of them find something that is greenish at some distance. Argle says there is water or how could it be greenish. Bargle says that is mirage and there won't be water. Bargle couldn't persuade Argle with her knowledge and experiences which she had about the desert land. Bargle really wished that Argle showed some maturity in her behaviour. Bargle had to take a big risk of walking with Argle towards the direction where they see the mirage. Both of them walked, fortunately they could find water in the direction which was shown by Argle. In fact it wasn't mirage as Bargle had pointed out, there was something greenish and there was water too. Now let us see how the notion of commitment (more correctly ontological commitment) works in relation to Argle and Bargle in this simple scenario. What Bargle said turned out to be false whereas what Argle said turned out to be true. Nonetheless would we say that Bargle wasn't committed to what she was telling to Argle? We find it difficult to answer this affirmatively. Bargle could say now I am not ontologically committed to what I had said

previously whereas I was committed to what I had said at the earlier time. Presently what is true doesn't preclude Bargle or Argle (or us) to say that she (Bargle) wasn't committed to what she was telling previously. I think almost a similar situation is happening, though not exactly the same. Here what I am trying to do is not to characterise the very notion of ontological commitment, but I am trying to show that the very falsity of a theory doesn't preclude the commitment which the theory had, to what it (theory) assumed to be real when it was proposed. Thus, though phlogiston theory is a false theory, phlogiston theory was committed to something that is phlogiston. In Argle-Bargle case, we talked about the commitment in relation to some agents as Argle being committed to something and Bargle being committed to something, unlike in the case of proper theory. In theory we say that theory being committed to something and not as the theorizer being committed to something. Now this difference between Argle-Bargle case and proper theories need not be a big issue. What is happening in Argle-Bargle case can be converted into different theories and we could say that Argle's theory being ontologically committed to such and such things and Bargle's theory being ontologically committed to such and such things. Even if Bargle's theory turned out to be false, Argle (or we) wouldn't say that her (Bargle's) theory wasn't committed to such and such things. We would keep the commitment in these cases intact. Somewhat similar case is happening with QCOC regarding the first conjunct which is of the form "***x*** is assumed by T".

Now the issue is, since QCOC keep the first conjunct which is of the form "***x*** is assumed by T" true, even if T is false and ***x*** is unreal, the very truth of the claim requires QCOC to keep the entity referred by ***x*** in its (QCOC's) domain of quantification. Thus QCOC is ontologically committed to such entities of the theories to which QCOC is applied. (5) and (6) have a form similar to the following: something is assumed by you but not by me. This can be represented in Q-V-I in the following way which Quine wouldn't accept.

(8) $(\exists \boldsymbol{x})$ (***x*** is assumed by ***you*** & ***x*** is not assumed by ***me***)

The reason why (8) is not acceptable to Quine is that in saying that something is assumed by someone else, I assume the reality of that thing and then I am denying the reality of the same thing. The variable ***x*** is allowed to refer to the entities which are not in my ontology or the variable ***x*** is allowed to refer to entities to which I am not ontologically committed. If we relate (8) to QCOC then the following can be said, something is assumed by phlogiston theory and that thing isn't assumed by me/QCOC, nonetheless whatever I say regarding phlogiston theory is applicable to phlogiston theory or QCOC is applicable to phlogiston theory. In the view of Scheffler and Chomsky this cannot be accepted.

If (4) to (8) are unacceptable then QCOC seems to be in a position to assume the ontological commitments of all the theories. Thus, one who adopts QCOC seems to accept ontological commitment of all the theories. This is the problem of inexorable ontological commitments. This can be extended by saying that if QCOC isn't committed to the entities to which QCOC is applied then it leads to some inconsistency in their position. This is what we could see in (5)/(6) which could be reduced to (7). QCOC is not in a position to deny the reality of the entities of the theories to which it is applied.

Scheffler and Chomsky say the following: "Pegasus cannot be said not to be without presupposing that in some sense Pegasus is. Our present problem is rather that Pegasus cannot be said to be assumed by any theory without presupposing that Pegasus is."[22] But it is to be noticed that Quine had showed a way to deny any kind of reality to Pegasus without assuming anything like Pegasus and this I have shown in the formulas (11) and (12). Whether Quine's method of denying reality to Pegasus without assuming anything such as Pegasus, can be employed for handling the current issue related with QCOC is something that is to be seen. Our current issue is: Pegasus cannot be said to be assumed by any theory without presupposing

[22] Ibid, p. 73.

that Pegasus is. Can meta-ontologist/QCOC affirm that Pegasus can be said to be assumed by any theory without me (meta-ontologist/QCOC) presupposing that Pegasus is?

Let us see how Quine denies any kind of reality to Pegasus without assuming anything like Pegasus. Let us consider the statements: something is not a Pegasus and there is no such thing as Pegasus. One who is a Russellian or Quinean cannot say to a Meinongian that there are things which you accept or assume whereas I don't. Russellian cannot say something is a Pegasus and assumed by you, but not by me. Russellian seems to face some inconsistency in such formulations. Such formulations lead to the acceptance of the reality of something and then, denying the reality of the same thing. In order to deny the reality of certain things, one is required to accept or assume something to which reality is denied. Russellian cannot consistently say the following: (9) and (10).

(9) $(\exists x)$ (x is not Pegasus)

(10) $(\exists x)$ (x is Pegasus & x is assumed by Meinongian & x is not assumed by me (Russellian))

The following formulation doesn't make any problem for Russellian.

(11) $\sim (\exists x)$ (x is Pegasus)

Quine had shown a way to formulate this in a better way without committing one to something that is Pegasus. Here, the issue of committing to something that is Pegasus is addressed by Quine by converting "Pegasus" into a descriptive phrase "Pegasizes" and can be represented in the following way.

(12) $\sim (\exists x)$ (x Pegasizes & (y) (y Pegasizes $\longrightarrow x = y$))

(11) and (12) don't commit one to something that is Pegasus. These sentences are acceptable for Russellian, as they don't lead to any inconsistent formulation. How to formulate my disagreement with my opponent is the issue here. Again how to determine what formulations are acceptable. How to determine what formulations don't lead to unacceptable ontological commitments or assumptions? How to determine what formulations would exactly capture the ontological commitment of a particular theory? For example, in the above mentioned examples (9) and (10) not only they don't capture the ontological commitment of Russellians but also they misrepresent to what Russellians are committed. Regarding the formulation procedure Scheffler and Chomsky say that, what formulations commit and don't commit one (a particular theory) to certain entities is to be independently determined. (9) and (10) commit one to something that is Pegasus whereas (11) and (12) do not. It is to be independently found out why (9) and (10) commit one to something that is Pegasus whereas (11) and (12) do not. The project of finding out or the project of determining what formulations commit one/a theory to what entities and what formulations don't commit to certain entities is a different project. Scheffler and Chomsky says, "To make such an independent determination……is to remain above the strife of ontology."[23] This is what is accomplished by QCOC and the subject matter which remains above the strife of ontology recently being called as meta-ontology. However, in the view of Scheffler and Chomsky, how much is it possible for QCOC to remain above the strife of ontology. According to them, there is a problem of neutrality for this criterion to be applicable. They say, it might be that (11) and (12) don't assume anything that is Pegasus, however, in order the criterion to be applicable, according to Scheffler and Chomsky, QCOC needs to accept that "there is some entity such that it is both Pegasus and assumed by the denial of [(11)].[24] This leads to the problem of inexorable ontological commitment.

[23] Ibid.
[24] Ibid.

Even if inexorable ontological commitments don't lead to any obvious problem in some cases[25], in some other cases[26] this might lead to some counterintuitive results. Counterintuitive result is that QCOC somehow is forced to move for false existential inferences which Scheffler and Chomsky try to show through the example of phlogiston theory. In order for QCOC to say that phlogiston theory is committed to something that is phlogiston, QCOC needs to be committed to something that is phlogiston. If QCOC is applicable to different theories then it is to be applicable to phlogiston theory too. One of the ways to envisage applicability of QCOC to phlogiston theory could be the following. The Phlogiston theory assumes something that is phlogiston or the entity phlogiston iff something that is phlogiston or the entity phlogiston must be counted among the values of the variables of phlogiston theory, in order that the statements affirmed in the phlogiston theory be true.[27] According to Scheffler and Chomsky, in order for QCOC to be applicable in the above mentioned way, QCOC needs to keep the entity phlogiston as the value of the variables of QCOC itself.[28] This is what they tried to represent through the Q-V-I: (3) ($\exists \boldsymbol{x}$) ($\boldsymbol{x}$ is assumed by (2) & $\boldsymbol{x}$ is Phlogiston). Then we tried to show that if QCOC doesn't keep something that is phlogiston then it might result in (4) or (5) or (6) which will affect the applicability of QCOC. Not only will it affect the applicability, intuitively it seems that QCOC may face some inconsistency in their position.

[25] Here, some cases mean, when QCOC is applied to the cases of true theories. When we say that QCOC assumes the entities of the true theories, we don't find much problem, unlike when we say that QCOC assumes the entities of the false theories.

[26] Some other cases stand for those cases when QCOC is applied to the false theories. Consider for example, the phlogiston theory. Phlogiston theory is a false theory. However, the applicability of QCOC to this theory, leads to QCOC being committed to something that is Phlogiston.

[27] Let us call any similar kind of claims or statement which results in the light of QCOC as the meta-ontological claims regarding that particular theory. Some examples for such sentences would be the following: "theory T is committed to entities of the sort…", "theory T assumes certain entities of the sort…" etc.

[28] However, a thorough enquiry is to be made on answering, what are the variables and what are the entities of QCOC.

QCOC is not in a position to deny the reality of the entities of the theories to which QCOC is applied. That is what we tried to represent through the following: (4), (5) and (6). This has some similarity with (8) (∃***x***) (***x*** is assumed by ***you*** & ***x*** is not assumed by ***me***). There is some inherent inconsistency in any of these formulations. It is this inconsistency towards which QCOC will be lead if QCOC doesn't commit itself to the entities of various theories to which QCOC claims to be applicable. If so, then QCOC is in more problematic situation. The removal of such inconsistency heavily depends on the inclusion of entities of the theories to which it (QCOC) is applicable. But once the inclusion is allowed then it leads to the problem of inexorable ontological commitment. Even if it is claimed that inexorable ontological commitment is unproblematic, in some cases this will lead to false ontological commitments or false existential inferences as we could see in phlogiston theory.

To handle the issue here, suppose it is claimed that QCOC is to be made applicable only to true theories not to any false theories. In doing so, QCOC's commitment to the entities of the theories which are regarded as false theory, can be eliminated. But there could be the following problem. Previously, it was mentioned that, the very falsity of the phlogiston theory doesn't have to restrain one to say that phlogiston theory is committed to something that is phlogiston. In other words, it is true that Phlogiston theory is a false theory, but the very falsity of the theory doesn't preclude QCOC to say that phlogiston theory is committed to something that is phlogiston. Through Argle-Bargle case, we could see this, though it wasn't explained in detail that very falsity of the theory doesn't preclude QCOC to say that, that theory is committed to certain entities. What this might be showing is that neither the truth of the true theories nor the falsity of false theories has anything to do with saying "theories are committed

to their entities". If so then, one cannot make QCOC be applicable only to true theories. That option isn't available to QCOC.[29]

The problem is that in order for QCOC to be applicable to different theories, QCOC needs to allow its variable to refer to the entities of different theories. If QCOC allows its variable to refer to entities of different theories then QCOC is committed to the entities of these theories. How can QCOC prevent the reference of its variable to the entities of theories such that QCOC doesn't have to commit to these different entities of the theories. Even without making the commitment to those entities, how can QCOC be made applicable. Some version of Platonic riddle of being is at play. How can I say that someone else is committed to a particular entity but not me without me being committed to those entities?

A similar concern runs throughout the analysis of Scheffler and Chomsky that QCOC shouldn't allow her bound variable to refer to the entities of different theories to which it is applied. But in fact QCOC does so and that is what makes QCOC applicable to different theories. The very applicability is possible because QCOC is committed to those entities of the theories to which it is applied. But these two problems are interrelated too. Once the interrelation is shown, then we can see the problem is more complicated than we generally thought of. There is another restriction which QCOC needs to take into account. QCOC will have different theories to which it is applied. Once the sentences in these different theories are translated into the Q-V-I then the variable in these sentences cannot be allowed to violate its

[29] To handle the issue that are raised against the referential theory of meaning that there are meaningful terms which don't have any referent, neither Meinong nor Russell tried to make referential theory of meaning applicable only to the terms which have referent. The reason is very much obvious that such a move will not explain the problem of term being meaningful without any referent. Meinong adopted a strategy where for each term, a referent can be found. Russell wasn't happy with such overpopulated ontology, so he minimized the referring expressions to bound variables. In Russell all the terms are deprived of referring job, it is not that only the controversial terms which don't have referent were deprived of referring job. Similar concerns are there when we say that QCOC cannot be made applicable only to true theories. The reason is that, it simply doesn't explain why even if Phlogiston theory is a false theory, this theory being false doesn't preclude QCOC to say that Phlogiston theory is committed to something that is Phlogiston. If Meinong or Russell were to adopt a strategy in which they say that referential theory of meaning is to be applied only to the terms which have referent, this will never explain the issue which was in question.

range. Each theory will have its own range for its variable to take any value. The range cannot be violated here. This restriction also is to be taken into account. So there are at least two kinds of restrictions are at work. First one is QCOC cannot allow its variable to range over and refer to the entities of the theories to which it is applied and secondly QCOC needs to ensure the restriction of variables in the sentences of one theory to the other theory. If this restriction is not ensured then it might result in the following problem.

II.1.4. The Extended problem of inexorable ontological commitments to rival entities

Let us say QCOC is committed to all the entities of various theories to which QCOC is applicable as Scheffler and Chomsky regards. Now consider a situation where there are two theories which are rival theories or two theories which have rival ontological commitments. Let us consider Russellian orthodox ontology and Meinongian ontology which are regarded as two competing theories in the history of philosophy. Now, we could say that in some way QCOC is applicable to both. Scheffler and Chomsky showed us that the very applicability of QCOC commits itself to the entities of different theories to which QCOC is applied. Now here, we have got a situation where we have got two theories which have rival ontological commitments but QCOC is committed to the entities of both the theories. If the problems that are raised by Scheffler and Chomsky are genuine or if it is on right track then QCOC is committed to both entities of Russellian ontology and Meinongian ontology. However, Russellian ontology and Meinongian ontology are two opposing ontological theories. If QCOC is committed to the entities of Russellian ontology then it shouldn't be that it is committed to the entities of Meinongian ontology and vice versa. But QCOC is committed to both entities. Let us call this problem as inexorable ontological commitments to rival entities. Either the way Scheffler and Chomsky explained the ontological commitments of QCOC is not in right direction or QCOC is committed to rival entities. Even if such problems persist, still QCOC can be made applicable to these theories to determine the commitments of these theories, if such a

determination is required. It is this very applicability of QCOC that makes QCOC to be committed to the entities of the theories to which it is applied. The same holds for QCOC being applicable to the Russellian and the Meinongian ontological theories. Applicability of QCOC will be ensured or the determination of the ontological commitments by QCOC is ensured even if the above mentioned kinds of problems are there. However, the issue comes with the very commitments of QCOC itself. QCOC is committed to the rival entities, when we consider the Russellian and the Meinongian ontologies, provided Scheffler and Chomsky are right in their approach. If we take Quine's suggestions here regarding the restriction upon variable then this issue can be stated in the following way. When ***x*** disagrees with her opponent ***y*** on what things exist, ***x*** (the one who disagrees) cannot allow her bound variable to range over the entities of ***y*** (the one with whom the disagreement is made). Some kind of restriction is there for the variables of a theory to take any value or the bound variable of a theory cannot be allowed to range over the entities of opponent theory. Here QCOC has two theories (the Russellian and the Meinongian) which disagree upon what entities are real and thus, the Russellian will not allow his bound variable to range over the entities of the Meinongians. Even then QCOC allows her bound variable to range over the entities of both of the entities of the theories. What about the Meinongian allowing her bound variable to range over the entities of the Russellian? This might not be an issue for the Meinongians, because the Meinongians are committed to the entities of the Russellians. Issue will be more pressing or problematic, if I can show a situation where the Meinongians don't want to be committed to the entities of a theory, unlike in the case of the Russellian. The Russellian-Meinongian case restriction is crucial for the Russellians. The restriction of the variable doesn't have to be an issue for the Meinongians, because the Meinongians are committed to the entities of the Russellians also. It is the Russellians who have lesser entities in their ontology compared to the Meinongians and the Meinongian ontology consists of the Russellian entities too. Responding to a Russellian, a Meinongian doesn't have to say that there are entities to which you are committed whereas I

am not. I (a Meinongian) am committed to all the entities to which you (a Russellian) are committed. So the issue of restriction of variable which Quine was talking about doesn't arise here for the Meinongians. However, the situation isn't same with the Russellians. The Russellians cannot say that, she is committed to all the entities to which a Meinongian is committed. This is because the Meinongians are committed to a lot of things to which a Russellian isn't committed. Nevertheless, according to Quine's formulations on restriction of variable, a Russellian cannot say the following to a Meinongian too: there are entities to which you (a Meinongian) are committed to whereas I (a Russellian) am not. Even if what is said in this formulation is the situation in which a Russellian is in, a Russellian cannot formulate her disagreement with a Meinongian in this way. We could see the problem associated with this, in the formulas (8), (9) and (10). Thus, the burden of restriction (in the sense that when a Russellian disagrees with a Meinongian, a Russellian shouldn't be allowing her bound variable to refer to the entities of the Meinongians to state her disagreement) rests on the Russellians and not on the Meinongians. So one might say that the restriction is required from one side only, that is from the Russellians' side only and not from the Meinongians' side. Still QCOC will face the problem of inexorable ontological commitments to rival entities. Because QCOC is committed to the Russellian entities and QCOC is also committed to Meinongian entities to which a Russellian will not be committed. This issue can be made more insistent if we can consider theories T and T* such that there are entities to which T is committed whereas T* isn't and there are entities to which T* is committed whereas T isn't. We can show at least one instance here from modal metaphysics, and this is related with question of whether Lewis being a Meinongian which is a chief concern of our present work. In the history of modal metaphysics there was this confusion that whether Lewis' Modal Realism is met with any kind of Meinongian features or people have gone to the extent of concluding that Lewis' Modal Realism is Meinongian ontology. But Lewis regards himself as a Russellian. Later, Zalta and Linsky showed that Lewis' Modal Realism has a similarity with a particular version of

Meinongianism, and that is of Parsons' version of Meinongianism. However, it can be shown that there is fundamental difference between the entities to which both these theories are committed. Once the difference is characterised further then one could say that there are entities to which Lewis' Modal Realism is committed whereas a Meinongian will not be committed to such entities. It is also the case that, there are entities to which Meinongian is committed whereas Lewisian will not be committed to such entities. This is worked out in the next chapter. Here, the point is that if Scheffler and Chomsky are right in showing that QCOC is committed to the entities of the theories to which it is applied then the following can be said. There are cases where QCOC is committed to rival entities and the problem becomes very much crucial when we consider the case of Lewis being a Meinongian from modal metaphysics. Unlike in the case of QCOC being committed to the entities of both Russellian and Meinongian, here the problem is more insistent. The reason to be more insistent in Lewis being a Meinongian is that the burden of the restriction of the variable rests on both Meinongian and Lewisian. The burden of restriction rests on both the Lewisians and the Meinongians in the following sense. When a Lewisian disagrees with a Meinongian, Lewisian shouldn't be allowing her bound variable to refer to the entities of the Meinongians to state her disagreement and vice versa. It is because that both are committed to fundamentally different kinds of entities. QCOC will face the problem of inexorable ontological commitments to rival entities. Because QCOC is committed to the Lewisian entities to which a Meinongian will not be committed and QCOC is also committed to the Meinongian entities to which a Russellian will not be committed. Therefore, QCOC is committed to rival entities. If Scheffler and Chomsky is right in showing that QCOC is committed to all the entities to which QCOC is applicable then it follows from this that QCOC is committed to the rival entities. The above mentioned two cases are the examples here.

II.2. Responding to the problems of extended inexorable ontological commitment to the rival entities, false existential inferences and inexorable ontological commitment to the entities

There are at least three issues which are to be handled here: (1) the problem of inexorable ontological commitments, (2) the problem of false existential inferences and (3) the problem of inexorable ontological commitments to rival entities. I think, these problems can be addressed by restricting QCOC's commitments to the theories to which it is applied or to which it is applicable. If we can show that QCOC isn't committed to the entities of the theories to which it is applied, then these problems can be addressed. When I restrict the ontological commitments of QCOC or when I am showing that QCOC isn't committed to the entities of the theories to which it is applied then I should also show how this will not affect the applicability of QCOC. In the view of Scheffler and Chomsky QCOC will not be applicable, if QCOC isn't committed to the entities to which it is applied. So, QCOC is committed to the entities of all the theories to which it is applicable and this is the problem of inexorable ontological commitments. Once it is said that QCOC is committed to the entities of the theories to which it is applied then in some cases it will lead to the problem of false existential inferences. Further, we could show that, if QCOC is committed to the entities of all the theories to which it is applied then some of the cases it will lead to the problem of inexorable ontological commitments to rival entities. Once the resolution is given to these problems, I should also ensure that the resolution doesn't affect the applicability of the criterion. Before getting into the resolution section, I would like to mention some of the points mentioned by Frank Jackson with regard to the notion of ontological commitments which will be significant to address the problems raised here.

Frank Jackson[30] regards Quine as a referential theorist. A theory is ontologically committed to certain entities by allowing bound variable to refer to those entities. An ontological commitment of a sentence or a theory is given by the referential apparatus and what work as a referential apparatus is the bound variables. Following Jackson we could say that QCOC is a referential theory of ontological commitments. There are some points which I would like to borrow from Frank Jackson in addressing the ontological issues relating to QCOC raised by Scheffler and Chomsky. Let me just lay down Jackson's views while stating my difference of opinions on certain points.

For Jackson, when the issues related to the ontological commitments are addressed, it isn't important to make a distinction between a sentence, set of sentences or a theory. His attempt of making sense of the notion ontological commitment doesn't consider the distinction between a sentence, set of sentences or a theory. Unlike Jackson, in my attempt to give an account of ontological commitment, it is very much crucial to make the distinction between a sentence, set of sentences or a theory. In my approach these distinctions do play a role in providing a criterion of ontological commitment. However, in general it could be asked to what a particular sentence is ontologically committed without making any distinction between a sentence, set of sentences or a theory. In other words, how to characterise the ontological commitment of a particular sentence, set of sentences or a theory without making any crucial difference between them. In such a situation, the project of providing an account of ontological commitment of a sentence, might not face the problem of fixing the universe of discourse. If fixation of universe of discourse or domain of quantification is an issue then these differences might play a role. Consider the following plausible scenario for QCOC and let us call this scenario as same-sentence-scenario.

[30] Jackson, Frank. 1980. "Ontological Commitment and Paraphrase." *Philosophy* 55 (213), 303-315.

II.2.1. The same-sentence-scenario

There are two theories ***T*** and ***T****. ***T*** and ***T**** differ in their ontology as some kind of entities which are found in the ontology of ***T*** are not found in the ontology of ***T****. In other words, the kind of entities to which ***T*** and ***T**** are ontologically committed differ. There is a sentence ***S*** and this sentence is true in both theories. Even though the sentence ***S*** is true for both the theories, ***T*** and ***T**** are ontologically committed to different entities through the sentence ***S***. The entity ***T*** is committed to, through the sentence ***S*** is not the same (kind of) entity to which ***T**** is ontologically committed.

When QCOC encounters the above mentioned scenario, the fixing of universe of discourse is to be handled carefully. Because for QCOC, the universe of discourse will consist of both kind of entities to which ***T*** and ***T**** are committed. First, QCOC needs to convert these sentences into Q-V-Idioms and needs to look into the variables. Here, QCOC is in a position to say that in relation to ***T*** the variable in sentence ***S*** will refer certain entities and in relation to ***T**** the variable in sentence ***S*** will refer certain other kind of entities. Here, in relation to particular theory only, QCOC can say that such and such entities would be the value of variables of sentences. When the above mentioned scenario is encountered one cannot simply ignore the distinction between a sentence and a theory, when we fix the ontological commitment of the sentence. Though Jackson doesn't give much importance to this distinction, my approach takes this distinction seriously. The same-sentence-scenario provides some reason to take this distinction seriously.

We can provide the following example for this scenario. Consider the following sentence. There are talking donkeys. This will be regarded as true for both Lewis' Modal realism and also for Meinongianism. The same sentence is true for both theories, and these two theories differ in their ontological commitments. There is no disagreement or dispute between these two theories over the truth of the sentence, "there are talking donkeys", though the

entities to which they are ontologically committed are not same through this sentence. In such a situation, QCOC needs to say that in relation to Lewis' Modal realism the sentence is true and the theory is committed to such-and-such entities. QCOC also needs to say in relation to Meinongianism the sentence is true and the theory is committed to certain other kind of entities. Here, QCOC is in a position to say that in relation to a particular theory the sentence is true and QCOC cannot simply ignore the distinction between the sentence and the theory.

Let us consider another one example here. Consider the following sentence. There is a possibility that she will come. Let us consider two theories ***T*** and ***T****. ***T*** allows in its ontology or accepts the reality of possibilities in a certain way. However, ***T**** doesn't make any commitment to the thing called possibilities as ***T*** makes the commitment to them (possibilities). ***T**** is committed to a kind of entity, let us say, ***K*** entities. What ***T**** does is that, ***T**** find out a way to reduce possibilities to ***K*** entities. After that ***T**** explains how the sentences that involve the notions possibilities or similar notions are to be understood in terms of ***K*** entities. Now in this scenario between ***T*** and ***T****, there will not be dispute over the truth of the sentence: there is a possibility that she will come. However, through this sentence to what ***T*** and ***T**** are ontologically committed differs. In such a situation, QCOC needs to take into account the difference between a sentence and the theories and needs to say that in relation to ***T*** the given sentence is committed to such and such entities and in relation to ***T**** the given sentence is committed to certain other entities.

The other point which Jackson takes for granted concerns the two basic assumptions of referential theory. First assumption is regarding the existence: there is only one kind of existence. The second assumption concerns being an Occamist, that only minimal entities are to be admitted in our ontology. In other words, we shouldn't be overpopulating our ontology. In the view of Frank Jackson, these are the two basic assumptions which a referential theorist might keep at its base. It is true that these assumptions are regarding the ontology. In other

words, these assumptions play a significant role when we are exclusively concerned with the question, what exists or what is real. The Quinean position which is developed from the Russellian one will have these two assumptions. The question is, should we attribute these assumptions to Quine's criterion of ontological commitment (QCOC). If we distinguish between Quine's ontology and his meta-ontology, we can say that these two assumptions are the core assumptions of his ontology which is Russellian. Here, the intention is not to say that such assumptions shouldn't be attributed to QCOC. Suppose we attribute these assumptions to QCOC then we should see whether such attributions affect the application of QCOC. The intention of QCOC is not to give answer to the question what exists or real. The aim of QCOC is to say what a particular theory says what exists or real. The purpose of Quine's own ontology is different from Quine's criterion of ontological commitment. Even then we may attribute those two assumptions upon QCOC. But in such a situation, we should find out what entities are to be regarded as acceptable for QCOC, so that the indented purpose of QCOC is fulfilled. What are the indispensable entities for QCOC, so that the purpose of QCOC is unaffected? Then we need to think about minimizing the entities to which QCOC is committed. But this will be meta-meta-ontology and not just meta-ontology. But we need to show how such attributions can be made sense. The problems associated with attributing these two assumptions to QCOC can be explained further in the following way.

The two assumptions mentioned above were the core assumptions when the methodology of Q-V-I was getting developed by Russell. These were the two assumptions which led Russell to use this methodology to address the issues relating to the referential theory of meaning without overpopulating the ontology. His robust sense of reality had only one kind of existence and this doesn't overpopulate the ontology. It is such a concern that made Russell to employ this methodology and showed that to handle certain issues regarding referential theory of meaning (a term seems to be meaningful, even when there is no referent for that

term), one doesn't have to overpopulate the ontology and doesn't have to accept different kinds of existence like the Meinongians. To achieve such goals (of without overpopulating the ontology addressing the problems relating to referential theory of meaning) the methodology of Q-V-I played a significant role. By means of this methodology of Q-V-I, Russell showed a way to handle the problems relating to referential theory, without violating these assumptions. It was within a particular ontology of robust sense of reality this methodology was getting developed. Quine showed that the same method can be used to show or to find out, to what a particular theory is ontologically committed. Not only the orthodox ontology used this method to maintain its orthodoxy by maintaining the above mentioned two assumptions but also this is extended to see to what any theory is ontologically committed. However, once this methodology is extended to be used to develop a criterion for ontological commitments or extended to develop a meta-theory/ontology, we should see the status of such assumptions. Those assumptions are the assumptions of a particular ontology. Should I require QCOC to satisfy these assumptions? Even if I require of QCOC to satisfy these, I need to show in what sense QCOC needs to satisfy these assumptions. Again it shouldn't affect the applicability of QCOC. It shouldn't be the case that the only theory this criterion (QCOC) will be applicable is the one which satisfies these two assumptions. To make the point clear consider the following scenario for QCOC.

II.2.2. The parallel-ontology-scenario

There are two theories $\boldsymbol{T}$ and $\boldsymbol{T}^*$. $\boldsymbol{T}$ and $\boldsymbol{T}^*$ differs in their ontology as some kind of entities which are found in the ontology of $\boldsymbol{T}$ are not found in the ontology of $\boldsymbol{T}^*$. Let us say $\boldsymbol{T}^*$ assumes the above mentioned two assumptions, whereas $\boldsymbol{T}$ doesn't assume these assumptions and $\boldsymbol{T}$ doesn't find any problem in overpopulating the ontology. Suppose we say, QCOC also makes these two assumptions. There is another theory $\boldsymbol{T}^*1$ which assumes exactly the same kind of entities which $\boldsymbol{T}^*$ assumes. However, $\boldsymbol{T}^*1$ has more entities in its ontology.

Though ***T****1 has more entities in its ontology, the kind of entities which are found in ***T****1 are exactly the same. To this let us consider the previous same-sentence-scenario which can be done in the following way. Consider that there is a sentence ***S*** such that between ***T*** and ***T****1, there is no dispute over the truth of the sentence ***S***. Consider that the same sentence is false for ***T****. Though ***T****1 has exactly the same kind of entities which ***T**** has, the sentence ***S*** is true for ***T****1 and false for ***T****. Now there arises the problem of fixing the ontological commitments of ***T****1.

In such a situation, in order to disambiguate the ontology of ***T****1 and ***T***, under the same sentence scenario using QCOC the following problem might arise. If we want to use QCOC then how can we make QCOC to be applicable in this scenario as we required QCOC to make those two assumptions (there is only one kind of existence and one needs to admit minimal entities in her ontology)? If QCOC make those two assumptions then QCOC cannot be made applicable to ***T*** as QCOC is not in a position to make any reference to the entities of ***T***. The reason is that in the ontology of QCOC will have only one kind of entities and only one kind of existence. If the above mentioned assumptions are attributed to QCOC then it might affect the applicability of QCOC. Or it should be shown that while QCOC makes these two assumptions, how QCOC can disambiguate between the ontological commitments of ***T*** and ***T****1? How QCOC can disambiguate the ontological commitments of ***T*** and ***T****1, without assuming the entities of ***T*** or without being ontologically committed to the entities of ***T***? Unless and until we show that how this is possible, we cannot require QCOC to make these two assumptions. Here, I am not going to conclusively say that these assumptions are to be attributed to QCOC, until the above mentioned problems are addressed.

An example for the above mentioned parallel-ontology-scenario can be provided. For this we need to consider David Lewis' two notions regarding ontological parsimony: qualitative parsimony and quantitative parsimony.

Theory T in relation to theory T* is qualitatively parsimonious iff theory T has the least number of fundamentally different kinds of entities in its ontology in relation to T*

Theory T in relation to theory T* is quantitatively parsimonious iff theory T has the least number of instances of the (same) kind of entities in its ontology in relation to T*

Under the qualitatively parsimonious criterion the theory will have the least number of fundamentally different kinds of entities and under the quantitatively parsimonious criterion the theory will reduce the number of instances of the kind posited. Two theories T1 and T2 may have the same kind of entities in its ontology, but it is possible that T2 may posit more entities of the same kind than T1. In that case T1 is quantitatively parsimonious in relation to T2.

Now consider the Russellian robust sense of reality and the Meinongianism. The Russellian orthodoxy keeps down the number of kinds of entities that are posited unlike Meinongianism. In Meinongianism, there are at least two kind of entities: the entities that subsist and the entities that exist. The Russellian ontology has only one kind of entities, the entities that exist. Using Lewis' two notions of ontological parsimony, we can say that in relation to Meinongianism, the Russellian orthodoxy is both qualitatively and quantitatively parsimonious. The Russellian orthodoxy is qualitatively parsimonious in relation to Meinongianism, because the Russellian orthodoxy consists of only one kind of entities. In relation to Russellian orthodoxy, Meinongianism will have more fundamentally different kinds of entities. Thus, in relation to Russellian orthodoxy, Meinongianism is qualitatively less parsimonious. The same can be said about quantitative parsimony too. Now, let us consider Lewis' Modal Realism. Lewis' modal realism is fundamentally regarded as the Russellian. With regard to qualitative parsimony, the Russellian orthodoxy and Lewis' Modal Realism will go hand in hand. Both theories posit exactly the same kind of entities. In fact they have only one kind of entities in their ontology. Their ontology doesn't consist of fundamentally different

kinds of entities. However, the same cannot be said about quantitative parsimony. In relation to the Russellian ontology, Lewis' Modal Realism is quantitatively less parsimonious. But in relation to Lewis' Modal Realism, Meinongianism is both quantitatively and qualitatively less parsimonious. It is so, because Meinongianism has more fundamentally different kind of entities and also more instances of the different kinds of the entities. Here, we are not concerned with the explication of the notion ontological parsimony and which kind of ontological parsimony needs to be preferred.

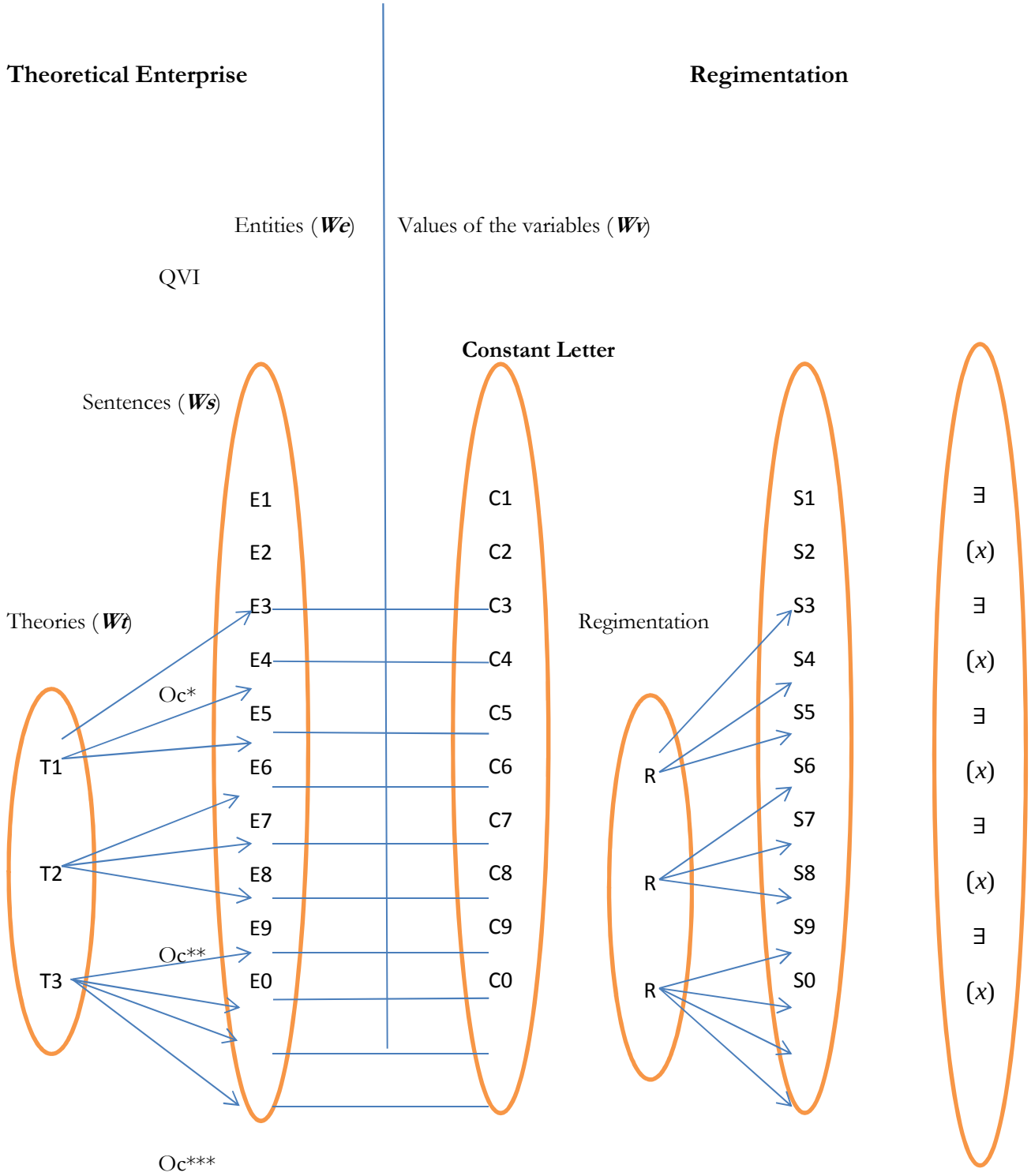
If we consider the above mentioned parallel-ontology-scenario, the Russellian orthodoxy may take the place of theory $\boldsymbol{T}^*$ and Lewis' Modal Realism may take the place of $\boldsymbol{T}^*1$. Now, the above mentioned parallel-ontology-scenario has a case. Now parallel-ontology-scenario seems to make more sense. To this we can add the same-sentence-scenario. There is no dispute between Lewis' Modal Realism and Meinongianism, over the truth of the sentence, "there are talking donkeys". However, one may not say that they are committed to the same kind of entities.

II.2.3. Different Concerns of the Criterion, QCOC

First of all, let us say that the left side of the connective talks about something that happens at the realm of theoretical enterprise and right side specifies the realm of regimentation procedure.[31] By looking into the criterion, we can raise different concerns. They are the following. Chief concern of this criterion is, as it is evident, are the theories themselves. Thus, we can say that this criterion talks about some set of theories. Similarly, we can say that this criterion talks of different entities of a specific theory, so, we have some set of entities. Also we can consider the set of values of variables and also set of sentences of the theory. In order to have an easy analysis of this criterion, let us put the different concerns of this criterion into different oval shaped figures as it is given in the diagram below.

[31] In general, an entity of a given sort is assumed by a theory if and only if it must be counted among the values of the variables in order that the statements affirmed in the theory be true.

In the given picture each oval shaped figure can be seen as a universe or a world. By world, we don't mean possible world. The term world or universe is used to enhance the analysis. Let us say that, we have got six worlds or universes here. In other words, the different concerns of the criterion can be put into six different worlds in the above mentioned way to see whether (1) this criterion works or not and (2) to see, if it works how? These different worlds are created to find out how the member of each world is related to the member of other worlds. Here, we could also make a distinction between a meta-theory and an object-theory. Here, the meta-theory is QCOC and the object theories are the theories to which QCOC is applicable.


Theoretical Enterprise
Regimentation
Entities (We)
Values of the variables (Wv)
QVI
Constant Letter
Sentences (Ws)
E1
E2
E3
E4
E5
E6
E7
E8
E9
E0
C1
C2
C3
C4
C5
C6
C7
C8
C9
C0
S1
S2
S3
S4
S5
S6
S7
S8
S9
S0
∃
(x)
∃
(x)
∃
(x)
∃
(x)
∃
(x)
Theories (Wt)
Oc*
T1
T2
T3
Oc**
Oc***
Regimentation
R
R
R

Ordering the Concerns and Stipulations of the Criterion

Let me consider the entire things in the regimentation procedure first. Each regimented area has different constant letters, predicate letters and variables. Each regimented area would require constant letters to stand for an entity in the theory. In other words each and every entity needs to have its counterpart in the regimentation area which can be called as constant letter. Constant letters are assigned to each entity. We can say that there are as many constant letters in regimentation as many entities in the theory. These constant letters stand for entities which are values of the variables. In other words, these constant letters are assigned to entities which are in the theory. Basically, entities are the values of the variable and these entities are represented by constant letters in the regimentation area.

1. The world of theories (***Wt***)

(***Wt***) consists of some or all possible theories, such as {T1, T2……Tn}

2. The world of entities (***We***)

(***We***) consist of some or all possible entities which are assumed by the members of (***Wt***), such as {E1, E2……En}

3. World of values of the variables which are represented by constant letters (***Wv***)

(***Wv***) consists of some or all possible values, such as {V1, V2……Vn}

4. World of regimentation (***Wr***)

(***Wr***) consists of some or all possible regimented sentences or propositional function, such as {R1, R2……Rn}.

Although the following two worlds are part of (***Wr***), they are mentioned in order to show some consequences of the criterion.

5. World of Predicates (***Wp***)

(***Wp***) consists of some or all possible predicates or predicate expressions, such as {P1, P2……Pn}. Following is an example for this: ***x*** is P, ***x*** is A, ***x*** is B.

6. World of Q-V-I (***Wq***)

(***Wq***) consists of quantifier-variable idiom, such as {Q1, Q2……Qn}

If we consider the domain of QCOC, then we can say that it consists of both (***Wt***) and (***We***). QCOC would say that there ***are*** theories and there ***are*** entities to which these theories are ontologically committed. Scheffler and Chomsky is of the view that, in some way, QCOC is ontologically committed to all the members of (***We***) or QCOC is committed to the entities of the theories to which it is applied. Here, it seems to me that the appropriate or better approach for QCOC is that developing a way to make QCOC to be applicable even without assuming the entities of the theories to which it is applied. For this we need to show that to what QCOC is committed are theories alone. We need to see theories as the entities for QCOC. QCOC is a meta-theory and the theories to which QCOC is applicable are the object theories. And the entities of the object theories are the entities which these object theories are committed. The very presence of the entities is because of the object theories to which QCOC is applied.

There are other concerns to be handled before showing that QCOC is not ontologically committed to the entities of the object theories. If Scheffler and Chomsky are right then all the entities will be there in the universe of QCOC and we can say that it will be the world (***We***). If we can show that even if QCOC isn't committed to the entities of the object theories, QCOC can still be made applicable would be the appropriate approach. Even if, we are successful in showing this, we need to ensure that QCOC doesn't violate certain principles. These principles arise from the concerns of the object theories. In other words, QCOC needs to take into consideration these concerns of the object theories and they are stated in the form of principles

which shouldn't be violated by QCOC, the meta-theory. These concerns are stated in the following principles. QCOC needs to ensure that it doesn't violate these principles when it is applied.

II.2.4. The Principle of Isolation upon Entities

(***Wt***) consists of all possible theories or set of theories. And (***We***) consists of all possible entities or set of entities. Now, consider a member of (***Wt***), for example ***T1***. ***T1*** will not have ontological commitment to all the members of (***We***), but only to some subset of members of (***We***) and the same is applicable to the relation between other members of (***Wt***) and (***We***). In that case, (***We***) can have a subset in relation to ***T1***. Let us call the members of (***We***) in relation to ***T1*** as ***T1E*** entities. ***T1E*** entities are the only entities to which ***T1*** is ontologically committed. The same can be said about ***T2***. In this way, some kind of non-overlapping is to be expected here.

Quine's two formulations regarding the range of the variable seem to be based on the assumption that there is some kind of isolation of entities between theories. If two theories are opposed in their ontological commitments, then the entities to which these theories are ontologically committed are different. That is why Quine says that, in disagreeing with my opponent, I shouldn't be allowing my bound variable to refer to the entities of the opponent. QCOC needs to ensure that it doesn't violate this principle when, QCOC is employed to determine the ontological commitments of a particular theory. Even in the parallel-ontology-scenario combined with the same-sentence-scenario, QCOC needs to ensure that it doesn't violate this principle. There are two theories which differ in their ontological commitments. There are sentences such that, between these two theories, there is no dispute over the truth of those sentences. However, these two theories are committed to different kinds of entities through those sentences. Even if the sentences are same and the same truth value is given by these theories, it is not the same entities to which these theories are committed through those

sentences. Same sentences are used by different theories to talk about different entities to which these theories are ontologically committed. In such a situation, as Quine suggests, we need to look into the bound variables. In the case of parallel-ontology-scenario the predicate expressions of the sentences are the same. Just looking at the predicate expressions or the consideration of predicate expressions alone will not help one determine to what entities a particular theory is committed. As Quine suggests, we need to look into the bound variables.

Here one could ask that, suppose one were to look into the bound variables, how does it help to determine the ontological commitment, because the entities seems to be the same for both ***T1*** and ***T2*** (in the parallel-ontology-scenario combined with the same-sentence-scenario). The above mentioned case is not only about the true sentences, but it is also about the true sentences about seemingly the same entities. We need to explicate further the point *looking into the bound variable*. Here, *looking into the bound variable* could mean to look into the way the entity becomes the value of the variable that is looking into the elimination process or the instantiation process. When we eliminate the variables, we eliminate them by using some constants, these constants stand for some entities which are assumed by the theories. This particular instantiation process may help one to determine the ontological commitment of a particular theory. So, to look to bound variable is to eliminate them (variables) into the assumed entities of a particular theory. However, this elimination or instantiation process is not as simple as it looks. Because, the instantiation process or the way an entity becomes the value of variable may vary from theory to theory. This is so, because the entities themselves are different for those theories which differ in their ontological commitments. From the Principle of Isolation upon Entities, we can formulate the following principle: the Isolation Principle of Instantiation Process.

II.2.5. The Isolation Principle of Instantiation Process

What is primary is the Principle of Isolation upon Entities. This principle puts up a restriction upon the instantiation process. This instantiation process could be theory specific i.e, it varies from theory to theory. What do we mean by an instantiation process? When we talk about the notion of instantiation the following things would come into picture. How a particular theory regards the instantiation of a property by an entity? From two sides this can be seen. One is from the point of view of philosophical logic and the other is from the point of view of metaphysics. From the point of view of philosophical logic, by instantiation process we understand it as substitution instance of a variable. There are Q-V-Idioms or the quantified sentences (sentences involving quantifiers, variables and predicate expressions). Their substitution instance is formed by dropping the quantifier and also by eliminating each occurrence of the variables with an individual constant. An individual constant stands for or refers an entity. The constant that is used to eliminate a variable is said to be the instantiating constant.

From the point of view of metaphysics, instantiation process can be understood as property being instantiated by an entity. If we look at the quantified sentence what it says can be stated in the following way: there is an entity ***a***, such that, ***a*** instantiates the property ***P***. From the point of view of philosophical logic we say, ***a*** is an instantiating constant. From the point of view of metaphysics, we say the entity that is referred by ***a*** is an instantiating entity and the entity in question instantiates the property[32] ***P***. Here, our task is not to give an account of how properties are instantiated by an entity. What we would be pointing out is that, whatever the account is given to the notion of instantiation of property, the way an entity instantiates a property may change from theory to theory. It is so, because the instantiating entities

[32] Let us not worry whether there are un-instantiated properties or not. It is a different issue.

themselves may vary from theory to theory. What is primary here are entities of the theories. The variation happens because of the difference in the entities.

This can be further explained with the help of the parallel-ontology-scenario combined with same-sentence-scenario. We could see that in relation to Meinongianism, the Russellian orthodoxy is both qualitatively and quantitatively parsimonious. In relation to the Russellian orthodoxy, Meinongianism will have more fundamentally different kinds of entities and also more entities of each fundamentally different kind. With regard to qualitative parsimony, the Russellian orthodoxy and Lewis' Modal Realism will be compatible as both theories posit exactly the same kind of entities and they have only one kind of entities in their ontology. However, in relation to the Russellian orthodoxy, Lewis' Modal Realism is quantitatively less parsimonious. But in relation to Lewis' Modal Realism, Meinongianism is both quantitatively and qualitatively less parsimonious. Here, we can say that the principle of isolation of instantiation process is at work. It might be that in relation to the Russellian orthodoxy, Lewis' Modal Realism is quantitatively less parsimonious; however the instantiation process is exactly the same[33]. Now consider the same-sentence-scenario. There is no dispute between Lewis' Modal Realism and Meinongianism, over the truth of the sentence, "there are talking donkeys" or similar kinds of sentences. But the instantiation process is not the same for these sentences for these theories (Lewis' Modal Realism and Meinongianism). The instantiation process is not the same because the entities themselves are different. In Lewis' Modal Realism, the way an entity instantiates a property is different from Meinongianism. It is so, because the entities themselves are different. The same predicate expressions are used by these two theories, in the above mentioned sentences. There is no difference in the predicate expressions used by these two theories. The difference between these theories can be shown by the difference in the way these predicates are instantiated. In other words, the difference between these theories is pointed out by the difference in the instantiating process. Instantiating process is different

[33] This is shown in the next chapter in detain under the section IV.

because, the instantiating entities are different. Once we talk of properties being instantiated, then what is fundamental here is the entities that instantiate the properties.

A theory is not committed to all the members of (***We***). So we have got the Principle of Isolation upon Entities. The Principle of Isolation upon Entities creates a restriction on the instantiation process itself. That is the instantiation process may vary from theory to theory. This will put up a restriction upon a variable taking any value. That is any member of the world (***We***) cannot be regarded as the value of a variable of a Q-V-Idioms of the sentence of a theory. Thus, we have got the following Restriction Principle of Variable. When the variables are eliminated to the entities, not any entity could be the value of variable. Thus, we have got the following principle.

II.2.6. The Restriction Principle of Variable

In the regimentation procedure not any entity can be the value of a variable. Some kind of restriction principle is at work. Here, one point is to be mentioned about the consequence of the isolation principle upon entities. A theory may not be committed to any members of the world (***We***). When the regimentation (of the sentences of a theory into Q-V-Idioms) is performed upon a theory then this point (that a theory is not committed to any members of the world (***We***)) has to be taken into consideration. ***R1*** which consists of regimented sentences of ***T1*** will not regard all the members of (***We***) as the values of the variable, but only some members and the same is applicable to the relation between other members of (***Wr***) and (***We***).

Previously, it was mentioned that, in two ways instantiation process can be understood: from the point of view of philosophical logic and from the point of view of metaphysics. From the point of view of metaphysics, instantiation process is understood as the way a property is being instantiated by an entity. It was mentioned that this may vary from theory to theory as theories will have different entities in their ontology. Such instantiation process is represented by the Q-V-Idioms. In Q-V-Idioms, the reference to the entities is made by the variables. As

there is isolation upon entities and isolation upon the instantiation process, there needs to be restriction upon the variables to take any value. It seems to me that it is this restriction which Quine considers in his two of the following formulations.

First formulation

> I cannot admit that there are some things which McX countenances and I do not, for in admitting that there are such things I should be contradicting my own rejection of them.[34]

Second formulation

> So long as I adhere to my ontology, as opposed to McX's, I cannot allow my bound variables to refer to entities which belong to McX's ontology and not to mine.[35]

When ***x*** disagrees with her opponent ***y*** on what things exist, ***x*** (the one who disagrees) cannot allow her bound variable to range over the entities of ***y*** (the one with whom the disagreement is made). Some kind of restriction is there for the variables of a theory to take any value or the bound variable of a theory cannot be allowed to range over the entities of opponent theory. We have tried to state this formulation in the form of the Restriction Principle of Variable. Nonetheless, this principle is logically posterior to the Principle of Isolation upon Entities and the Isolation Principle of Instantiation Process.

There are two aspects here for the meta-ontology to be concerned about: the restriction aspect and the variance aspect. The restriction aspect is concerned with the issue of restriction of variable. The issue of restriction of variable is explained previously by stating Quine's two formulations. How will QCOC ensure the restriction upon variables? The reason to ask this question is that all the entities of all the theories to which QCOC is applied are considered and

[34] Quine, W. V. 1948. "On What There Is", p.35.
[35] Ibid.

QCOC needs to ensure the restriction of variable to take any entity as value. This concern of restriction upon variables arises from the concerns of the theories to which QCOC is applied. Theories that vary in their ontological commitments shouldn't allow its bound variable to range over the entities of the opposed theory while stating their disagreements. Another reason to take this issue of restriction upon variable is that of relating to the same-sentence-scenario and the parallel-ontology-scenario. In these kinds of situations, QCOC is in a position to make a restriction to the variables of the Q-V-I of the sentence in question such that the variables in these sentences don't refer to the entities of the other theory. The issues relating to the restriction of variable is stated under the restriction principle of variable. How to ensure this restriction? Through the creation of restriction what we (the meta-ontologists/theorists) achieve is not allowing the variables of a particular object theory to range over other object theories' entities. It is to be noted that from the side of (or with in) the object theory there isn't any kind of restriction, as there is no object that stands outside the ontology of a particular object theory. But when the disagreement is to be made with the opponent then the restriction comes in the sense that the bound variable of one theory shouldn't range over the entities of the opponents.

The apparatus which is introduced to create the restriction should also be able to take care of the aspect of variance. QCOC, the meta-theory, will have different object theories and QCOC cannot allow itself to stick to any particular restriction and also cannot allow itself to stick to any restricted set of entities, though the object theories are required to stick to their own restrictions.[36] From one restriction to the other restriction QCOC needs to shift, otherwise there might be a bias. Some variance is to be allowed or is expected for QCOC. This is related with the issue of Ontological Commitment of QCOC itself. We don't know whether

[36] This is related with my previously mentioned disagreement with Frank Jackson regarding the following assumptions. First assumption is regarding the existence: there is only one kind of existence. Second assumption is regarding being Occamist, that only minimal entities are to be admitted in our ontology. If we require these assumptions on QCOC, then we need to ensure that it doesn't affect the variance aspect.

we (QCOC) are committed to all the entities of object theories or not, but as far as we are able to allow ourselves to vary from theory to theory, whenever it is required, we have accomplished our requirement. Our requirement here is to fix the ontological commitment of two object theories. Not only we need to create the restrictions but also we need to vary from theory to theory while dissecting the ontological commitments of object theories. This can be achieved by introducing the notions of independent variable and dependent variable in this kind of debate.

II.2.7. Introducing the Independent Variable and the Dependent Variable

The ideas of independent variable and dependent variable are introduced in meta-theory and here, the meta-theory is QCOC. Here, the object theories are the theories to which QCOC is applied. QCOC needs to take into account the entities of the theories to which, it is applied. Once we introduce the notions of independent variable and dependent variable into this debate, then the obvious questions are the following. What is an independent variable and what is a dependent variable? And why certain variables are regarded as independent variables and some other variables are regarded as dependent variables?

Various conditions of a particular object theory are regarded as independent variable. These conditions of an object theory are about the reality of entities and they elucidate in what way the reality of an entity is to be construed and accepted in that object theory. These conditions are about how an entity is to be regarded as real in that object theory. And let us call such conditions as ***r***-conditions of a theory or a system where ***r*** stands for reality. ***R***-conditions of a theory or a system constitute the independent variable. Each object theory will have its own conditions and let us say, these conditions are the independent variables. For a meta-theory (QCOC) as there are different object theories, there will be respectively different conditions and thus there will be various independent variables. Here, the dependent variables are the respective entities of the object theories. These entities of object theories are regarded

as dependent variables in the following sense. Different sentences can be brought under the scrutiny of or can be examined under a particular object theory.

II.7.1. Ensuring the restriction aspect

Let us consider an object theory ***OA*** and another object theory ***OB***. Suppose certain sentences are under the scrutiny of ***OA***. Then the variable ***x*** cannot take any value or it cannot take any entity to fill the variable ***x*** from any object theory; that is variable ***x*** cannot take an entity from ***OB*** or from some other object theory. When certain sentences are under the scrutiny of ***OA***, the variable ***x*** in these sentences cannot be allowed to range over other theory's entities or ***OB***'s entities. What entities could be the value of variable ***x*** in these sentences is dependent on the ***r***-conditions of the object theories and, these ***r***-conditions are the independent variables. The entities of object theories are dependent variables in the sense that these entities could be the values of variable of the sentences depending on certain ***r***-conditions of object theories. Once the sentences which are in the form of Q-V-Idioms are examined under the ***r***-conditions of a particular object theory, the entities that can be the value of variable of such sentences are the dependent variable. ***R***-conditions of object theories impose certain kind of restriction upon the variables of the sentences to take any value. Once the sentences which are in the form of Q-V-Idioms are examined under the ***r***-conditions of a particular object theory, the variables that occur in Q-V-Idioms, in some sense are conditioned by the ***r***-conditions of that particular object theory to take any value. Variables have a range and the range is determined by the ***r***-conditions of a particular object theory. Thus, what entities could be the value of variable ***x*** in these sentences is dependent on the independent variable of a particular theory. Only under such independent variable which is the ***r***-conditions of particular theory one could say such and such entities could be the value of variables in the given sentences. QCOC cannot say that these sentences are true or false per se. QCOC can say under a set of ***r***-conditions of a particular object theory, a particular entity could be the value of

the variable of the sentences. As the sentences are scrutinised under a particular (object) theory, the variables in those sentences have a range. That range is fixed by the independent variable which is the ***r***-conditions of an object theory. Independent variable of a particular object theory fixes the range of the dependent variable (variable of the sentences which are under scrutiny) of a particular object theory because what constitute independent variable are the ***r***-conditions of object theory. Secondly, independent variable prevents the dependent variable (variable of the sentences which are under scrutiny) to range over other object theory's entities. In other words, independent variable prevents the violation of the range of the dependent variable (variable of the sentences which are under scrutiny). Independent variable does so, because what constitute the independent variable are the ***r***-conditions of a particular object theory and the sentences which are under the scrutiny of a particular object theory have to satisfy these ***r***-conditions. These ***r***-conditions fix the range of the variables in these sentences.

Different sentences can be brought under the scrutiny of object theories. Once various sentences are brought under the scrutiny of any particular object theory, the point which the meta-theory needs to take into account is the point of restriction which that particular object theory requires. That is the variables in the sentences which are brought under the scrutiny of a particular object theory cannot be allowed to range over the entities of the opponent or the different object theory. From the meta-theory (here in our case, from QCOC) independent variable is the restriction part which it (QCOC) takes care for the object theory by not allowing the variable of an object theory to range over the entities of some other object theory. Independent variable does so, because what constitute the independent variable of a particular system/theory are that system's/theory's conditions. Any sentence which is under the scrutiny of a particular object theory needs to satisfy these conditions. It was mentioned before that under QCOC all the entities of the object theories are under consideration. From meta-theory we can say that for a particular object theory there is a particular range for the variables of the

sentences. The range of a particular object theory is determined by the independent variable of that object theory. What constitute the independent variable of a theory are that theory's ***r***-conditions. Though different sentences can be brought under the scrutiny of a particular object theory, any entity cannot be the value of variable which are under the consideration of QCOC or the meta-theory.

It was explained briefly that why certain variables are regarded as dependent variable. Now let us see why some other variables, namely ***r***-conditions, are regarded as independent variables. It was mentioned before that independent variable is the respective ***r***-conditions of object theories. These conditions provide the mode of reality for the particular entity to be in that particular system. In other words, through independent variable, an object theory provides a particular mode for an entity to be real. To put it in ordinary language, particular independent variable of a particular object theory sets out conditions regarding how an entity is to be considered real or is to be considered present in that particular object theory.

Let us consider to represent the independent variable. As there are different object theories and as there are various respective conditions for these object theories, there would be various independent variables. So, we could say there would be various . Independent variable will help QCOC to fix the range of the variable of a particular theory. And thus determine the ontological commitment of that particular theory. To determine the ontological commitment, we need to look into bound variable. It is the independent variable which helps one to look into bound variable of certain kind. Independent variable is the restriction which QCOC needs to take into account. This is introduced in the meta-ontology not in ontology. If we look at the kind of enquiry which is carried out here, we could see that it is not merely ontological. Here we are not providing an answer to the question what exists or what is there, but what we are trying to do is that we just look into particular theories and we see that what these theories say regarding what there is.

II.2.7.2. Ensuring the variance aspect

Since there are different object theories, QCOC will consist of different sets of conditions of these object theories and each set of these conditions constitutes the different independent variables. Variability aspect of these set of conditions comes from the point that within the meta-theory (here, it is meta-ontology/QCOC) from one set of conditions of an object theory to other set of conditions of another object theory the meta-ontologist could make a shift. QCOC can shift from one kind of independent variable to other kind of independent variable.

II.2.8. Functional difference in the ontological commitments of QCOC (meta-theory) and object theory

The aim and purpose of QCOC is not to determine what is real/exists. The aim and purpose of QCOC is to determine what a particular theory says what exits or real. Determining what exists and determining a particular claim or theory says what exists is not the same philosophical enterprise. The object theories to which QCOC (the meta-theory) is applied determines what exists and QCOC determines what the object theory says what exists. If the object theory determines what exists then claims of the form '$(\exists x)$ (Kx)' are made in the object theories. Consider the set of all theories which determines what is real or exists? Is QCOC a member of such a set? It seems that it is not. The set of all theories which ***determines*** what is real/exists is different from the set of all theories which ***determines*** what a particular theory says what is real/exists. If so then, claims of the form '$(\exists x)$ (Kx)' belong to or are the claims made in object theories in the ontology and they are not made in meta-ontology (QCOC). Any claims of the form '$(\exists x)$ (Kx)' are the claims of the object theories. To reiterate QCOC is not one of the object theories here, because it doesn't belong to the set of all theories which ***determines*** what is real/exists. QCOC belongs to the set of all theories which ***determines*** what a particular theory says what is real/exists.

Any meta-theory which determines what an object theory says what is real/exists cannot be seen as making any existential claims of the form '(∃*x*) (K*x*)'. Even if QCOC were to make such claims, QCOC can make such claims only by assuming any of the (object) theories which determines what is real/exists. But that is not what QCOC is meant to do. Another point is that QCOC cannot make any existential claims of the form '(∃*x*) (K*x*)' from the object theories. The premises of such arguments consist of what a particular theory says what exists and the conclusion will consists of existential claims such as there are such and such things. T1 says there are such and such things, therefore, there are such things and T2 says there are such things, therefore there are such things. This is not a valid argument.

T1 says (∃*x*) (K*x*)/ Therefore, (∃*x*) (K*x*)

T2 says (∃*x*) (L*x*)/ Therefore, (∃*x*) (L*x*)

When we (meta-ontology) say that Phlogiston theory assumes something that is Phlogiston, from that we cannot make an existential inference like there exists something that is phlogiston. First of all, it is invalid and secondly, if QCOC needs to make any such inference then QCOC needs to assume any of the object theories. Suppose someone says, QCOC in fact can make such inferences because there is two parts in QCOC, one part takes care of the meta-ontological problem and the second part will take care of the ontological problem. But this second part will not in fact belong to first part; it will belong to object theory. One doesn't gain much by saying that there are two parts in QCOC. Meta-ontology should work separately from the concerns of the ontology. QCOC needs to work separately from the concerns of the theories to which QCOC is applied. The theory which determines what a particular theory says what there is, needs to work differently from the theory which determines what there is. 'I ***determine*** what exists' and 'I ***determine*** what I say what exists' are not the same. Purposes of

both are different. They are not meant to do the same thing. The subject matter of one differs from the subject matter of the other.

II.2.8.1. A different form of the old Platonic riddle of non-being?

It seems that the old Platonic riddle of non-being (non-being must in some sense be, otherwise what is it that there is not.) runs into the issue which we have been dealing with in the above mentioned section. Pegasus must in some sense be, otherwise what is it that we are talking about. When Meinong was addressing the problems relating to the referential theory of meaning the riddle took the following form. The Golden-mountain must in some sense be real, otherwise how is it that the term golden-mountain is meaningful. In our case, there must be some entity called Phlogiston or how is it that we make sense of "something that is Phlogiston is assumed by Phlogiston theory". Saying that Phlogiston theory assumes something that is Phlogiston is correct or it makes sense. Therefore, there is something that is Phlogiston. What is said has some similarity with, "non-being in some sense be otherwise what is that there is not"[37]. It is correct to say that "Phlogiston theory assumes something that is Phlogiston", therefore, there must be something that is Phlogiston. Otherwise what is that "Phlogiston theory assumes something that is Phlogiston" is correctly said of. So, we must assume something that is phlogiston. It seems to me that the Platonic riddle of non-being takes a different form here. If one can show that, even if we don't assume anything called phlogiston, how can we make sense of such expressions (Phlogiston theory assumes something that is Phlogiston) that approach will be better. To do this one could adopt the following method.

II.2.8.2. The Direct ontological commitment and the indirect ontological commitment

The ontological commitment is not the same for QCOC (meta-theory) and the theories to which it is applied (object theories). This can be understood from the functional difference in the commitment itself. The intended purpose of commitment varies. The intended purpose

[37] Quine, W. V. 1948. "On What There Is", p. 21.

of QCOC being ontologically committed to the entities differs from the intended purpose of object theories being ontologically committed to the entities. This difference can be understood not in terms of the difference in the entities to which QCOC and the object theories are committed, but in terms of the functional difference in the ontological commitments. QCOC (meta-ontologist) wouldn't say I am committed to those entities, because those are the entities which are real/exists. QCOC (meta-ontologist) would say I am committed to those entities in order to show to what you are (particular theory) committed to. The function of the ontological commitment of QCOC differs from the function of ontological commitments of object theories. The purpose of the entities of the object theories figuring in the domain of QCOC is different from the purpose of these entities figuring in the ontology of the object theories. QCOC (meta-ontology) neither denies nor affirms the reality of any entities as the object theories do. QCOC (meta-ontology) denies or affirms to what the object theories are committed. QCOC is ontologically committed to the entities to determine to what a particular (object) theory is ontologically committed. The object theories are ontologically committed to the entities as a result of determination of what is real. In the domain of quantification of QCOC these entities of the object theories are kept not to make any ontological claim but to say to what any of these object theories are ontologically committed. These objects or entities in the meta-ontologist's domain of quantification did not figure separately or they don't have any independent role. They figured through some object theory only. Unless these object theories give a place for entities then there is no question of entities figuring in the domain of QCOC (meta-ontology). So, here, the function or the intended purpose of the ontological commitments of the object theories interferes with the function or the intended purpose of QCOC, the meta-theory. Here, considering the functional difference between QCOC and the object theories, we can talk of direct ontological commitments and indirect ontological commitments of the theories.

A theory is directly ontologically committed to the entities iff committing to such entities results in the determination of what is real/exists.

A theory is indirectly ontologically committed to the entities iff committing to such entities doesn't result in the determination of what is real/exists.

Now, we can see that the ontological commitment of QCOC to the entities of the object theories is indirect ontological commitment. Because QCOC being committed to the entities of the object theories doesn't result in the determination of what is real/exist. Instead it results in the determination of what a particular theory says what is real/exists. We may require QCOC to be ontologically committed to the entities of object theories. However, its ontological commitment is not direct that is, QCOC being committed to the entities of the object theories doesn't result in the determination of what is real/exist. The object theories being committed to certain entities results in the determination of what is real/exist.

II.2.9. A Resolution to the problems of extended inexorable ontological commitment to the rival entities, false existential inferences and inexorable ontological commitment to the entities

The idea of functional difference of the ontological commitment can be used to address the extended inexorable ontological commitment to the rival entities. We could show that, if QCOC is committed to the entities of all the theories to which it is applied then in some of the cases it will lead to the problem of inexorable ontological commitments to rival entities. For example, QCOC is applicable to both Lewis' Modal Realism and Meinongianism, so, QCOC is committed to the entities of both Lewis and Meinong. However, there is a functional difference in the ontological commitment of QCOC being committed to the entities of both Lewis and Meinong and on the other hand, Lewis and Meinong being committed to their respective entities. The entities of both Lewis and Meinong figure in the domain of quantification of QCOC, to determine what Lewis' Modal Realism and Meinongianism say

what there is, not to determine what is real/exists. There seems to be rivalry in the ontological commitments, because we mix-up or confuse the functional difference between QCOC and the object theories to which it is applied. Suppose the function of QCOC was to determine what is real/exist, and QCOC is committed to the entities of both Lewis and Meinong, then the conflicting or the rival ontological commitments would have been a problem. In the domain of quantification of QCOC the entities of both Lewis and Meinong are kept not to make any ontological claims (of the form $(\exists x)\ (Kx)$), but to determine to what any of these object theories are ontologically committed. Here, I am not claiming that these entities are not there in the domain of QCOC. These entities are there in the domain of QCOC and these rival entities are kept in the domain of QCOC. They are kept for not making any existential claim (of the form $(\exists x)\ (Kx)$). Here, the ontological commitment of QCOC to the entities of Meinong and Lewis is indirect. The ontological commitment to the rival entities is an issue when a theory makes a direct commitment to the rival entities. What cannot be allowed is the direct ontological commitment to the rival entities. When a theory determines what is real/exists then that theory cannot be ontologically committed to the rival entities. Whereas under indirect ontological commitment, QCOC may keep the entities of both Meinong and Lewis yet not to determine what is real/exists, but to determine what these theories say what is real/exists. The conflict or the rivalry becomes an issue under the direct ontological commitment but not under the indirect ontological commitment. Thus, the conflict or the rivalry becomes an issue for the objet theories not for QCOC (meta-theory).

The problem of false existential inferences can be addressed in the following way. Once it is said that QCOC is committed to the entities of the theories to which it is applied then in some cases it will lead to the problem of false existential inferences. Since there is a functional difference in the ontological commitments of QCOC and the object theories to which QCOC is applied, QCOC doesn't make any existential claims. So, the question of false existential

claims doesn't arise. Because those entities about which falsity is attributed figures in the domain of QCOC not to make any existential claims but to say to what the (false) theory is ontologically committed. Some more points are to be mentioned about the problem of false existential inferences. Scheffler and Chomsky considered phlogiston theory to show this problem of false existential inferences. We should see that this is one of the superceded or obsolete theories in the scientific enquiry. If the determination of ontological commitment of phlogiston theory is in serious question other than seeing the consequences ofQCOC, what one needs to do is to look into the context of phlogiston theory. Looking into the context of the phlogiston theory can mean at least the following: looking into what was replaced by the phlogiston theory and what replaced the phlogiston theory. If what was replaced by the phlogiston theory isn't available then one should see what this contributed to the larger scientific enquiry at that particular point and then see what replaced the phlogiston theory. Then we need to see the ontological status of the entity to which the phlogiston theory was committed. There are many other superceded or obsolete theories in sciences. Now following Scheffler and Chomsky, one could argue that QCOC would make a lot of false existential claims. But the adherent of QCOC by holding on to the idea of functional difference can say that QCOC doesn't have to make any kind of existential inference, as the intended purpose of QCOC is not to make any such claim. Moreover, the adherent of QCOC can say that when these superceded theories are considered, they are to be considered in relation to the theories which supercede these superseded theories. QCOC (meta-ontology) cannot approach any such theory in isolation. These theories are part of a larger scientific enquiry.

There is inexorable ontological commitment to the entities to which QCOC is applied. However, such inexorability needs to be related with the functional difference and then with the direct and the indirect ontological commitments. Even if QCOC is committed to the entities of object theories to which it is applied, there is a functional difference in the

ontological commitment. QCOC doesn't make any direct ontological commitment to any of these entities. QCOC makes only indirect ontological commitments. Inexorable direct ontological commitments to the entities would be a problem, whereas inexorable indirect ontological commitments need not be a problem. QCOC being committed to the entities of the object theories doesn't result in the determination of what is real/exist, instead results in the determination of what a particular theory says what is real/exists.

It can be explained further how inexorable direct ontological commitments to the entities would be a problem for theories. When a theory has inexorable direct ontological commitments to the entities of other theories then such commitment will result in some kind of inconsistency. A theory shouldn't reach a position where that theory is committed to something which it shouldn't be committed to. Inexorable direct ontological commitments will lead a theory to be committed in such a fashion. Whereas inexorable indirect ontological commitments will not lead a theory to be committed so. To understand this point let us consider the ***r***-conditions which constitute the independent variable of a system or a theory. If we consider any theory whose function is to determine what is real/exists then those theories will have certain ***r***-conditions. ***R***-conditions fix the range of the variable. A variable cannot take any entity as the value. There is some kind restriction which is at work for the variable to take any entity as a value. The range of the variables that occur in the sentences (Q-V-I) of the theory is fixed by the ***r***-conditions of that theory. If an entity that doesn't satisfy the ***r***-conditions of a theory occurs in the variable as value then such an occurrence will result in an inconsistent formulation. It is not that such occurrence merely would lead to the falsity. But it leads to the inconsistent formulation. What happens in the inexorable direct ontological commitment is that such commitment leads to an inconsistent formulation.

This can be understood from Russell's problem of negative-singular-existentials. Here, let me consider Russell's reasons for why existence is not a property. If we consider existence

as a property then the problem of negative singular existential arises. The puzzle of negative singular existential is the following. Consider the sentences which deny the existence of non-existing entities. So here, let us consider the sentence: James Bond does not exist. Suppose we consider existence as a property of an individual, this particular above mentioned sentence predicates nonexistence to the designation or to the referent of the term James Bond. If so, then our world or reality consists of an object or an entity which is designated by the singular term James Bond and this entity has the property of nonexistence. The problem is, in some or the other way we identify an object or an entity in our reality and then we predicate the property of nonexistence. In other words, we are required to accept the reality of an entity which does not exist, so that we accept this sentence (James Bond does not exist) as expressing a true proposition. This puzzle of negative singular existential is an outcome of regarding existence as a property of individuals. Russell denies that existence is a property and he offers his classic alternative way of reading this sentence (negative existentials) which is clear in his theory of definite descriptions.

Consider the following sentence with regard to the Russellian robust sense of reality. Hobbits don't exist. This is a true sentence. They are fictional characters. From the first one we cannot say that $(\exists x)$ $(\sim Hx)$ by assuming something that is Hobbits. Likewise from such kind of sentences we cannot say that $(\exists x)$ (x doesn't exist). We are trying to identify some objects and say that the object lacks the property of existence. Quine said my variables cannot be allowed to range over the entities of my opponent while I disagree with her over what things exist. It was said what constitute the independent variable is the ***r***-conditions of a particular system and the ***r***-conditions are the conditions that provide a particular mode of reality for an entity to be real by a particular system. ***R***-conditions impose a kind of restriction upon the variables of the sentences to take any value in the sense that variables in the sentences cannot be allowed to range over the entities of opponent theory's entities.

Robust sense of reality plays a crucial role in the ***r***-conditions of the Russellian ontology. What could be the value of variable of the sentences which are under the scrutiny is dependent on the ***r***-conditions of the Russellian ontology. The variable ***x*** that occurs in the Q-V-I of the sentences which are brought under the scrutiny of the Russellian ontology are constrained by the ***r***-conditions of the Russellian ontology. A robust sense of reality plays a crucial role in the ***r***-conditions of the Russellian ontology. Thus, these constrained variables (constrained by the ***r***-condition of robust sense of reality) cannot take any value in the sense that it cannot range over the opponent's or other theory's entities. The variables in the sentences which are brought under the scrutiny of the Russellian ontology will not range over the entities of certain Meinongian entities in the sense the range of the variable is set by the ***r***-conditions of the Russellian ontology. What entity could be the value of variable in these sentences is dependent on the ***r***-conditions of the Russellian ontology.

My presuppositions are directly linked to the variables or the ***r***-conditions are directly linked to the variables that occur in these sentences. If so, then the variable ***x*** that occurs in the sentences which are under the scrutiny of the Russellian ontology is assumed to have been infused with a robust sense of reality. If so then it might be that, the sentences in which "existence" occurs as a predicate adds nothing to the sentences. In what sense "existence" as a predicate doesn't add anything to a sentence is explained with the help of the examples below. Sometimes in the Russellian ontology regarding "existence" as a property (that can be predicated) of things might result in incompatibility or inherent inconsistency. To show this let us consider the different sentences and their Q-V-Idioms in relation to the Russellian robust sense of reality.

Hobbits don't exist. This can be represented in Q-V-I in the following way.

$\sim (\exists x)\ (Hx)$

Consider the following unacceptable representation of the same sentence.

$(\exists x)$ (Hx & x doesn't exist)

Problem with the second representation is that, one is trying to accept something that is Hobbits and deny the property of existence to that thing. It means, it leads to the acceptance of the reality of something which doesn't exist. Here in this kind of representation the variable ***x*** is allowed to range over some other entity which normally wouldn't be regarded as real by the Russellian ontology. Somehow here, there is the problem of violation of the range. This leads to some kind of alteration upon the range of variables of these sentences, which is fixed by the ***r***-conditions. It sounds like accepting the reality of something that is Hobbits which goes against the robust sense of reality. This will obviously go against the ***r***-conditions of the Russellian ontology. The range of the variable is altered. This will result in inconsistency. Something like one is trying to identify the entity in reality which is not in the reality. So the acceptable representation of the same sentence for Russellian ontology is the following.

$\sim (\exists x)\ (Hx)$

This representation doesn't lead to the kind of problem which was faced by the previous one. The independent variable which is constituted by the ***r***-conditions had already put up a restriction upon the variable ***x*** which will occur in the Q-V-Idioms of these sentences. In other words the range is fixed by the ***r***-conditions upon the variable ***x*** in these sentences. In doing so, the robust sense of reality plays a crucial role. If so, then the variable ***x*** is already assumed to have certain import of the robust sense of reality: ***x*** in the Russellian ontology will stand for an entity which satisfies the robust sense of reality. So when we consider the open sentence "*x* exists" in relation to a robust sense of reality, the sentence seems to be tautology. If not a tautology at least the occurrence of such expression as predicate in the sentences seems to be redundant. Because in the parameter of ***x***, we could see a robust sense of reality is already infused.

$(\exists x)$ (*x* exists)

Russellian ontology has already fixed that the variable ***x*** in the sentences will stand for an entity that satisfies the robust sense of reality. It seems that this sentence says something similar to the following: robustly existing thing exists. Now consider the following Q-V-I.

(∃*x*) (*x* doesn't exist)

And this seems to suggest something similar to the following: robustly existing thing doesn't exist.

(∃*x*) (*x* exists) seems to be a tautology

(∃*x*) (*x* doesn't exists) seems to be a contradiction

Once you try to give value for this expression by considering any entity form the Russellian ontology, the first one will always end up in redundancy and the second one will always end up in falsity. This ***x*** already has an import of robust sense of reality in the Russellian ontology. Not only are the substitutional instances always false, in the 2nd one, such a formulation results in contradiction. This explains why the Russellian ontology would face the problem of negative singular existentials, if the Russellians keep existence as a predicate.[38]

This is the problem if theories have inexorable direct ontological commitments to the entities of other theories. When we talk of inexorable ontological commitments, it is having inexorable direct ontological commitments to the entities of other theories that will put a theory in an inconsistent situation. QCOC doesn't have any inexorable direct ontological commitments to any entities, though QCOC has inexorable indirect ontological commitments to the entities of other theories. QCOC doesn't provide or have any separate ***r***-conditions. Because the intended purpose of QCOC is not to determine what is real/exists, but the intended purpose of QCOC is to determine what a particular theory says what is real/exists. Considering the two notions of inexorable direct and indirect ontological commitments, we can

[38] Similar problem is addressed in the forthcoming chapter under the heading "IV.4.6. Are "*x* is spatiotemporally located" or "*x* is a space-time point" predicate expressions in LMR?". This is addressed in relation to Lewis' Modal Realism and Meinongianism.

say the following regarding Scheffler and Chomsky. When Scheffler and Chomsky showed QCOC has inexorable ontological commitment to the entities of all the theories to which QCOC is applied, then they were talking about inexorable indirect ontological commitments to the entities and not inexorable direct ontological commitments. QCOC cannot be said to have any inexorable direct ontological commitments, as QCOC doesn't provide any ***r***-conditions and also as the intended purpose of QCOC is not to determine what is real/exists.

CHAPTER III

A META-ONTOLOGICAL ENQUIRY INTO THE PARALLELISM BETWEEN DAVID LEWIS' MODAL REALISM AND MEINONGIANISM

Introduction

Explaining the intuitiveness behind the truth of the sentences involving modal concepts is one of the central concerns[1] of modality in philosophy.[2] A repercussion of such consideration is the construal of the problem of modal metaphysics through a simple question ***what might be there***.[3] The simple but trivial answer would be ***everything that could be***. In some sense, ***what is there*** seems to be insufficient to explain the truth of modal sentences. So, the metaphysicians consider ***what might be there***. David Lewis' modal metaphysics is such an attempt that tries to give an adequate explanation to the truth of modal sentences by considering the item: possible worlds. David Lewis' version of Modal Realism (henceforth LMR) is the view that other possible worlds exist in the same sense the actual one exists. The fundamental tenet of LMR is that possible worlds are spatiotemporally isolated concrete particulars. The upshot $_{of}$ LMR is the recognition of the concrete objects other than the one which inhabit the actual world. Full-fledged reduction of modality remains to be the *success* of

[1] Some other concerns can be generally categorised into semantic, metaphysical and epistemic. One of the semantic concerns is to explain the meaning of the modal sentences. Metaphysical concerns would be regarding the items which are invoked to explain the meaning of modal sentences. For example, possible worlds are invoked to explain the truth of modal sentences. Now the metaphysical question would be are they real? If so, how they are real. If not, why. One of the epistemic concerns would be regarding the difference in the nature of the knowledge regarding actual and possible entities. These are some of the different concerns in modality in philosophy.

[2] What I mean by *the intuitiveness behind the truth of sentences involving modal concepts* is that, at least one cannot say that such sentences are false. How to provide truth conditions to such sentences is the issue here.

[3] There are two projects here. First project is to explain the intuitiveness behind the truth of modal sentences by taking some items for granted. Second project concerns the metaphysical/ontological status of such items. The metaphysical issues might not be settled in the first project of explaining the intuitiveness behind the truth of modal sentences. On the other hand, the first project might have certain metaphysical underpinnings in explaining the intuitiveness behind the truth of modal sentences. These two projects are carried out separately. Metaphysical concerns regarding modality fall into the kind of metaphysics, known as modal metaphysics.

such view: modal notions are explained in terms of non-modal notions. There could have been talking donkeys or possibly there is a talking donkey is true because there is a talking donkey at some possible world ***W***. That world is spatiotemporally unrelated to us. So, in accordance with LMR, there are flesh and blood talking donkeys and flesh and blood philosophising cats.

There are attempts to associate this particular aspect of LMR with Meinongianism (henceforth MS). Central to MS is the acceptance of the reality of entities which don't exist in the actual world. William G. Lycan argues that LMR is met with Meinongian features which Lewis rejects. Subsequently, Linsky and Zalta systematically show that though there are non-Meinongian features, some Meinongian features can still be found in LMR. In this chapter, I evaluate such various attempts to bring out Meinongian features in LMR. Are they correct in indicating Meinongian features in LMR?[4] Lewis commits to Orthodox/Russellian Ontology. Is there any problem in having his LMR and committing him to Orthodox Ontology?

As the question is whether Lewis is a Meinongian or not, it is obvious that two different ontological theories are of concern: the Meinongian and the Russellian. Since the issues designated by this particular question overlap these two different ontological frameworks, an attempt to address such issues requires the consideration of these two different ontological frameworks. I am of the view that such an attempt might require us to use some criterion which itself is ontologically unbiased with respect to any of these two ontological theories. Such a criterion will help us to develop a neutral framework to address the issues indicated by this question. I will show that Quine's criterion of ontological commitment is such

[4] At least two points are to be considered while asking whether there is any Meinongian feature in LMR/whether Lewis is a Meinongian: having Meinongian features because of adopting Meinongian strategies and having Meinongian features because of assuming Meinongian ontology. Does having Meinongian features in LMR mean that LMR is committed to Meinongian ontology? Issue will be metaphysical, if LMR assumes Meinongian ontology. Assuming a Meinongian ontology could mean, LMR is committed to at least some of those entities to which a Meinongian is also committed. One could say that although there are Meinongian strategies in LMR, nonetheless LMR is not a Meinongian ontology. However, in the following sections, it will be shown that the attribution of Meinongian features to LMR is mainly by considering the similarity in the entities to which both are committed. Thus, the charge against LMR is that of assuming the Meinongian ontology.

a criterion and would play a crucial role in assessing the attempts to show the Meinongian features in LMR. I would examine the arguments which seem to suggest Lewis' Modal Realism as Meinongian. In section I, I will briefly explain some points regarding existence and quantification. In section II, I will delineate different arguments and the strategy of Linsky and Zalta in depicting Lewis as Meinongian and how Lewis could argue against them. In section III, I try to explain Lycan's project of attributing Meinongian features to Lewis' system. In section IV, I first provide a brief explanation regarding Quine's criterion of ontological commitment. Next I illuminate the debate regarding whether Lewis is a Meinongian and reformulate the problem in the light of Quine's criterion. I provide a solution to the problem by suitably extending Quine's criterion through introducing two notions: that of independent variable and of Functionally Isomorphic Quantifiers. I conclude by arguing that Lewis is not a Meinongian.

III.1. Some preliminary remarks on existence and quantification

As our concern here is to see whether Lewis is a Meinongian or not, two theories of reality/ontology are at play: the Meinongian and the Russellian. There are certain entities to which these theories are committed. There are idioms of quantification in natural language regarding these entities which can be represented in a formal language. In natural language such idioms are stated as "there are something", "there exist things" and "something". These idioms in natural language can be represented in formal language through the quantifier variable idiom (Q-V-I) of the first-order-quantificational/predicate logic to talk about the existence of the entities. So, we have got the existential quantifier "(∃)", the variable "***x***" and the predicate expressions. The variable "***x***" stands for an entity and is attached to "(∃)" and the predicate expressions are represented by using capital letters.[5] How to formulate the (Q-V-I) of the

[5] Let us consider one example here. Let us consider a sentence

natural language sentences regarding the entities is one of the issues which an approach to the reality needs to take into account.

Let us consider the Meinongian approach. Acceptance of the distinction between being and existence in reality is crucial to the Meinongian project. There are two realms of reality: the realm of subsistence and the realm of existence. These differences will have some effect on the way how Q-V-I of such entities are to be formulated. How to formulate Q-V-I of the entities that fall in any of these realms? This need not be an issue for the Russellians. The Russellian ontology consists of only one kind of entities i.e., the spatiotemporal entities with which we are familiar. The Russellian requires only one quantifier i.e., the standard existential quantifier which can be used to quantify the entities. Unlike the Russellian, the Meinongian has two realms of reality. From these two theories what we can find out is that the entities, which these theories are committed to, play a crucial role in the way the Q-V-I of such entities are to be structured. For Meinongians there could be at least two different ways to formulate the Q-V-I of the entities in their ontology. Let me generally call these two different ways as the quantifier restricting strategy (QRS) and the double quantifier strategy (DQS). In the QRS, single quantifier i.e., "(∃)" the standard existential quantifier is used to quantify over all the entities. When the familiar spatiotemporal entities are of concern then restrictions are introduced to the quantifier by using the ***existence*** predicate. In DQS, as the expression suggests, there are at least two quantifiers. The normal existential quantifier will be employed to quantify over only the familiar spatiotemporal entities and the newly introduced quantifier will be employed to quantify over only the entities in the realm of subsistence. One quantifier will be ***there exists*** which will quantify over the spatiotemporal entities and the other quantifier ***there is*** will be employed to quantify over those entities which stand outside the spatiotemporal realm. We are interested in these two strategies because arguments can be provided from both sides that LMR has Meinongian features. Lycan's some of the arguments are directed from the double

quantifier project and some of the arguments of Linsky and Zalta are directed from the quantifier restricting project. I will show that neither of these attempts succeeds in arguing that Lewis is a Meinongian.

III.2. The Attempts of Linsky and Zalta on Lewis' being a Meinongian

This section tries to explain the various strategies employed by Linsky and Zalta in exploring the Meinongian features within the LMR. In doing so, initially they argue that LMR violates one of the non-logical principles which is fundamental to physicalism: everything that is real is spatiotemporally related to us. So, in the first sub-section, a brief explanation is given for Lewis' version of physicalism which is one of the versions. Next I explicate different strategies, employed by Linsky and Zalta, of revealing the Meinongian features in Lewis' metaphysics and Lewis' responses to each of these strategies. In their attempts, Linsky and Zalta don't draw a parallel between Lewis' account and any general version of Meinongianism, but only to a particular version of Meinongianism- the one held by Terence Parsons.

III.2.1. Briefly on Lewis' Physicalism

Physicalism is the metaphysical thesis that everything is physical or everything supervenes on physical. Though there are different versions of physicalism, for the current discussions here, let us consider Lewis' version of physicalism which is generally known as supervenience physicalism or Humean supervenience. The name Humean supervenience is associated with David Hume who pioneered the renunciation of necessary connections. To Lewis' description of Humean supervenience, vital is the following.

> It is the doctrine that all there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another……We have geometry: a system of external relations of spatiotemporal distance between points. Maybe points of spacetime itself, maybe point-sized bits of matter or aether or fields, maybe both. And at those points we have local qualities: perfectly natural intrinsic properties which need nothing bigger than a point at which to be instantiated. For short: we have an

> arrangement of qualities. And that is all. There is no difference without difference in the arrangement of qualities. All else supervenes on that.[6]

Lewis, to make his point clear, uses the example of dot-matrix picture. Dot-matrix picture consists of nothing but the dots. This picture can be said to have some global properties such as it is symmetrical or it is cluttered. Different shapes can be constructed from this dot-matrix picture; however what is all there to the picture are the dots. Any global property supervenes on the dots of the picture. Now consider the physicalist claim that all there is to the world is a vast mosaic of local matters. This is similar to the dots in the dot-matrix picture. In other words, physical properties are similar to the dots in the picture. Similar to the idea that global properties of the picture are the different arrangements in the dots of the picture, global properties of the world are the different arrangements in the physical properties. The global properties of the world supervene on the physical properties of the world. Lewis uses the same example to clarify the following significant point of Humean supervenience. There cannot be two different pictures which differ in the global properties but do not differ in the number or arrangement of the dots underlying them. There cannot be a case where there is difference between the global properties but no difference in the physical properties.[7]

What is fundamental to Lewis' physicalism is that the world consists of point sized individuals which are arranged in space and time. That the notion of space-time is crucial in Lewis is apparent from the following remarks:

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[6] Lewis, D. 1986. *Philosophical Papers Volume II*, Oxford: Oxford University Press. pp. IX – X.

[7] We had arrived at this conclusion analogically using the example of dot-matrix picture. One could point out some problem in the premise of this analogical argument regarding the dot-matrix picture itself. In a dot-matrix picture of a necker cube there are allegedly different geometrical orientations. In such situation, the case is like two global properties but no difference in the arrangements of the dots itself. This might be an issue which is related to the premise of the analogical argument. Does such problems run into the conclusion is an issue that requires some attention. An extreme form of the issue is that of there being no dots at all. However, such issues are not the central concern here.

> We have geometry: a system of external relations of spatiotemporal distance between points. Maybe points of spacetime itself, maybe point-sized bits of matter or aether or fields, maybe both.[8]

He regards geometry as a system of external relations[9] of spatiotemporal distance between points and even he goes to the extent of saying that this system could be of the external relations of points of space-time itself. The points are distanced in space and time. What we could understand from all these is that the spatiotemporality plays a crucial role in his physicalist approach to the reality. Whether the reality is of this nature or is his physicalism a correct version or not is a different question. But this is how Lewis constructs his physicalism. Our concern here is not to find out which version of physicalism is the plausible version. Our concern here is that provided this is Lewis' version of physicalism, what are its repercussions on his modal theory and the kind of criticisms raised by Linsky and Zalta.

III.2.2. Strategy 1: Violation of Physicalism and Lewis' Quantifier Restricting Strategy (QRS) Response

According to Linsky and Zalta, LMR violates the fundamental principle, of physicalism, which will be compatible with Russell's robust sense of reality. Linsky and Zalta state the principle in the following way.[10]

(P) Reality consists of everything that bears some spatiotemporal relation to us.

(P1) $(\boldsymbol{x})$ $(R\boldsymbol{x} \rightarrow \boldsymbol{x}$ is spatiotemporally related to us)

LMR accepts the existence of the entities which are concrete and are spatiotemporally unrelated to us which we had stated as the upshot of the fundamental assumption of LMR. So there exists flesh and blood talking donkeys and flesh and blood philosophising cats. Let us consider the sentence regarding the entity talking donkey. The problem is to explain the intuitiveness behind the truth of the sentences that there could have been talking donkey.

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[8] Lewis, D. 1986. *Philosophical Papers Volume II*, Oxford: Oxford University Press. pp. IX – X.

[9] Regarding external relation some explanation is to be added.

[10] Linsky B. and E. N. Zalta. 1991. Is Lewis a Meinongian?, *Australasian Journal of Philosophy*, 69 (4):438–453, p. 445.

Lewis explains the plausibility of such sentences by saying that there is a possible world in which there is a donkey and that donkey talks. This possible world is spatiotemporally isolated from our world. That possible world and the things in it exist in the same sense our world and the things in our world exist. Linsky and Zalta call the move made by LMR as Diamond Dropping Possibilism[11].

(1) $\Diamond (\exists \boldsymbol{x})$ $(T\boldsymbol{x} \& D\boldsymbol{x})$

(2) $(\exists \boldsymbol{x})$ $(T\boldsymbol{x} \& D\boldsymbol{x})$

In LMR, sentence (2) is entailed by the sentence (1). This simply will accept the existence of concrete but possible entities which are spatiotemporally unrelated to us. Lewis addresses this issue by employing his own version of Quantifier Restricting Strategy (QRS) by introducing the notion of ***actuality*** in the following way. For all ***x***, if ***x*** is ***actual*** then ***x*** is spatiotemporally related to us. We can observe certain points in Lewis' (QRS). Although Lewis does not get rid of certain entities, like talking donkeys, to which he is committed, or does not remove certain entities, like philosophising cats, he does not think that his view violates the physicalist principle. He keeps his entire ontology intact, even after encountering the criticisms made by Linsky and Zalta. Lewis devises or structures the (Q-V-I) regarding these allegedly problematic entities[12], through his (QRS) in such a way that the notified violation of the physicalist principle by LMR can be handled. In order to make LMR consistent with the physicalist principle he will adjust the range of the quantifiers[13] by introducing the notion of ***actuality*** as a predicate in the sentences and to the corresponding (Q-V-I) of such sentences. By putting this notion in the place of predicate he would restrict the range of the quantifiers

[11] Ibid., p. 453.
[12] The entities which are spatiotemporally unrelated to us are allegedly problematic entities because it violates the physicalism and Lewis will show that acceptance of those entities will not violate physicalism.
[13] We need to make a difference between range of quantifiers and the range of variable. Altering the range of quantifiers might not lead to the variation in the ontological commitment whereas altering the range of variable might. Though it isn't worked out here, we will proceed further keeping this distinction.

without affecting the truth of the sentences and also without affecting the set of entities to which LMR is committed. Lewis would say that the falsity of the non-logical principle **(P)** arises because the quantifier is not properly restricted. Regarding the talking donkey or the philosophising cat, Lewis would say that there are no such entities. But here, the quantifier ***there are*** or "(**)**" is to be restricted to actuality. There are no actual talking donkeys or actual philosophising cat. Or there are no talking donkeys or philosophising cat in the actual world or in actuality. For Lewis, there wouldn't be any problem in saying that there are no such entities. But in such cases the quantifier "there are" is restricted to actuality. It is possible that there could have been such entities. In this way Lewis by using the notion of actuality in the place of predicate restricts the range of existential quantifier. He uses his own version of (QRS) to make LMR consistent with physicalism. Thus the sentence there are no talking donkey is to be understood in the following way:

(3) $(\exists \boldsymbol{x})$ $(T\boldsymbol{x} \,\&\, D\boldsymbol{x} \,\&\, \sim A\boldsymbol{x})$

Upon this strategy, Linsky and Zalta draw a parallel between Lewis and Parsons' Meinongian theory. Here they consider Parsons' response to Russell regarding the following statement, "Whatever is round fails to be square". Parsons, employing his QRS, would say that, if the quantifier is not properly restricted to possible objects then this statement is false. In Parsons' Meinongian framework existence is regarded as a property; furthermore it is regarded as an extra-nuclear property[14]. He will execute his QRS by restricting the range of quantifier by using the existence predicate. In Lewis, the term actuality occupies the place of predicate but in

[14] Parsons' version of Meinongianism distinguishes between two kinds of predicates: nuclear and extra-nuclear properties. Only nuclear properties are significant in determining the nature of an object or characterising the nature of an object. Examples for such properties are "being blue", "being tall", "being kicked by Socrates" etc. Extra-nuclear properties don't affect the nature of the objects, which can be categorised into at least four: ontological, modal, intentional and technical. Existence is regarded as one of the ontological properties. From these, Parsons will conclude that, for every set of nuclear properties there is an object that exemplifies those properties in the set. One of the significant motivations for such an approach is to handle Russell's problem. For example, Parsons can say that there are objects that satisfy or exemplify nuclear properties of "being gold" and "being mountain" but all such objects lacks the extra-nuclear property of existence. For him, nuclear properties are not existence entailing.

Parsons' Meinongian framework existence occupies the place of predicate. The job performed by both terms is the same and the effect is the same: restricting the range of the quantifier without affecting the truth of the sentence and also without affecting the set of entities to which both are committed.

Lewis' employment of his QRS is the result of his ontological views regarding the possible worlds. For Lewis, possibilia exist in the same way the actual wold exists. We never come across any talking donkey or any such entities because those entities are not spatiotemporally related to us. They are spatiotemporally unrelated to us. Nonetheless they exist and they are not our world-mate. So they are not actual. I think Linsky and Zalta are right in pointing out that in QRS there is a similarity between Lewis and Parsons. It is true that there is a similarity in their strategy of QRS. But will that be sufficient to show that there is some Meinongian features in Lewis? In other words, from such a similarity could one conclude that both have same or identical ontological commitment? QRS is a kind of (re)interpretation to remove the inconsistent formulations. So, QRS might play a crucial role in dissecting the ontological commitment. To find out the ontological commitment or to fix it the concentration needs to be on what it is that is being interpreted. So concentrating only on both of their respective QRS might not help to dissect their ontological commitments. These are some of the points that require some serious consideration. It is also the case that Linsky and Zalta don't stop on showing the similarity in QRS. Apart from showing that there is a similarity in their QRS strategy, they explore a straight parallelism between Lewis' ***exist/actual*** distinction and the Meinongian ***being/existence*** distinction.

III.2.3. Strategy 2: Parallelism between Lewis' *exists/actual* distinction and Meinongians' *being/exists* distinction and Lewis' Non-categorial Difference Argument

According to Linsky and Zalta, Lewis' ***exist/actual*** distinction and Meinongian's ***being/existence*** distinction stand for or they pick out the same set of entities. Lewis'

exists/actual distinction seems to be a restricted talk of Meinongians' ***being/exists*** distinction. Because, Meinong's domain will consist of incomplete objects, which are said to have mutually incompatible properties, which will not be found in Lewis' system.[15] Nevertheless, if we consider Meinongian's sub-domain that is the domain of ***existence*** and Lewis' domain of ***actual*** then we can see that both have the same extension. When Lewis says that "***x*** is actual" and when a Meinongian (Parsons' Meinongianism) says that "***x*** exists", these two propositional functions stand for the same set of objects. In the view of Linsky and Zalta, both terms which occupy the place of predicate cover the same objects which any Russellian would consider as real. These predicates cover the objects which are spatiotemporally related to us. Both Lewis and the Meinongians in their quantifier restricting strategy would use these predicates (***actual*** by Lewis and ***existence*** by Meinongian) to restrict their quantifier to certain entities and both these predicates pick out the same set of objects. In this respect, when the complete objects to the exclusion of incomplete ones are considered, Lewis' ***exists/actual*** distinction has some parallel with Meinong's ***being/existence*** distinction. In the view of Linsky and Zalta, Lewis could respond to this problem in the following way. It could be that Lewis' ***actual*** and Meinongian's ***exists*** pick out exactly the same objects, but there is no categorial difference between actual objects and other existing possible objects. They are of the same kind. The separation between the objects persists not because there is a categorial difference between the objects but because of the lack of spatiotemporal relations or connections between them. Category wise all objects are of the same kind. As there is no categorial difference between the objects in one room and the objects in the other, similarly there is no categorial difference between objects in the actual world and the objects in other possible worlds. Lewis would point out that according to Meinongianism the categorial difference between the existing objects and the objects which have being alone is crucial. It

[15] Round-square is an example for an object which will have mutually incompatible properties which will not be found in Lewis' system.

could be that both predicates pick out the same objects; nonetheless in Meinongianism there is a categorial difference between the entities that have being and the entities that have existence. In Lewis' view, in his framework, such a categorial difference cannot be found between actual objects and other possible objects and they are of the same kind. This sort of response from Lewis is challenged by Linsky and Zalta, by pointing out that some of the Meinongians can argue that their [sub]-domain of being and the domain of existence has no categorial difference. Linsky and Zalta allude to Parsons' Meinongian approach as a case for this.

> His [Parsons'] domain of being contains completely determinate, nonexistent objects that exemplify their properties in exactly the same way that existing objects do. These determinate, non-existent objects differ from the existing ones only by possessing the property of existence. But this difference is not a categorial one! For the property of existence is an *extranuclear* property of objects (according to Parsons' theory). As such, it is not part of the *nature* of objects. So the Meinongian can deny that there is a difference in kind between the existing and nonexisting determinate objects on exactly the same grounds that Lewis uses to deny the categorial difference between his possible and actual objects.[16]

In Parsons' Meinongian approach, when the point of exemplification of properties is considered, there cannot be any categorial difference between the objects which have being alone and the objects which exist. It is true that Parsons' subdomain of being consists of determinate but non-existent objects and the domain of existence consists of the spatiotemporal objects. Objects in the domain of being exemplify their properties as the existing objects exemplify their properties. The only difference between them is that objects which have being alone lack the property of existence whereas the objects which are existent do not lack this particular property. Thus, there is no categorial difference between the objects in the realm of existence and the objects in the realm of being. In Parsons' framework, existence is an extra-nuclear property and no extra-nuclear property affects or has any impact on the nature of objects. It is nuclear property which would have some impact on the nature of

[16] Linsky B. and E. N. Zalta. 1991. Is Lewis a Meinongian?, In *Australasian Journal of Philosophy*,69 (4):438–453, p. 447.

objects. In this way Parsons' Meinongian approach can deny that there is any categorial difference between existing objects and the non-existing objects.

Lewis' domain consists of determinate talking donkeys or any other similar possible objects which do not differ categorially or which do not differ in kind from actual donkey or any other actual objects. The only difference between these objects is that one which is actual doesn't talk whereas the other talks. Parsons' theory which is fundamentally Meinongian one says the same thing: there is no categorial difference between or kind difference between objects that fall in the realm of existence and those fall in the realm of non-existence. According to Linsky and Zalta, "In particular, Parsons' theory asserts that there are complete, determinate, flesh and blood (albeit nonexistent), talking donkeys. These differ in nature from existing donkeys only by the fact that they talk."[17] In Parsons' framework, there is no categorial difference between existing object and non-existing object. They are of the same kind. In Lewis also there is no categorial difference between actual and possible objects. The case is almost like the entire realm of Lewis coincides with the entire realm of Parsons' Meinongianism: if not the entire realm of Parsons, at least the sub-domain of Parsons. I think it is at this point one needs to show that Lewis is not a Meinongian. But Lewis can continue to show that his system is not met with any Meinongian features by considering the indexical nature of actuality. Let us see how he does that.

III.2.3.1. Indexical Approach as a unique programme to Lewis' system

Lewis would continue to argue for the crucial difference between Lewis' notion of ***actuality*** and Meinongian's notion of ***exists***, by considering the indexical approach to the notion of ***actuality***. The point of Lewis' argument is that the way the notion of ***actuality*** functions differs from the way the notion of Meinongian ***exists*** functions. ***Actuality***, in Lewis' modal metaphysics, is nothing more than a context sensitive indexical. ***Actuality*** as a notion

[17] Linsky B. and E. N. Zalta. 1991. Is Lewis a Meinongian?, p. 448.

doesn't add anything to the property of objects or, in other words, it doesn't have any impact on the nature of the objects. This term works like the other indexical terms like ***now***, ***here*** etc. Some varieties of beer are ***here*** in this pub but some are not ***here*** but are in countryside pub. There isn't any categorial difference between the varieties those are ***here*** (in this pub) and those are not ***here*** (in this pub) or which are in countryside pub. Similarly there is no categorial difference between those objects which are picked up by the term ***actual*** and those which are not picked up by the same.

A particular use of ***actual*** is very much parasitic on the context of use. Once the element of context is presented then the role of speaker becomes quite crucial: not only the role of speaker but also the things which are associated with the speaker and the relation which these two have with each other. So, Linsky and Zalta carry out their discussion by bringing the relation between the objects which are picked out by a particular use of the term ***actual*** by a speaker and the speaker herself. One of the relations which these two things or elements said to have is the relation of ***worldmatehood***. The particular use of the term ***actual*** by a speaker picks out all the objects or things which are the world-mate of that speaker. Speaker and the objects which are picked by a particular use of the term ***actual*** are in the same world. There isn't any categorial difference between the objects those are picked out by a particular use of the term ***actual*** by a speaker and the objects which are not. So there is a crucial difference between Lewis' ***actual*** and Meinongian's ***exists*** and they don't work or function similarly, even if both the terms pick out the same entities or objects.

III.2.4. Strategy 3: Exposition of the Failure of Indexical Approach: an intuition from Stalnaker

Still Linsky and Zalta aren't satisfied with Lewis' contention that his indexical approach to the notion of actuality will show that his use of actuality and Meinongians' use of exists are not the same. To show this Linsky and Zalta employ an observation made by Robert Stalnaker that we can make a distinction between the semantics of ***actual*** and the metaphysics of ***actual***.

According to Stalnaker, "……the semantical thesis that the indexical analysis of "actual" is correct can be separated from the metaphysical thesis that the actuality of the actual world is nothing more than a relation between it and things existing in it."[18] Once this distinction is made intelligible and accepted, the semantical questions regarding the notion of ***actuality*** and the metaphysical significance of the notion of ***actuality*** can be distinguished properly. According to Linsky and Zalta, "The semantics of 'actual' concerns the way the word acquires its significance, whereas the metaphysics of actuality concerns what this significance is."[19]

Once the distinction made by Stalnaker mentioned above is accepted, one of the questions concerning the metaphysics of actuality which could be asked is that, "whether there is a property of being actual that is signified by uses of the predicate 'is actual', and if so, what the nature of that property is."[20] What Linsky and Zalta are trying to do through this question is that they are making an attempt to extend this distinction, pointed out by Stalnaker, and find out whether there is any metaphysical significance which can be attributed to the notion of ***actuality***. In other words, they try to explore the metaphysical significance attached to the notion of ***actuality***. In Linsky and Zalta's view, Lewis uses the predicate ***actual*** to restrict metaphysical generalizations to certain class of objects. Through the predicate ***actual*** or through a particular use of the predicate ***actual*** what Lewis does is that he can restrict metaphysical generalisations to some set of objects. If Lewis restricts certain metaphysical generalisation to some set of objects by a particular use of the term ***actual***[21] then, according to Linsky and Zalta, there could be some property through the employment of which he distinguishes or separates the restricted class to which his metaphysical generalisations apply. If there could be some property with which he distinguishes or separates the restricted class to which his metaphysical generalisations apply then there is some property which is signified by

[18] Stalnaker, R. 1976. Possible Worlds, *Nous,* 10 (1): 65–75, p. 69.
[19] Linsky B. and E. N. Zalta. 1991. Is Lewis a Meinongian?, p. 449.
[20] Ibid., p. 450.
[21] Lewis' system is such that, he is required to restrict.

the uses of ***actual***. The property which is signified by the uses of ***actual*** will depend on the context of use, since Lewis provides an indexical analysis of ***actual***. In Lewis' modal metaphysics, both ***actual*** and ***this worldly*** take a similar role and both are indexical. Now consider a speaker ***S*** and her particular use of ***actual***. Her particular use of actual to make some generalisations helps to restrict the generalisations to some set of objects which are worldmates of ***x***. According to Linsky and Zalta, this use of actual signify a relational property which will have the form of ***worldmate of x*** and this relational property is an extrinsic property.[22] According to them, the relational property ***worldmate of x*** neither is grounded in nor reflects the nature of its relata. In this way they show that Lewis' indexical ***actual*** signifies an extrinsic property which is relational. Here they again draw a parallel between Lewis and Parsons. Parsons use of ***exists*** also signifies an extrinsic extra-nuclear property of objects, though ***exists*** is not a relational property. It might be that ***actual*** is indexical. But the indexicality of ***actual*** doesn't help it to function differently from Meinonigan ***exists***. Because the property designated by both notions (***actual*** and ***exists***) is extrinsic in nature which doesn't affect the nature of the object itself or which is not grounded in the object. This again establishes some Meinongian features in Lewis' modal metaphysics.

These are the different strategies employed by Linsky and Zalta to show the Meinongian features in Lewis. Now let us see how Lycan tries to show the Meinongian features in Lewis.

III.3. William G. Lycan on Lewis' Possibilism being Meinongian and Lewis' response

Following is Lycan's project of showing Meinongian features in Lewis' Modal Realism. This section begins with a problem which Lycan has with the Meinongians and how such problems can be handled by introducing a different quantifier into the Meinongian system.

[22] The distinction between extrinsic and intrinsic property is that intrinsic properties are part of the nature of the objects whereas the extrinsic properties are not grounded in object itself.

III.3.1. A Problem in the Meinongian Framework

In Lycan's view, the crucial point in Meinongianism is the acceptance of non-existent possibles and how to carry out a way to quantify over such entities. For Meinongians, Non-existent objects are not just obscure entities. Some of these entities can be said to have mutually inconsistent properties such as Round Square. Quantifying over any non-existent possibles will result in contradiction. What Lycan wants to point out is that once we accept the reality of non-existent possibles then we are automatically in a position to accept that there are such entities of which it is true that there are no such entities. Lycan formulates an initial Q-V-I of such inconsistent sentences in the following way.

(4) $(\exists x) \sim (\exists y)\ (x = y)$[23]

There is inconsistency in the above mentioned formulation. Lycan tries to resolve this *prima facie* inconsistency by disambiguating the quantifier in (4). So the project is to reinterpret the quantifier in such a way that it does not lead to any contradictory formulation. In Lycan's view, Meinongian can introduce two operators one of which would help the Meinongian to quantify over actual existence and the other would quantify over the Meinongian mysterious[24] non-existence. Let us call such a strategy as double quantifier strategy (DQS)

III.3.2. Double Quantifier Strategy (DQS)

This can be seen as one kind of strategy for removing the inconsistent or contradictory formulations which a Meinongian may encounter. Let me generally call this strategy as double quantifier strategy (DQS). As they find some difficulty with traditional existential quantifier to quantify over all the entities in their large ontology, apart from the traditional existential

[23] There are two quantifiers here. First one to which the variable *x* is attached talks about at least one object in the universe of discourse and in the second one to which the variable *y* is attached, all the entities in the universe of discourse are considered. If we give value *a* to *x* then what remains is ~ (∃*y*) (*a* = *y*) which is equivalent to (*y*) ~ (*a* = *y*). Since (*y*) ~ (*a* = *y*) is about all the entities in that universe of discourse, the entity *a* will be one among them. So what Q-V-Idiom (∃*x*) ~ (∃*y*) (*x* = *y*) says is ~ (*a* = *a*) and this is inconsistent.

[24] Lycan regards Meinong objects that don't exist as mysterious one.

quantifier the Meinongians introduce one more quantifier in their language to cover specifically those entities which are not covered by traditional existential quantifier. Some Meinongians choose double quantifier strategy (DQS) instead of quantifier restricting strategy in which only one quantifier figures. So DQS seems to be a viable strategy in disambiguating the inconsistent formulation. (Provide examples for those Meinongians who opt for this strategy.)

In Lycan's view, a Meinongian can try to disambiguate (4)'s quantifier to get rid of the inconsistent formulation through DQS. The traditional existential quantifier can be used to quantify the objects in actual existence and the newly introduced quantifier can be used to quantify the mysterious Meinongian objects. In Lycan's view, a Meinongian can indicate some of the usages in ordinary English language to make sense of this mysterious Meinongian quantifier and this can be achieved by considering some type of sentences which are similar to the following. There is a character in James Bond movies who is smarter than anyone in the CIA; there is a famous detective, Sherlock Holmes, who is smarter than other detectives in the world right now. In Lycan's view, in some sense these sentences will be regarded as true sentences. Meinongians could argue that as we understand the kind of expressions in such kind of normal quotidian sentences we can also understand the expressions in (4). In other words, as we understand the kind of usage of quantifier (such as there is/exists/∃) in normal quotidian sentences which are similar to the above mentioned sentences, we can also understand the usage of quantifier in (4). In Lycan's view, these similarities in usage in expressions and quantifiers can be introduced into Meinong's theory which will enable the Meinongians to introduce a new quantifier. Meaning can be provided to this new quantifier based on the above mentioned type of sentences from the quotidian context. Newly introduced quantifiers can be used to quantify over the Meinongian mysterious entities. The normal existential quantifier can be used to quantify the actual entities or the entities which any Russellian would be committed to. Based on this explanation, Lycan works out his DQS in the following way. The sentence

which is to be framed in Q-V-I is the following. There are things that don't exist. In two ways this can be represented.

$(\exists x)\boldsymbol{M}$ ~Actual x

or

$(\exists x)\boldsymbol{M}$ ~ $(\exists y$: Actual $(y))$ $(x = y)$

According to Lycan, this doesn't lead to any inconsistent formulation. Actuality indicating quantifier can be defined in the following way.

$(\exists x)\boldsymbol{A}$ …… x…… $(\exists x)\boldsymbol{M}$ (…x… & Actual (x))

$(\exists x$: Actual $(x))\boldsymbol{M}$…… x……

Both "$(\exists x)\boldsymbol{M}$" and "$(\exists x)\boldsymbol{A}$" might be sufficient for a Meinongian to quantify the entire entities in her ontology. Though Lycan's attempt is of DQS, in my opinion this isn't worked out properly. Though I get an idea of his DQS, when it is accomplished, I am unable to understand his formalized version of the same. In the left side of the connective there are two dashes: before the variable ***x*** and after also. It is not mentioned what these dashes represent. Same problem can be seen after the connective also. There are dashes and it is not mentioned what it represents.

Lycan makes this offer only on the condition that a Meinongian provides a semantical explanation for this Meinongian quantifier "$(\exists x)\boldsymbol{M}$". One option for the Meinongians is that she might regard this quantifier as a primitive one and thereby every quantificational statement or any English language constructions would be explained in terms of this operator. The Russellians, specifically Quine, regard "$(\exists x)$" = "there is" = "there exists" as primitive quantifier and any Meinongian constructions or quantificational statements or English language

constructions is understood in terms of this standard quantifier. This is how Lycan tries to interpret the Meinongian sentences like "There are things that don't exist". Even if Lycan makes his offer in this way, he himself is not a Meinongian. He says, "I have to take my place among those who find *Relentlessly* (i.e., *genuinely* or *primitively*) Meinongian quantification unintelligible……I mean that I really cannot understand Relentlessly Meinongian quantification at all."[25]

Here our concern is not to find out whether Lycan's DQS is correct one or not and thereby provide an alternative DQS. Our concern is directed towards his approach on Lewis' Modal Realism. Lycan, based on his DQS, comes to the conclusion that Lewis' version of Modal Realism which is generally known as Possibilism is met with some kind of Meinongian features or it is a Meinongian project. According to Lycan, mature Lewis equates "$(\exists x)\boldsymbol{M}$" with standard existential quantifier "$(\exists x)$" or "there exists" or "there is" and explains "actual" in terms of the spatiotemporal dislocation.[26] Let me make a quick response to Lycan's this contention in a very general way. In fact, the quantifier which is offered by Lycan "$(\exists x)\boldsymbol{M}$" cannot be even found in Lewis' system. Saying this much will not be enough. Briefly we can state the entire project in the following way. We should show what kind of entities Lycan's offered quantifier "$(\exists x)\boldsymbol{M}$" could quantify. "$(\exists x)\boldsymbol{M}$" could quantify those entities even if they don't exist. It can quantify those intentional entities too. It cannot quantify Lewis' merely possible entities which are similar to talking donkeys or philosophising cats. The quantifier which got generated in Lycan's DQS might not quantify the entities which Lewis' system quantifies over. In the following section, I will try to develop these ideas in a more detailed way.

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[25] Lycan, W. G. 1979. "The Trouble with Possible Worlds", In Michael J. Loux (ed.), *The Possible and the Actual*. Cornell University Press. pp. 274-316.

[26] Lycan continuously uses the term "spatiotemporal dislocation". At least for me this is a misleading terminology. What in fact he wants to say is spatiotemporal disconnection. "Dislocation" and "disconnection" as these words suggest obviously mean different; and especially when we are concerned with the metaphysical status of certain entities, this difference has to be maintained. Even if he uses the notion of "spatiotemporal dislocation", I will use "spatiotemporal disconnection".

III.4. My response: an Experiment in Meta-metaphysics and Meta-ontology

When the issues raised in sections II and III are addressed, I should pay attention to the point that different theoretical frameworks or systems are the focus of our concern: Lewis' version of Modal Realism (LMR) and Meinongianism (MS). They differ in their ontology. They differ upon the point what entities are to be included in their ontology. They differ on to what they are ontologically committed to. Linsky and Zalta say that in some or may be in many of the aspects these two theories or systems are said to behave similarly or said to have some similarity. Lewis needs to deny their contentions because Lewis claims that he is Russellian by nature: he quantifies over the entities in exactly the same way a Russellian would quantify over. He quantifies only over those entities which exists in the Russellian robust sense. Here the project is broader as Lewis is in his negative side of the ontological dispute. Lewis is in the negative side of the ontological dispute in the sense that he has to prove the negative: I am not a Meinongian. What does it mean to say that ***I am not a Meinongian***? Just answering I am a Russellian wouldn't do the job. Proving that I am not a Meinongian cannot be just achieved by answering the ontological question what there is. To the question of what there is or what exists, Lewis would say the following: I am very much clear of what things are there or what exists. They are the Russellian entities and they are the only entities which exist. The kind of problems raised by Linsky and Zalta, and Lycan are not the problems raised to the question what things are there or what are the entities which exist. Their problem is not a mere disagreement about what things are there. Their charge is that there are certain entities or may be the most of the entities which Lewis and a Meinongian have in common. Their contentions show that there is at least a partial agreement in what Lewis regards as what there is and what a Meinongian regards as what there is. Consequently this agreement affects Lewis' commitment towards a Russellian ontology. Lewis could say the following. It might be that you are successful in pointing out my unexpected agreement with Meinongian upon what things are

there. Nonetheless I don't belong to his camp, may be because the way the things ***are*** there or the way they ***exist*** for both of us (Lewis and Meinong) is not same. It seems that at least that the way things are considered to exist in your (Meinongian) system is not the way the things are considered to be existing in my (Lewis') system. How to show this? How to develop a way for me (Lewis) to disagree with you (Meinong)? How to characterise the nature of my disagreement with a Meinongian? In what follows, my project is to develop a way for LMR to disagree with the Meinongian. A way which clearly will show in what sense Lewis is not a Meinongian.

III.4.1. Some predicaments of this enquiry

It was mentioned that the LMR and the Meinongianism are two different systems or theories. In many respects, the language itself is different. These two theories' languages have different vocabularies. Some of the vocabularies in one cannot even be found in the other. For example, ***existence*** and ***non-existence*** as terms of property cannot even be found in Lewis' system. These terms do not function like property in Lewis' system. So they are not predicates. Parsons' version of Meinongianism has unique characteristics represented by the terms like nuclear and extra-nuclear properties which bring a great deal of difference from Lewis' system. Such distinctions employed by Parsons cannot even be found in Lewis' system which leaves us in such a position to find out what these distinctions supposed to purport in Lewis' system if they were to purport anything at all. These are some of the points to begin with. Since such a situation persists, we need to create a platform where these two theories can be brought and analysed to find out how exactly are they different or similar. In my opinion any attempt to address these kinds of issues will require us to use some criterion which itself is ontologically innocent to any of these two ontological theories. I am of the view that Quine's criterion of ontological commitment will be useful here. Quine's criterion of ontological commitment is not an ontological thesis. Here I simply assume Quine's criterion and I will use it for the

purpose of determining the ontological commitments of Lewis' Modal Realism. I will show how this criterion can be used for carrying out such a project. If we are going to answer the question whether Lewis is a Meinongian through the employment of Quine's criterion then the enquiry is in meta-level. For such an enquiry there could be some other concepts which will help us to distinguish the ontological commitment which any of these two theories make. Here I would like to introduce two notions: functionally isomorphic quantifiers and independent variable. I think this will help us to create a space or platform where we can bring these two theories together and can analyse the ontological commitment of each. The reason why we require such meta-ontological criterion is that the application of this criterion to such debate will enable us to dissect properly the predicate expressions, the meaning of the quantifiers, restricted or unrestricted use of quantifiers and the range of variables.

III.4.2. Quine's Criterion of Ontological Commitment[27] for this Problem

> An entity is assumed by a theory if and only if it must be counted among the values of the variables in order that the statements affirmed in the theory be true.

The aim of this criterion is to determine or fix what a particular theory says *there is* without committing itself to any particular ontology. Without committing itself to any ontological assumption, this criterion tries to determine what a theory concedes as existing. In this sense, the Criterion of Ontological Commitment (COC) is applicable to any theory which itself does not make any ontological commitment. The different concerns of this criterion can be put in different universes or worlds. By world, we don't mean possible world. The term world or universe is used to enhance the analysis. Let us say that the different concerns of the criterion can be put in at least six worlds or universes here.

7. The world of theories (***Wt***)

(***Wt***) consists of some or all possible theories, such as {T1, T2……Tn}

[27] A detailed discussion regarding this criterion is provided in the previous chapter.

8. The world of entities (***We***)

(***We***) consist of some or all possible entities which are assumed by the members of (***Wt***), such as {E1, E2……En}

9. World of values of the variables which are represented by constant letters (***Wv***)

(***Wv***) consists of some or all possible values, such as {V1, V2……Vn}

10. World of regimentation (***Wr***)

(***Wr***) consists of some or all possible regimented sentences or propositional function, such as {R1, R2……Rn}.

Although the following two worlds are part of (***Wr***), they are mentioned in order to show some consequences of the criterion.

11. World of Predicates (***Wp***)

(***Wp***) consists of some or all possible predicates or predicate expressions, such as {P1, P2……Pn}. Following is an example for this: ***x*** is P, ***x*** is A, ***x*** is B.

12. World of Q-V-I (***Wq***)

(***Wq***) consists of quantifier-variable idiom, such as {Q1, Q2……Qn}

III.4.3. Illuminating the debate in the Light of Quines' COC

When we connect the debate of whether Lewis is a Meinongian or not, to Quine's COC, we can illuminate the debate in an important way and also we can find the point of Quine's COC. One of the points of Quine's COC is that the names or predicates are immaterial or irrelevant to the ontological issues. In my opinion, this irrelevance can be understood from the above mentioned debate regarding whether Lewis is a Meinongian or not. I think it is here Linsky and Zalta failed in their project of determining the ontological

commitments of Lewis. To make the point very briefly, let us consider again what we called as quantifier restricting strategy (QRS). If we look into their arguments (Linsky and Zalta) we can see that while they were interpreting Lewis' modal metaphysics, their entire concentration was upon the predicate expressions such as "***x*** is actual", "***x*** exists" and "***x*** is real" etc. They say Lewis has his single quantifier and Lewis employs any of these predicates to move for restricted or unrestricted use of quantifiers. I would say a proper focus is not given on entities themselves which Lewis and Meinong are ontologically committed. Therefore, I will argue that Lewis' *the x which is it to be the value of variable* is mixed up with *the x which is it to be the value of variable* of Meinongians. If a proper focus is given for the entities themselves then we can show that Linsky and Zalta do not succeed in their argument. To determine the ontological commitment, we need other worlds which are mentioned above. We need the world of Q-V-I and the world of values and the correlation between the variable and the entity. I take Quine's suggestion that predicates are immaterial to the ontological issue and it is the entities which one needs to concentrate when the issue is ontology.

The second point is the following. Just looking at the quantifiers either existential or universal that occur either in the sentences or in the Q-V-I of the same sentences may not also help one to determine the ontological commitment. If someone were to determine the ontological commitment of a particular theory then it is not by looking at the (***Wq***) she does so. As it is said in the previous paragraph, we need to concentrate on the variable itself or the entities which could become the value of variable itself. I think Lycan's project is mostly directed from focusing on quantifiers because of which his argument also failed in determining the ontological commitments of LMR. We called his project as double quantifier strategy (DQS). What double quantifier strategy shows is that you can introduce some modifications within the quantifiers and can come up with different quantifiers to quantify over the entities to which you are ontologically committed in accordance with the theoretical purpose. This means

quantifiers can undergo modifications or they are vulnerable to modifications. In such a situation merely concentrating on quantifiers of the systems may not help in ontological issues. We simply need to look into the variable itself as Quine suggests.

While Lycan was interpreting Lewis' modal metaphysics, he said even if Lewis has his single quantifier, Lewis equates "$(\exists x)\boldsymbol{M}$" with standard existential quantifier "$(\exists x)$" or "there exists" or "there is" and explains "actual" in terms of the spatiotemporal dislocation. My point is that, the quantifier which is offered by Lycan "$(\exists x)\boldsymbol{M}$" cannot be even found in Lewis' system. Again to show this I need to show what kind of entities Lycan's offered quantifier "$(\exists x)\boldsymbol{M}$" could quantify. "$(\exists x)\boldsymbol{M}$" could quantify those entities even if they don't exist: it can quantify those (at least some) intentional entities too. It cannot quantify Lewis' merely possible entities those are similar to talking donkeys or philosophising cats. The quantifier which got generated in Lycan's DQS might not quantify the entities which Lewis' system quantifies over. In Meinong's framework, how this quantifier "$(\exists x)\boldsymbol{M}$" quantify the entities. What this direction shows is that ultimately I need to consider the entities themselves even to understand the meaning of quantifiers.

I think Lewis' response to Lycan can bring more light into what I try to suggest here.

> I think that what gives Lycan such bother is not the way I quantify: I quantify just the way he or anyone else does: over all the entities I think there are, or over less than all of them whenever it's convenient to impose some restriction.[28]

Look at Lewis' response on the way Lewis would quantify and the way any Russellian (in this case Lycan) would quantify is exactly same: the quantification is performed upon the entities which one regards as existing. What Lewis says can be put in a different way. Lewis doesn't quantify over those entities which don't exist or which aren't there. Lewis allows some restriction to the quantification whenever it is required to impose some restriction. In other

[28] Lewis, D. 1986. *On the Plurality of Worlds,* Oxford: Blackwell, p. 98.

words he employs some kind of QRS. Putting it differently, Lewis uses the quantifier **(*x*)** exactly in the same way any Russellian would use. It is used in the traditional sense. In the view of Lewis, Lycan's real problem is on the way Lewis uses the notion of "actual": the extent of actual needs to be the extent of the existential quantification. Quantifiers need to cover only those entities which are actual. To this Lewis objects by saying that he doesn't use the term actual as a blanket term which covers all that there is but he uses it as indexical. What is got hidden in this is that whether Lewis uses ***actual*** as indexical or not and whether Lycan uses it (***actual***) as a blanket term or not is immaterial to what Lewis is ontologically committed to. It is immaterial in the sense that merely concentrating on in what ways these terms are used in a particular system might not help to dissect the ontological commitment. If we are charitable to Lycan what Lycan wants to say can be restated in the following way. Do quantifiers in Lewis' system quantify the objects which are spatiotemporally unrelated to us? The answer would be yes. If it is so then for Lycan it is a Meinongian move. If we look at Lewis' response that he (Lewis) quantifies exactly the way Lycan quantifies. Now answering Lycan's worry in this way is not really going to help Lewis. Because some Meinongians can still say that the way Lewis quantifies is exactly the way we, some Meinongians, quantify. This is what Linsky and Zalta showed in their project in a very clarified manner. Parsons case is an example here. He has his single quantifier and we saw that he has his own version of QRS. It is true that existence is not a predicate in Lewis. Nonetheless talking donkeys and philosophising cat are flesh and blood entities or objects for Parsons. So is for Lewis. In the view of Linsky and Zalta this approach is not really going to help Lewis to distinguish him from these type of Meinongians. Which make Linsky and Zalta to conclude that there are Meinongian features in Lewis. In my view they are wrong. Lewis' answer to Lycan neither satisfies Lycan nor them. I will say that the reason is that Lewis complete concentration was upon the (QRS) as restricted and unrestricted use of quantifiers. More serious consideration is to be given to the entities themselves.

So concentrating on neither QRS nor DQS is going to help in answering whether Lewis is a Meinongian or not. It is true that in QRS, quantifier is fixed or only one quantifier is used. But we should notice that the quantifier is stretchable. Quantifiers have some kind of nature of stretchablity: restricted or unrestricted use of quantifiers in accordance with the temporary theoretical purpose. In DQS there could be more than one quantifier but to understand how they are employed ultimately one needs to look into the entities themselves. It might be stronger to say that even to understand the meaning of the quantifiers we need to look into the entities themselves. What remains fixed in QRS and DQS is the value of variable. Theoretical presuppositions are directly connected to variables. So what one needs to do is that, she needs to look in to the correlation between the members of (***Wv***) and (***We***): values of the variable are represented by the constant letters. Let us call this correlation as variable-entity correlation or parallelism. This entity-variable correlation helps one to determine the ontological commitment of a particular theory. These considerations are very significant when it is asked whether Lewis' Possibilism has any Meinongian features. Let me develop these points one by one in the following sections.

III.4.4. Restatement of the problem and the resolution

Once I consider Quine's criterion of ontological commitment in this debate, the questions and the problems can be reformulated in a different way. In our world of theories (***Wt***) we have got two theories and these are the following:

(i) Lewis' Modal Realism (LMR)

(ii) Meinongianism (MS)

(***Wt***) consists of (LMR) and (MS). And (***We***) consists of set of entities to which LMR and MS are ontologically committed. If we are keeping Quine's criterion at the base we could say that LMR will not be ontologically committed to all the members of (***We***), but only to some

set of members of (***We***). But it need not be that the same is applicable to the relation between MS and (***We***). MS will be ontologically committed to those entities to which LMR is also ontologically committed. The reason is quite obvious, MS is a larger ontology than the LMR or in other words MS will have more entities in its ontology than the entities which LMR has in its ontology. I would like to emphasize that we do make such demarcation between the entities and we say that there are some entities to which LMR is not ontologically committed from the perspective or from the point of view of Quine's criterion. Such a demarcation wouldn't be possible from LMR itself. From LMR or for Lewis one cannot say that there are certain entities to which LMR is (or I am or my theory is) not ontologically committed.[29] Otherwise, he will contradict himself. Such a demarcation between entities and saying that we are not ontologically committed to such entities is realized in the meta-level.

Let us call the members of (***We***) in relation to LMR as LMR-E entities. The LMR-E entities are the only entities to which the LMR is ontologically committed. But the same need not be said about the MS. As it was said above the MS is larger compared to the LMR. Now the point of Linsky-Zalta analysis is that LMR violates this requirement and according to their analysis in Lewis' ontology some entity of MS figures. One shouldn't forget that the problem is not regarding these entities which are spatiotemporally related with us. The entities which are spatiotemporally related to us will figure in both LMR and MS. The problem arises regarding those entities which are spatiotemporally unrelated to us. There is some kind of overlap between the entities to which Lewis and Meinong are ontologically committed. The overlap between the entities is attributed to those entities which are spatiotemporally unrelated to us. If so, the challenge for Lewis is to ensure that this overlap is apparent; this, in turn, will require us to enquire into the entities themselves.

[29] This is related to Quine's old Platonic riddle of being.

Let us also consider some members of (***Wp***) or (***Wq***) which are true sentences about the overlapping entities. In other words, consider the sentences which are true for both LMR and MS: ***There are/exist things*** which are spatiotemporally unrelated to us or ***there are*** talking donkeys. The first sentence will be represented as (∃*x*) (*x* is spatiotemporally unrelated to us) and the second sentence can be represented in Q-V-I as (∃*x*) (*x* is a talking donkey). In a way Linsky and Zalta begin their enquiry into the problem whether Lewis is a Meinongian or not by considering such kind of sentences which are true for both systems or for both theories. We begin to get a feeling that there is some parallelism between these two systems when we consider the sentences which are true for both systems. Two different systems and they differ in their ontological commitments. But there are some overlapping entities which figure in these two different theories. In such a situation, in my opinion, neither these kinds of sentences nor their Q-V-Idioms would help one to determine the ontological commitment of these theories. This was explained before also: neither concentrating on QRS nor on DQS will help us to settle any such dispute in ontology. We need to enquire into the entities themselves. Statements are true for both the theories and they use the same Q-V-I to talk about the entity. These two theories use the existential quantifier to talk about the entity to which they are ontologically committed. In this case, if someone tries to determine the ontological commitment of LMR and MS by considering the range of existential quantifier (as restricted or unrestricted) then the question arises whether she would be able to determine the ontological commitment of these two different theories. It seems that in such a situation one may not be able to determine the ontological commitment of these two theories. The quantifier helps one to range over the already assumed and ontologically committed entities. The role of quantifiers is to range over certain entities which are already assumed by the theory. So we need to focus on the entities themselves. It is the variables which are directly connected with entities.

If the above mentioned situation persists, instead of looking into the restricted and unrestricted use of quantifiers, following Quine's suggestion, one needs to look into the bound variables of the Q-V-I to determine the ontological commitment of these two theories. That is we need to look into the bound variable of the sentences (∃*x*) (*x* is spatiotemporally unrelated to us) and (∃*x*) (*x* is a talking donkey), instead of looking into the restricted and unrestricted use of quantifiers. These entities or objects over which Lewis quantifies and the Meinongian quantifies, the way they are there or the way they exist is not same. Thus the objects themselves need not be of the same kind. It is true and also obvious that the objects which are spatiotemporally related to us are the same for both LMR and MS. But the entities which are spatiotemporally unrelated to us for Lewis and the entitles which are spatiotemporally unrelated to us for Meinong are not of the same kind. If it is not of the same kind then what sort of an entity is Lewis committed to? How to show that the entities which are spatiotemporally unrelated to us for LMR and for MS are not same? To show this one needs to answer the following question. What sort of an entity could be the value of variable ***x*** in these sentences?

Here one could point out that, suppose one were to look into the bound variables of these sentences how is it that it helps one to determine the ontological commitment, because the assumed entities are the same for both LMR and MS. This question is significant because, the above mentioned case is not only about the true sentences regarding the entities which are spatiotemporally unrelated to us, but it is also about the true sentences of the same entities or overlapping entities of two different theories. Let me emphasise the point that the overlapping entities are: ***the thing*** that is talking donkey and/or ***the thing*** that is spatiotemporally unrelated to us. Since the same entities occur in two theories which differ in their ontological commitment, how would it help one to determine the ontological commitment of these two theories by looking in to the bound variable? For this, we need to explicate further the point about *looking into the bound variable*. Here, *looking into the bound variable* is to look into the way the

entity becomes the value of the variable that is looking into the elimination process. When we eliminate the variables, we eliminate them by using some constants, these constants stand for some entities which are assumed by theories. This particular elimination process is the one which helps someone to determine the ontological commitment of a particular theory.

Again we can state the problem in a somewhat different way which we have been considering. For COC which is the meta-ontology/meta-theory the given sentences are ($\exists x$) (x is a talking donkey) or ($\exists x$) (x is spatiotemporally unrelated to us) or similar kind of sentences. We need to say, in relation to a particular object theory that this sentence is true. Suppose there are two different object theories that is said to differ in their ontological commitments and some sentences are true for both the object theories. It is so, because in both the ontologies, the entities about which these sentences are, are regarded as real. But the ontological commitment in one theory seems to be different from the ontological commitment in the other theory for those sentences. Even if those sentences are true, due to those entities being real for both object theories, there is some difference in their ontological commitments with respect to the entities alluded to by the same sentences taken to be true in both theories. As there is a difference in the ontological commitment, Lewis cannot be regarded as a Meinongian (in any sense). So through meta-theory we can begin to say that although these sentences might be true for both object theories and similar entities figure in both object theories, nonetheless they differ in their ontological commitments and we can begin to show that though those sentences are true for both object theories but the way they are true differs. In other words, the mode of those sentences being true or false differs. It seems that what is said here can be captured by or it can be made sense of by saying that the instantiation process itself in one theory is different from the other theory. The instantiation process is different because the entities themselves are different. The way, the entities are real, are different or the mode of reality of the entities is different in different theories.

III.4.4.1. The issue of restriction upon variable

We are exclusively concerned with the application of COC to this debate, in order to dissect the ontological commitment of LMR and MS. For this, a problem which COC needs to take into account is related with the restriction of the variable. To understand this problem, let us consider an insight provided by Quine.

> So long as I adhere to my ontology, as opposed to McX's, I cannot allow my bound variables to refer to entities which belong to McX's ontology and not to mine. I can, however, consistently describe our disagreement by characterizing the statements which McX affirms. Provided merely that my ontology countenances linguistic forms, or at least concrete inscriptions and utterances, I can talk about McX's sentences.[30]

When ***X*** disagrees with her opponent ***Y*** on what things exist, ***X*** (the one who disagrees) cannot allow her bound variables to range over the entities (which do not belong to the ontology of ***X***) of ***Y*** (the one with whom ***X*** is in disagreement). In our case, Lewis cannot allow his bound variables to range over the entities of a Meinongian (and not belonging to Lewis' ontology) and vice versa. There involves a strong sense of restriction upon variable, which the principle (COC) in meta-ontology needs to take into account while dissecting the ontological commitments of different theories. Here, in our case this restriction is at work which we need to take into account when we consider whether Lewis is a Meinongian or not. Here, the problem is the following. At least in some cases, the bound variable of LMR seems to range over the entities of MS. If the bound variable of LMR ranges over the entities of MS then LMR assumes, at least, in part, the ontology of MS. Lewis cannot allow his bound variable to range over the all the entities of Meinong. Following Quine's formulation, we could say, Lewis cannot allow his bound variable to refer[31] to the entities which belong to Meinong's ontology

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[30] Quine, W. V. 1948. "On What There Is", *The Review of Metaphysics*, 2(1): 21–38. p.35.

[31] The notion of reference is to be taken seriously. Frank Jackson regards Quine's COC as referential criterion of ontological commitment, since variables are regarded as referring to some entities. See, Jackson, Frank. 1980. "Ontological Commitment and Paraphrase." *Philosophy* 55 (213), 303-315.

But then, variable referring an entity cannot be just regarded as referring to existing entities alone. Consider, Meinongian ontology, they will be having intentional entities too which don't exist, but merely

and not to Lewis'. The point of the argument of Linsky and Zalta, and Lycan can now be stated in the following way by relating it to Quine's COC. Lewis, apart from allowing his bound variables to range over the entities which are spatiotemporally related to us, in some way, also allows his bound variables to range over the entities which are spatiotemporally unrelated to us, to which a Meinongian is also ontologically committed. In other words, there are entities which are spatiotemporally unrelated to us, to which both Lewis and Meinong allow their bound variables to range over and those entities are of the same kind. Thus, there seems to be some identical ontological commitment. Thus, Lewis has some Meinongian features. Now, the problem for Lewis is to show that his bound variable doesn't range over the Meinongian entities.

How about Lewis saying that "I am not a Meinongian" or Lewis disagreeing that he is a Meinongian? This might not be similar to the kind of disagreement that is depicted in the above mentioned passage from Quine. Lewis saying that "I am not a Meinongian" doesn't seem to be similar to Quine's disagreement with McX on what there is. While Quine disagrees with McX, the disagreement wasn't upon the similar kind of entities, like in the case of Lewis and Meinong. Keeping the unproblematic entities (which are spatiotemporally related to us) aside, there isn't any entity to which both Quine and McX are ontologically committed. Thus, Quine doesn't have to deny any kind of similarity with McX. The problem is how to characterise the disagreement of Quine, without allowing Quine's bound variables to range over the entities of McX. The Quinean cannot quite consistently say that ***there are*** entities to which McX is committed but not me. "I cannot admit that there are some things which McX countenances and I do not, for in admitting that there are such things I should be contradicting

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subsist. As COC is a meta-theory, and if this meta-theory is to be applicable to other object theories then variable referring to intentional entities is to be explicated. The notion of reference requires some adequate explanations in COC. But this has to be worked out separately, and need not be an issue to be considered here.

my own rejection of them."[32] Unlike in the case of Quine, the problem seems to be even stronger in asking whether Lewis is a Meinongian or not. Here the dispute seems to be stronger in the sense that there is some similarity in the entities to which both LMR and MS is ontologically committed. Talking donkeys or the other similar entities are there in both LMR and MS, unlike in the case of Quine disagreeing with McX. Or, there are entities to which both (LMR and MS) are committed and they seem to be of the same kind. Lewis also would face the same issue which Quine faces that Lewis cannot quite consistently say that ***there are*** entities which a Meinongian is committed but not Lewis, because in doing so Lewis would be contradicting Lewis' own denial of those entities. Here prior to this kind of disagreement there seems to be some similarity in the entities to which both these theories (LMR and MS) are ontologically committed. Thus, stronger and rigorous characterisation of disagreement is required here. Because the disagreement needs to address the seeming similarity or the alleged similarity that Linsky and Zalta, and Lycan are trying to attribute to LMR. In that sense, Lewis' saying that "I am not Meinongian" requires a more rigorous characterisation which is to be carried out from the meta-theory side.

III.4.4.2. Two aspects of characterising the ontological disagreement

Characterisation of disagreement needs to take into account at least two aspects: the restriction aspect and the variance aspect. In other words, the apparatus which is to be employed in characterising the ontological disagreement needs to take into account two aspects which are mentioned above. What the restriction aspects takes care of is what Quine requires when he says "I cannot allow my bound variables to refer to entities which belong to McX's ontology and not to mine." In our case this needs to be understood with regard to the LMR and the MS and the LMR-E and the MS-E respectively. From the point of view of COC, the domain consists of all the entities of LMR and all the entities of MS that is the domain consists

[32] Quine, W. V. 1948. "On What There Is", *The Review of Metaphysics*, 2(1): 21–38. p.35.

of the LMR-E and the MS-E. The LMR cannot allow its bound variables to refer to the entities which belong to MS' ontology and not to LMR's. Similarly, the MS cannot allow its bound variables to refer to the entities which belong to LMR's ontology and not to MS'. So, there is some kind of restriction or control that emerges from the object theory. This is to be taken into account and is to be developed in the meta-theory. Through the creation of restriction what we (the meta-ontologists/theorists) achieve is not allowing the variables of a particular object theory to range over other object theories' entities. It is to be noted that from the side of (with in) the object theory there isn't any kind of restriction, as there aren't any object that stands outside the ontology of a particular object theory and its ontology is complete. But when the disagreement is to be made with the opponent then the restriction comes in the sense that the bound variable of one theory shouldn't range over the entities of the opponents.

The apparatus which is introduced to create the restriction should also be able to take care of the aspect of variance. COC, the meta-theory, will have different object theories and COC cannot allow itself to stick to any particular restriction and also cannot allow itself to stick to any restricted set of entities, though the object theories are required to stick to their own restrictions. From one restriction to the other restriction COC needs to shift, otherwise there might be a bias. Some variance is to be allowed or is expected for COC. This is related with the issue of Ontological Commitment of COC itself. We don't know whether we (COC) are committed to all the entities of object theories or not, but as far as we are able to allow ourselves to vary from theory to theory, whenever it is required, we have accomplished our requirement. Our requirement here is to fix the ontological commitment of two object theories. As far as we don't stick to LMR alone or MS alone, one cannot charge us with any kind of bias. Not only we can create the restrictions but also we can vary from theory to theory while dissecting the ontological commitments of object theories. This can be achieved by introducing the notions of independent variable and dependent variable in this kind of debate.

III.4.4.3. Introducing the Independent Variable and the Dependent Variable

The ideas of independent variable and dependent variable are introduced in meta-theory and here, the meta-theory is Quine's COC. Here, the object theories are the LMR and the MS. The COC needs to take into account the entities of both these object theories: LMR-E and MS-E. In what sense the COC is a meta-theory and the LMR and the MS are object theories, has been explained previously. Once we introduce the notions of independent variable and dependent variable into this debate, then the obvious questions are the following. What is an independent variable and what is a dependent variable? And why certain variables are regarded as independent variables and some other variables are regarded as dependent variables? In what way introduction of these notions resolves the issues in this debate?

Let us begin by saying that the various conditions of a particular object theory are regarded as an independent variable. These conditions of an object theory are about the reality of entities and they elucidate in what way the reality of an entity is to be construed and accepted in that object theory. In other words, these conditions are the basic presuppositions, of a particular object theory, about how an entity is to be regarded as real in that object theory. And let us call such conditions as ***r***-conditions of a theory or a system where ***r*** stands for reality. ***R***-conditions of a theory or a system together constitute the independent variable. Each object theory will have its own conditions and let us say, these conditions are the independent variable. For a meta-theory (COC) as there are different object theories, there will be different respective conditions and thus there will be various independent variables. Why these different conditions of object theories are regarded as independent variable is to be explained. But then, this can be explained only in relation to those items which work as dependent variables. Here, the dependent variables are the respective entities of object theories. In our case, the dependent variables are the entities of LMR (LMR-E) as well as the entities of MS (MS-E). These entities of object theories are regarded as dependent variable in the following sense. Different sentences can be brought under the scrutiny of or can be examined under a particular object

theory. Let us consider the same example of sentences regarding talking donkeys or sentences regarding the entities which are spatiotemporally unrelated to us: (∃*x*) (*x* is a talking donkey) or (∃*x*) (*x* is spatiotemporally unrelated to us). Let us ask the following question. What entities could be the values of the variable ***x*** in these sentences (the sentences which are under the scrutiny of object theories) so that the sentences are true (have a truth value) in a particular object theory (either in LMR or in MS)? Once these sentences (which are in the form of Q-V-Idioms) are brought under the scrutiny of LMR then in relation to LMR there are some entities that could be the values of variables in these sentences. For this, these sentences are to be examined under the ***r***-conditions of LMR. Once these sentences satisfy the ***r***-conditions of LMR then, only certain kind of entities could be the values of variables. The resulting entities that we get, once these sentences are examined under the ***r***-conditions of LMR, are the dependent variable. Independent variable is the ***r***-conditions of LMR. The same holds for MS too.

Let us consider an object theory ***OA*** and another object theory ***OB***. Suppose certain sentences are under the scrutiny of ***OA***. Then the variable ***x*** cannot take any value or it cannot take any entity to fill the variable ***x*** from any object theory; that is variable ***x*** cannot take an entity from ***OB*** or from some other object theory. When certain sentences are under the scrutiny of ***OA***, the variable ***x*** in these sentences cannot be allowed to range over other theory's entities or ***OB***'s entities. What entities could be the value of variable ***x*** in these sentences is dependent on the ***r***-conditions of the object theories and, these ***r***-conditions are the independent variable. The entities of object theories are dependent variables in the sense that these entities could be the values of variable of the sentences depending on certain ***r***-conditions of object theories. Once the sentences which are in the form of Q-V-Idioms are examined under the ***r***-conditions of a particular object theory, the entities that can be the value of variable of such sentences are the dependent variable. ***R***-conditions of object theories

impose certain kind of restriction upon the variables of the sentences to take any value. Once the sentences which are in the form of Q-V-Idioms are examined under the ***r***-conditions of a particular object theory, the variables that occur in Q-V-Idioms, in some sense are conditioned by the ***r***-conditions of that particular object theory to take any value. Variables have a range and the range is determined by the ***r***-conditions of a particular object theory. Thus, what entities could be the value of variable ***x*** in these sentences is dependent on the independent variable of a particular theory. Only under such independent variable which are the ***r***-conditions of particular theory one could say such and such entities could be the value of variables in the given sentences. COC cannot say that these sentences are true or false per se. COC can say under a set of ***r***-conditions which are the independent variable of a particular object theory a particular entity could be the value of the variable of the sentences. As the sentences are scrutinised under a particular (object) theory, the variables in those sentences have a range. That range is fixed by the independent variable which is the ***r***-conditions of an object theory. Independent variable of a particular object theory fixes the range of the dependent variable (variable of the sentences which are under scrutiny) of a particular object theory because what constitute independent variable are the ***r***-conditions of object theory. Secondly, independent variable prevents the dependent variable (variable of the sentences which are under scrutiny) to range over other object theory's entities. In other words, independent variable prevents the violation of the range of the dependent variable (variable of the sentences which are under scrutiny). Independent variable does so, because what constitute the independent variable are the ***r***-conditions of a particular object theory and the sentences which are under the scrutiny of a particular object theory have to undergo these ***r***-conditions. These ***r***-conditions fix the range of the variables in these sentences.

Let me put the same points in a different way. Different sentences can be brought under the scrutiny of object theories. Once various sentences are brought under the scrutiny of

any particular object theory, the point which the meta-theory needs to take into account is the point of restriction which that particular object theory requires. That is the variables in the sentences which are brought under the scrutiny of a particular object theory cannot be allowed to range over the entities of the opponent or the different object theory. From the meta-theory (here in our case, from COC) independent variable is the restriction part which it (COC) takes care for the object theory by not allowing the variable of an object theory to range over the entities of some other object theory. Independent variable does so, because what constitute the independent variable of a particular system/theory are that system's/theory's conditions. Any sentence which is under the scrutiny of a particular object theory needs to undergo these conditions or is required to undergo its independent variable. It was mentioned before that under the COC all the entities of the object theories (LMR and MS) are under consideration. From meta-theory we can say that for a particular object theory there is a particular range for the variables of the sentences. The range of a particular object theory is determined by the independent variable of that object theory. What constitute the independent variable of a theory are that theory's ***r***-conditions. Though different sentences can be brought under the scrutiny of a particular object theory, any entity cannot be the value of variable which are under the consideration of COC or the meta-theory. Here, object theories are two: LMR and MS. COC will have all the entities of both LMR and MS. When different sentences are under the scrutiny of a particular object theory (be it LMR or MS), any entity cannot be the value of variable in the sense that LMR's variable cannot be allowed to range over the MS' entities. In the same way, MS' variable cannot be allowed to range over the entities of LMR. These are the restrictions which COC needs to consider in our particular case that is being discussed here.

It was explained briefly that why certain variables are regarded as dependent variable. Now let us see why some other variables, namely ***r***-conditions, are regarded as independent variables. It was mentioned before that independent variable is the respective ***r***-conditions of

object theories. These conditions provide the mode of reality for the particular entity to be in that particular system. In other words, through independent variable, an object theory provides a particular mode for an entity to be real. To put it in ordinary language, particular independent variable of a particular object theory sets out conditions regarding how an entity is to be considered real or is to be considered present in that particular object theory.

Since there are different object theories, COC will consist of different set of conditions of these object theories and each set of these conditions are the different independent variables. Variability aspect of these set of conditions comes from the point that within the meta-theory (here, it is meta-ontology/COC) from one set of conditions of an object theory to other set of conditions of another object theory the meta-ontologist could make a shift. COC can shift from one kind of independent variable to other kind of independent variable. Through this shift what a meta-ontologist wouldn't do is that she wouldn't commit herself to any of these entities of object theories. She would be successful in not committing herself to these entities, because what is performed through this independent variable is the following. Given this is the particular independent variable which is a set of ***r***-conditions then some kind of entities are the resulting entities which an object theory would regard as the values of the variable in the given sentences.

Let us consider to represent the independent variable. As there are different object theories and as there are various respective conditions for these object theories, there would be various independent variables. So, we could say there would be various . Independent variable will enable COC to fix the range of the variable of a particular theory which will help to eliminate the overlap between the entities. And thus determine the ontological commitment of that particular theory. To determine the ontological commitment, we need to look into bound variable. It is the independent variable which enables one to look into bound variable of certain kind. Having considered these points, keeping Quine's ontological criterion we can ask the

following question. What sort of given entities is LMR ontologically committed to? From the point of view of COC, what is the independent variable of LMR.

Before giving an answer to this question, let me explain some more points regarding independent variable. Independent variable is the restriction which COC needs to take into account. This is introduced in the meta-ontology not in ontology. If we look at the kind of enquiry which is carried out here, we could see that it is not merely ontological. This particular aspect of this enquiry was mentioned before also. Here I think I need to repeat it again to make some of the points clear. Our enquiry is meta-ontological in the following sense. Here we are not providing an answer to the question what exists or what is there, but what we are trying to do is that we just look into particular theories (and here these are LMR and MS) and we see that what these theories say regarding what there is. Here, we try to find out whether there is any parallelism between these two theories. When our enquiry adopts Quine's COC a question may arise which we wouldn't be able to settle here: what entities are we or COC is committed to especially when we carry out meta-ontological enquiry.[33] Without getting worried about this particular issue, some arrangements are to be made here. I would say this has something to do with independent variable which I am trying to propose here. What it does is that for meta-ontological purpose this helps the meta-ontologist to create a restriction over the entities,

[33] To make sense of this question let us just ask the following question in relation to the theories which we have considered here: LMR and MS. Are we committed to all the entities to which these two theories are committed or is it that we are committed to only some of the entities? I am quite sure that it cannot be some entities. If we say that we are committed to some entities to the exclusion of others then this will create some bias in our analysis or in COC. In my opinion there are three options at least: we are committed to all the entities, secondly we are committed to none of them or thirdly we are committed to the theories themselves as entities not to the entities of the theories. Either we need to say we are committed to all the entities or we are committed to none of them. But we wouldn't be able to say we are committed to some of them. If we (COC) say we are committed to all the entities then we (COC) need to characterise in what sense we (COC) are committed to all of these entities. If we (COC) say that we are committed to none of these entities then we need to explain to what we (COC) are committed to. The other option is that we need to say that this is a higher order theory. Since this is a higher order theory, and if we are able to talk of this higher order theory being committed to some other entities that is this higher order theory is committed to lower level theories themselves as entities. But it needs to be explained that what does it mean to say that higher order theory being committed to these theories as entities. Secondly, a more difficult problem will be that higher order theory is committed to theories as entities but in what sense this higher order theory isn't committed to the entities of the lower level theories. But this issue cannot be settled here. How to characterise this ontological commitment of Quine's criterion is a different project.

because in the meta-ontology all the entities are regarded. We don't know whether the meta-ontological principle is committed to all or none of these entities. But it is our requirement or it is the requirement of the one who does the meta-ontology to devise a way to create a restriction within or among all entities which are at concern.

When we regard all the entities of these two theories (LMR and MS) to determine the ontological commitment of any of these theories, we shouldn't forget the fact that whatever is regarded as entities from our side need not be regarded as entities from the LMR's or the MS' side. We will be able to say that there are some entities to which, for example, LMR is not ontologically committed. But LMR is not in a position to say the same. She is not in a position to say that there are entities to which she is not ontologically committed. We need higher level or meta-level or meta-ontology to settle the dispute with the one who holds the rival ontology. Such ontological disputes cannot be settled at the same level. One is not in a position to say that my ontology is limited. She needs to say that my ontology is complete. My ontology has all the entities to which I am committed. We (the meta-ontology) wouldn't be doing justice to their position if we don't include such concerns in our analysis. I would say this is achieved by introducing independent variable in the meta-ontology. Independent variable fixes the range of variables in the sentences of object theories and the range is not altered. Altering the range of independent variable will result in altering the ontological commitments of some theory. Whatever phenomenon is presented to a particular object theory, those are to be explained within the range of that particular object theory. The limit is not set from the object theory but it is from the meta-ontology through COC. Having said this much regarding Independent Variable, let me come back to our chief problem of this chapter that whether Lewis is a Meinongian or not.

III.4.4.4. Independent Variable and the Dependent Variable in LMR and MS

Here, we should look into the independent (**α**) variable of Lewis' Modal Realism. Independent variable of Lewis' Modal Realism would encompass the physical kind. I do accept that now also I haven't shown anything really great by pointing out that the independent variable of Lewis would encompass physical kind. The reason is that, this is already mentioned or accepted by Linsky and Zalta and also by Lycan, though they didn't use anything called independent variable. In LMR, all the entities are of physical nature. There is no categorial difference between the talking donkey and the donkeys in our world because they are of the same kind. They are of the same kind in the sense they are of physical kind. Talking donkey is a physical kind and donkeys in our worlds are also a physical kind. This much is also accepted by Linsky and Zalta and also by Lycan. What I just did now is I just pointed out by connecting their debate with Quine's COC that in Lewis the independent variable will be always a physical kind. Lewis also points to the same idea while responding to Lycan: non-acceptance of categorial difference among objects. Merely pointing out that there is no categorial difference among entities wouldn't help Lewis or anyone to distinguish Lewis' position from some Meinongians' namely Parsons' version of Meinongianism. Because we saw that Parsons also accepts the existence of flesh and blood talking donkeys. In Parsons also in some way these kinds of entities are of physical nature. My idea that independent variable of Lewis as Physical kind has more things to say which will clearly show the difference between the LMR and the MS of Parsons. There is more to the idea that the independent variable is physical kind which Linsky and Zalta, and Lycan missed in their analyses. To point out this, let me set out various ***r***-conditions of LMR and these ***r***-conditions provide the mode of reality for an entity.

***R*-conditions of LMR**

Theses of Counterpart system[34]

1. Nothing is in anything except a world.

2. Nothing is in two worlds.

3. Whatever is a counterpart is in a world.

4. Whatever has a counterpart is in a world.

World-thesis of possible worlds

5. Possible worlds are spatiotemporally isolated concrete particulars.[35]

At the minimum, these five theses together provide ***r*-**conditions for an entity to be regarded as real in LMR. All these theses provide a particular mode of existence for objects which the meta-theory (COC) needs to take into account when the independent variable of LMR is fixed. First four theses together provide a particular mode of existence exclusively for objects in LMR i.e., objects as existing in possible worlds. The fifth thesis provides a particular mode of existence for worlds themselves. According to the first thesis, nothing stands or nothing is placed outside the worlds. Everything that exists, exists in some worlds. According to the second thesis, same object cannot exist in different worlds. Every object is world bound and none of the objects can exist in two world. Second thesis not only leads to the introduction of counterpart of objects[36] (mentioned in 3rd and 4th theses) but it also presupposes worlds

[34] Lewis, D. 1968. "Counterpart Theory and Quantified Modal Logic", *Journal of Philosophy*, 65: 113–26. p.114.

[35] 5th thesis is formulated by combining the point of isolation and the point of concreteness of possible worlds. See, Lewis, D. 1986. *On the Plurality of Worlds,* pp. 69-86.

[36] Introduction of counterpart of objects has some other motivations. Humphrey could have won the election. According to LMR, this is true because there is a possible world in which Humphrey wins the election. The question is, are Humphrey in our world and Humphrey in the other world identical. The second thesis wouldn't allow LMR to say that they are same. So it is the requirement from the part of LMR to explain this and she does it by saying that Humphrey in the possible world is the counterpart of Humphrey who is in

being isolated in some way. These four theses together provide a particular mode of existence for objects: every object that exists, exists in some worlds. But what are these things called worlds or possible worlds including the actual one, is pointed out in the 5th thesis. We could say that the 5th thesis provides a particular mode of existence for the worlds themselves. According to this thesis, possible worlds are isolated and this has some connection to the 2nd thesis (nothing is in two worlds). Unlike the 2nd thesis, the 5th thesis provides a demarcation principle for possible worlds: possible worlds are spatiotemporally isolated. The 5th thesis also mentions that the possible worlds are concrete entities. Though the 5th thesis provides a particular mode of existence for possible worlds, the mode of existence of objects has a connection with this thesis: in what way or in what manner these objects in different worlds exist. To explain this we need to look into the significance of the notion of spatiotemporality, the point that there is no categorial difference among the objects and also the idea of non-difference in the manner of existing. All these constitute additional points to the 5th thesis.

The notion of spatiotemporality becomes crucial in explaining the *worldmate* relation and also to give the isolation principle for worlds. If we consider the views discussed in his *On the Plurality of Worlds*, we can see that Lewis begins his explanation for isolation of worlds, by explaining the notion of *worldmate*: if two things or individuals are parts of the same world then they are said to be *worldmates*. A world $\boldsymbol{W}$ is the mereological sum of all the possible individuals that are parts of $\boldsymbol{W}$ and those individuals are *worldmates* of one another. A part being a *worldmate* of another part is further connected with the spatiotemporal relations between those parts of the worlds. Consider what is said by Lewis, "……things are worldmates iff they are spatiotemporally related. A world is unified, then, by the spatiotemporal interrelation of its

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our world. Since our concern here is different, we don't have to worry much about the counterpart relation and its pros and cons. Nonetheless, COC/meta-theory needs to consider this unique predicate "x is counter part of y" when the kind of ontological issues that are addressed here. And this predicate will not be found in the language of Parsons' version of MS.

parts."[37] Lewis explains how a particular world is unified from the point of parts being worldmates and the kind of interrelations these worldmates have with each other. Two possible individuals being worldmate is further explained in terms of the spatiotemporal relation which these individuals are said to have. Spatiotemporal relation works as necessary and sufficient condition for individuals being worldmate. Two parts having spatiotemporal relation becomes a crucial requirement for those parts to be the worldmates. In this way the notion of spatiotemporality[38] plays a crucial role in explaining the worldmate relation in LMR. The other way how spatiotemporality becomes crucial in LMR has to do with demarcation principle of the worlds. Spatiotemporal isolation works as the demarcation principle between worlds. When we consider the worldmate relationship as well as the demarcation principle together the notion of spatiotemporality plays a very significant role in LMR. Spatiotemporality plays a crucial role in providing the mode of existence for the objects which are the parts of the worlds and also for the mode of existence for the worlds themselves as isolated entities. These five theses together provide a particular mode of existence for worlds as well as for the things in those worlds. These five theses are very significant in fixing the independent variable of LMR. There are some other additional points to 5th thesis which are to be considered when the independent variable/ of LMR is fixed from the point of view of the meta-theory. These additional points are that there is no categorial difference among objects and the idea that there is no difference in the manner of existing. Not only in the above mentioned cases (of worldmate relation and of the demarcation principle among possible worlds), the notion of spatiotemporality plays a crucial role. The point of spatiotemporality becomes even more significant in LMR, when these additional points are considered. In what follows, what is shown is that how these additional points play a crucial in providing an account of a mode of existence for objects and the significance of spatiotemporality in doing so.

[37] Lewis, D. 1986. *On the Plurality of Worlds*, p. 71.
[38] Here, the expression "spatiotemporality" will be used in a very general sense to stand for space-time.

Lewis says the following regarding non-categorial difference between the worlds as well as among the objects in these worlds. Suppose it is asked what sort of a thing a possible world is, Lewis will say that, "I cannot give the kind of reply my questioner probably expects: that is, a proposal to reduce possible worlds to something else. I can only ask him to admit that he knows what sort of thing our actual world is, and then explain that possible worlds are more things of *that* sort, differing not in kind but only in what goes on at them."[39] "The other worlds are of a kind with this world of ours……The difference between this and the other worlds is not a categorial difference……Nor does this world differ from the others in its ***manner of existing***.……some things exist here at our world, others exist at other worlds; again, I take this to be a difference between things that exist, not a difference in their ***existing***."[40] The points which are in need of some attention are that, there is no categorial difference among the objects and there is no difference in the manner of existing. This could be related with the physicality of the things: things which are parts of the other worlds are of physical kind as the things which are parts of ours. They exist as physical entities and this point is accepted by Linsky and Zalta, and also by Lycan. However, not only this physicality adds to the non-difference in the manner of existing and to the non-categorial difference, the notion of spatiotemporality also adds to them. Apart from the physicality of the objects, how the notion of spatiotemporality plays a role in the non-difference in the manner of existing requires further clarification.

We can see that how crucial, for LMR, the notion of spatiotemporality is, when it is claimed that even the spirits are located in time. If the traditional stories are correct, spirits are not located in space and time. Couldn't it be true that there is a possible world which is populated by spirits? If so, then there is a world in which the parts of the worlds are not spatiotemporally interrelated. Lewis doesn't deny such possible worlds on the basis that such

[39] Lewis, D. 1973. *Counterfactuals*. Basil Blackwell, New York, p.85.
[40] Lewis, D. 1986. *On the Plurality of Worlds,* pp. 2-3. Italics added.

entities (spirits) could be located in time alone. Here, the concern is not to evaluate whether such problems are genuine and Lewis' response is correct or not. Moreover, he says that all worlds need not be unified by the same spatiotemporal interrelatedness. Worldmates of each world are interrelated spatiotemporally but the spatiotemporal interrelatedness in any world need not be the same in any other worlds. How the worldmates are interrelated or what kind of spatiotemporal relations are there between the worldmates could vary from world to world. I emphasise the point that nothing stands outside this spatiotemporal interrelation. Though Lewis says that the existence of spacetime and its parts don't play a significant role in his modal realism, the way worldmate relations between the things as well as the isolation of the worlds are worked out, we can see that this notion does play a crucial role. Any external relation could be brought to work out the worldmate relation and also the isolation of worlds other than the spatiotemporal interrelation. It is not necessary that one needs to stick to spatiotemporality. But what could be those external relations? It is also the case that Lewis doesn't offer any other fundamental external relations other than the spatiotemporal relation. So we are left with spatiotemporal relations as a fundamental relation.

According to the 1st thesis of counterpart system everything that exists, exists in some world (nothing is in anything except a world). Everything which is a part of the world is interrelated with other parts of the world through some spatiotemporal interrelation. So, there isn't anything that stands outside this spatiotemporal relation. Since nothing is in anything except a world, as things in each world are interrelated through spatiotemporal relation, there isn't anything that stands outside this relation. Lewis works out this interrelation between parts of a world as spatiotemporal interrelation. Spatiotemporal relation which is an external relation remains to be a fundamental relation in LMR. Though all worlds are not united as having same spatiotemporal interrelation, what cannot be denied is that, a thing which is a part of a world has some spatiotemporal interrelation with at least another part of that world. One significant

question arises regarding the relation and relata: spatiotemporal relation and the things between which the relation obtains. What could be the status of spatiotemporal relation and the things between which the relation obtain? Once spatiotemporal relations are regarded as the fundamental relation in LMR then the various conceptions regarding the space-time is to be given an adequate emphasis.[41]

III.4.4.5. Briefly on various conceptions of space-time and Lewis' neutrality

There are basically three views regarding the spatiotemporal relations and Lewis is neutral to take any position, though he prefers one among them over others. One of the views accepts the reality of space-time parts and the occupants that occupy these space-time parts. Lewis regards this as a dualist conception. In Lewis' view, the occupants of the space-time parts could be pieces of matter or objects. The properties are instantiated by the objects or the occupants which occupy the spacetime parts. Under this conception, space-time is separate entity which can exist independently of the occupants or the objects which are with some spatiotemporal locations. It is to this view the notion spatiotemporal location is crucial. Under this view space-time is similar to the container where objects can be put. The point is, even if the objects don't exist, the space-time can exist independently of any kind of object. But Lewis isn't much attracted to this view, because for him it is uneconomical. It might be because, there are various relations come into play. There are distance relation between parts of space-time, the relations of occupancy between occupants and the space-time parts and also the distance relation between the occupants.

[41] For Lewis' Modal Realism, it is not necessary to take a position on different conceptions of space-time. He can simply be neutral to any of those conceptions. We need to be clearer about his neutrality when it is asked whether Lewis is a Meinongian or not. This particular case of whether Lewis being a Meinongian requires us to consider the point of non-categorial difference and also the non-difference in the manner of existing. In my opinion, if we want to clearly pin down the difference between the LMR and Parsons' MS then these two points are to be explicated further. There the notion of space-time becomes crucial and what could be the conception which Lewis would prefer is to be given some emphasis. This will help us to see what more is there in non-categorial difference and non-difference in the manner of existing in LMR which will be significant to differentiate these two systems.

The second view rejects a separate reality for space and time and accepts objects alone. According to this view, there are only objects and the spatiotemporal relations or as Lewis says distance relations between these objects. Properties are instantiated by those objects which stand in some spatiotemporal relations. There is a third view, which Lewis is interested in and this view rejects occupants or the objects as separate entities. What is there is the different parts of the space-time or spatiotemporal regions or the points of space-time itself. The spatiotemporal relations are the distance relations between these regions or the points of space-time itself. Properties are instantiated by the part of the space-time points or the space-time regions itself. Regarding the last conception Daniel Nolan writes the following: under this view "regions of spacetime are entities in their own right, but that physical objects are just modifications of spacetime."[42] Lewis maintains neutrality between the first and the last conception. Lewis says "……I shall presuppose there are such things as spatiotemporal regions, whether or not there also are distinct things that occupy those regions."[43] It is to be noted that Lewis rejects the first view more weakly. Lewis says, "I tend, ***more weakly***, to oppose the dualist conception as uneconomical."[44] Lewis rejects the view that rejects any reality to the space-time in favour of objects which is the second view which means Lewis gives significance to space-time itself.

"Humean Supervenience … says that in a world like ours, the fundamental relations are exactly the spatiotemporal relations: distance relations, both spacelike and timelike, and perhaps also occupancy relations between point-sized things and spacetime points."[45] This quotation also suggests that Lewis maintains neutrality between the first view and the last view, at least in a weaker sense. To the first view the notion of spatiotemporal location is crucial and to the last view the notion of space-time point is crucial. Lewis maintains neutrality between

[42] Nolan, Daniel. 2005. *David Lewis*, Chesham: Acumen Publishing. p. 48.
[43] Lewis, D. 1986. *On the Plurality of Worlds*, p. 76.
[44] Ibid. Italics added.
[45] Lewis, D. 1994. "Humean Supervenience Debugged." *Mind* 103: 473–490, p. 474.

spatiotemporal locations and spacetime points. Here, our concern is not to address and resolve such neutrality.[46] There are other issues that come in such as in what sense these spacetime points are modifications of spacetime itself. Here what we would be concentrating is that the significance of the notion of spatiotemporality in LMR. Since Lewis rejects the theory that doesn't give an adequate place for the reality of space-time (the 2nd view), two notions become crucial: spatiotemporal location and space-time points. He maintains neutrality between these two. This aspect of neutrality is to be taken into account when the independent variable is fixed by the meta-theory. Since neutrality is maintained between spatiotemporal location and space-time points, both are to be considered about the objects: either the objects have spatiotemporal location or they are the space-time points itself. There isn't anything that stands outside such location in LMR or there isn't anything that is real which is not a space-time point. Everything that is real is points in space-time itself.

Now consider the notions of non-categorial difference among objects and the non-difference in the manner of existing of objects. To this the notion of physicality was well accepted by Linsky and Zalta, and Lycan upon LMR. That is, all the entities in LMR are of physical kind. I would like to emphasize the point that more than this physicality the notion of spatiotemporality seems to be crucial: everything that exists, exists as spatiotemporally located or as space-time points itself. The point of physicality can be used to explain non-categorial difference and the non-difference in the manner of existing to differentiate the LMR from the Meinongian framework. But Linsky and Zalta argue that sometimes this non-categorial difference also might not help us to differentiate the LMR from some Meinongians namely, Parsons' Meinongianism. Linsky and Zalta assume it is physicality that is crucial to non-categorial difference among objects. Once we try to elaborate non-difference in the manner of existing and non-categorial difference in LMR, we could see that the notion of spatiotemporality becomes quite crucial: everything that exists, exists as spatiotemporally

[46] Resolving in the sense, which should be preferred spatiotemporal locations or spacetime points?

located or as space-time points itself. In Parsons Meinongianism, that there is no categorial difference among the objects that exits and that don't exist, because they are of the physical kind. However in Lewis, apart from physicality, the notion spatiotemporality also adds to the non-categorial difference among the objects. Everything that exists, exists as spatiotemporally located or as space-time points itself. For Lewis, talking donkeys are not only physical kind but also are spatiotemporally located or they are space-time points themselves. This cannot be attributed to Parsons. For Parsons, as Linsky and Zalta points out there are flesh and blood talking donkeys which are of physical kind a claim which Lewis also would accept. Nonetheless they are not spatiotemporally located or they are not space-time points. Lewis would say there are flesh and blood talking donkeys which are of physical kind. Along this Lewis would also say they are spatiotemporally located or they are space-time points. It is so because the fundamental relation in LMR is spatiotemporal relation and it is this relation which is used to explain the interrelation among the parts of the same world.

There is non-difference in the way the objects exist as obtaining some spatiotemporal locations or the objects being the points in spacetime itself. This particular aspect is very significant in Lewis' modal realism and needs to be given an adequate emphasis. Lewis uses the analogy that the things in this room and the things in other rooms do not differ categorially and they are of the same kind. This analogy is apt to show in what sense the objects of actual world and of possible worlds are of the same kind. We know well the objects in one room and the objects in the other rooms; existential wise they are of the same kind. What we clearly get from this is the objects' physicality and Linsky and Zalta, and also Lycan emphasize the point of physicality. The point I would like to emphasize is the very spatiotemporality of the object itself in Lewis' system, as having some spatiotemporal location or being the space-time points itself. Spatiotemporality occupies a very crucial position in his modal metaphysics not only in

providing the isolation principle for worlds but also to provide a particular mode of existence for objects.

This point of objects' spatiotemporality (as having spatiotemporal location or as being space-time points) in Lewis' system is to be given adequate considerations with the language of nuclear and extra-nuclear properties which Parsons makes use to develop his system. I am not sure whether Linsky and Zalta assume that spatiotemporality in Lewis' framework is a nuclear property or not.[47] Nonetheless, consider the following claim made by Linsky and Zalta regarding Parsons, "Any *nuclear* property, such as being spatiotemporally located, being made of matter, having a certain size and shape, which might determine the category of a thing, can be shared by existing and non-existing objects alike."[48] At least from this passage, it is clear that in the interpretation of Linsky and Zalta, Parsons regards spatiotemporality as a nuclear property and not as an extra-nuclear property. Once, the language of nuclear and extra nuclear property is employed and if we regard *being spatiotemporally located* as a property then this property turns out to be one of the nuclear properties in Parsons' system or Parsons' Meinongianism. It is true that the language of nuclear and extra-nuclear property cannot be found in Lewis' system. Very fundamental to Lewis' system, it is very true that he will never regard existence as a property. Though there is no nuclear-extra-nuclear type of language in Lewis, if we can use such language to his system, we can ask the question in the following way. Would Lewis regard ***being spatiotemporally located*** a nuclear property or an extra-nuclear property? What kind of property would ***being spatiotemporally located*** be? Now, if we were to use the language of Parsons' system to look into Lewis' system then ***being spatiotemporally located*** is to be regarded as an extra-nuclear property not a nuclear property. Among various other extra-nuclear properties ***being spatiotemporally located*** would be an ontological property. Lewis himself will not accept such kind of explanation of his own system. It can be further explained

[47] At least they haven't mentioned anywhere.
[48] Linsky B. and E. N. Zalta. 1991. "Is Lewis a Meinongian?." p. 448.

in what sense *being spatiotemporally located* is not a property in Lewis' system. If we can borrow the terminology of Parsons' system and apply it in Lewis' system (just for the current theoretical purpose), along with existence, *being spatiotemporally located* will also be regarded as an extra-nuclear property, not a nuclear property. On other hand, if we stick to Lewis' system which is Russellian by nature then Lewis' modal realism wouldn't be regarding *being spatiotemporally located* as a property of individuals. This is explained below.

Having considered those five theses together with non-categorial difference and the non-difference in the manner of existing, let us consider the independent variable of LMR. The point of non-categorial difference and the point of non-difference in the manner of existing come under the 5th thesis. There we could see that the notion of spatiotemporality plays a crucial role. The five theses jointly provide the ***r***-conditions for an entity to be considered as real in LMR or they provide an account of particular mode of reality or existence for the objects or the entities. Once we fix those five theses as conditions then the resulting entities would be physical entities which are either spatiotemporally located entities or the points of the space-time itself. So the independent variable would be those five theses and thereby the resulting entities would be physical entities and space-time entities. Now we could say that the independent variable of Lewis and the independent variable of Parsons cannot be same.

In Lewis

= Physicality + being spatiotemporally located/being space-time points

In Parsons

= Physicality

Once we fix the ***r***-conditions of LMR then the resulting entities would be physical entities which obtain spatiotemporal locations or they are the points in spacetime itself. Once we fix

the ***r***-conditions in the above mentioned manner then the resulting entities in the sentences which are under scrutiny will be physical entities having spatiotemporal locations/being space-time points. These ***r***-conditions constitute the independent variable and what could be the value of variable in the sentences which are under scrutiny is dependent on these ***r***-conditions of LMR. What could be the values of the variable in the sentences such as (∃*x*) (*x* is spatiotemporally unrelated to us) or (∃*x*) (*x* is a talking donkey) is dependent on the ***r***-conditions of LMR. Whatever sentences are brought under the scrutiny of LMR, those sentences need to satisfy these ***r***-conditions. Take any such sentence once it satisfies these ***r***-conditions, the entity that would become the value of variable will be a physical entity which is spatiotemporally located or which is a point in space-time itself. But this is not the case with Parsons' Meinongianism.

III.4.4.6. Are "*x* is spatiotemporally located" or "*x* is a space-time point" predicate expressions in LMR?

As Lewis maintains neutrality between *having spatiotemporal location* and *being points in spacetime itself*, whenever something is said about one, the same would be applicable to the other. The problem that I find is something that concerns with the notion of spatiotemporal location and that being the property of things in the LMR. What do these expressions "*x* is spatiotemporally located" or "*x* is a space-time point" stand for? Are they predicate expressions? If they are regarded as predicate expressions then what is predicated is a property. Are they properties of things in the LMR?

If *being spatiotemporally located* is regarded as a property of things then it seems that a problem that is similar to Russell's problem of negative singular existential might arise for the LMR. For the sake of argument, let us consider *being spatiotemporally located* as a property of things. Now let us consider the sentence; some entity/object is not spatiotemporally located. It seems to me that the puzzle that is similar to the negative singular existential arises in the

following way. The above mentioned sentence says that some object lacks the property of *being spatiotemporally located*. If so, then our world or reality includes an object or an entity such that that entity lacks the property of *being spatiotemporally located*. Here also, as in the case of existence, we try to recognize one entity in our reality and we say that that entity lacks the property of *being spatiotemporally located*. It is almost like the case that we are required to accept the reality of an entity which is not spatiotemporally located, so that we recognize this sentence as expressing a true proposition. In other words, there is/exists an entity such that that entity is not spatiotemporally located. In the case of existence; we need to find out an object which has the property of non-existence. Since these problems arise I am of the view that along with existence, *being spatiotemporally located* also cannot be regarded as the property of individuals in LMR. We know that the notion of spatiotemporality has very great significance in his system when we consider the points of isolation between the worlds, fundamental relation between the objects and the objects being the points of space-time itself. Spatiotemporality cannot be regarded as a property of individuals. Let me briefly elaborate this point furthermore. Consider what is said by Lewis.

> If we believe in possible worlds and individuals, and if we believe in set-theoretic constructions out of things we believe in, then we have entities suited to play the role of properties. The simplest plan is to take a property just as the set of all its instances--all of them, this-- and other--worldly alike. Thus the property of being a donkey comes out as the set of all donkeys, the donkeys of other worlds along with the donkeys of ours.[49]

In LMR, all the properties are instantiated or there are no un-instantiated properties. Properties are construed as sets of objects and these objects are located or situated in worlds and these objects are world-bound. In other words, a property is the total instances of that property in all possible worlds including in the actual one. These instances or objects are in different worlds and this follows from the 1st thesis that nothing is in anything except a world.

[49] Lewis, D. 1986. *On the Plurality of Worlds,* Oxford: Blackwell, p. 50.

These instances are world bound and this follows from 2nd thesis that nothing is in two worlds. And to this if we consider 5th thesis and the additional points of 5th one then we need to say that these objects are spatiotemporally located or they are the space-time points themselves.[50] The property of being a donkey is the set of all the donkeys from all the worlds including the actual world. Considering the various points of 5th thesis, we could say that these properties are instantiated by something that is the space-time points or something that is spatiotemporally located. Being points of space-time itself or being spatiotemporally located is very significant in providing the mode of reality for an entity in LMR. It says in what manner things exist in different worlds in LMR. Hardly can we find anything that stands outside such points or locations. Now let us ask the following question. What kind of expression would "*x* is spatiotemporally located" or "*x* is a space-time point" be? If they are predicative expression then do these expressions predicate a property to things? The same issue might not arise to the expression "*x* and *y* are not spatiotemporally related" or to the expression "There are things which are not spatiotemporally related to ***us***". In LMR, there are many things which are not spatiotemporally related to each other. Things in any world are not spatiotemporally related to the things in other possible worlds. However, situation is quite different with the expressions like "*x* is spatiotemporally located" or "*x* is a space-time point".

Consider the following sentence with regard to LMR and consider only the concrete objects or individuals which exist within different possible worlds. Hobbits don't exist. Hobbits are not spatiotemporally located. This is a true sentence. They are fictional characters. From the first one we cannot say that (∃*x*) (~H*x*) by assuming something that is Hobbits. Likewise from such kind of sentences we cannot say that (∃*x*) (*x* doesn't exist). But then again from such kind of sentences we cannot say (∃*x*) (*x* is not spatiotemporally located). We are trying to identify some objects in LMR which are not spatiotemporally located or which are not space-

[50] This comes from the non-categorial difference and also from the non-difference in the manner of existing which was explained previously under 5th thesis.

time points and say that the object lacks the property of being spatiotemporally located. In LMR everything that is real is a space-time point or is spatiotemporally located. On the similar ground why "(∃*x*) (*x* doesn't exist)" cannot be accepted we could say "(∃*x*) (*x* is not spatiotemporally located)" cannot be accepted. It can be explained further more why there is a problem here.

The point which I would like to put forth can be explained with the help of the independent variable which is constituted by the ***r***-conditions of a particular theory. For this let me recapitulate some of the previous points very briefly. Quine said my variables cannot be allowed to range over the entities of my opponent's entities while I disagree with her over what things exist. A method is required to represent my disagreement with my opponent. In some cases this disagreement requires rigorous characterisation. For example Lewis saying that "I am not a Meinongian". The reason for the requirement of rigorous characterisation was cited before. For this we tried to introduce the notion of independent variable into this debate. It was said what constitute the independent variable is the ***r***-conditions of a particular system and the ***r***-conditions are the conditions that provide a particular mode of existence or reality for an entity to be in that system.[51] ***R***-conditions impose a kind of restriction upon the variables of the sentences to take any value in the sense that variables in the sentences cannot be allowed to range over the entities of opponent theory's entities. Then we tried to find out the ***r***-conditions of the LMR and there we could see that physicality and spatiotemporality plays a crucial role in the ***r***-conditions of the LMR. What could be the value of variable of sentences which are under the scrutiny is dependent on the ***r***-conditions of the LMR. ***R***-conditions of LMR constitute the independent variable of the LMR or they are the independent variable of the LMR. If so, ***x*** the variable that occurs in Q-V-I of the sentences which are under the scrutiny of the LMR is already restricted by the ***r***-conditions of the LMR. To put it differently, the range of the

[51] Why ***r***-conditions are regarded as the independent variable is explained before and what are the advantages in regarding ***r***-conditions as the independent variable is explained previously.

variable ***x*** in the Q-V-I of the sentences which are brought under the scrutiny of LMR is fixed by these ***r***-conditions of LMR. In other words, the variable ***x*** that occurs in the Q-V-I of the sentences which are brought under the scrutiny of LMR are constrained by the ***r***-conditions of LMR. Thus, these variables cannot take any value in the sense that it cannot range over the opponent's or other theory's entities. The variables in the sentences which are brought under the scrutiny of the LMR will not range over the entities of MS in the sense the range of the variable is set by the ***r***-conditions of the LMR. What entity could be the value of a variable in these sentences is dependent on the ***r***-conditions of the LMR. The significance of spatiotemporality (as points or as locations) in the LMR is indicated in the 5th ***r***-condition of the LMR. The notion of spatiotemporality (as points or as locations) as it is construed in the LMR plays a crucial role in fixing or setting the range of the variables in the sentences. The notion of spatiotemporality (as points or as locations) is a crucial element in the ***r***-conditions of the LMR and thus, this notion plays a crucial role in putting up a restriction upon the variables in the sentences.

To put it in another way, you can bring any sentence under the scrutiny or observation of my theory (LMR). Once you bring the various sentences then you need to convert those sentences into Q-V-Idioms. Now the variables in these Q-V-Idioms can stand only for those entities that satisfy my ***r***-conditions. My ***r***-conditions constitute the independent variable. Any sentence you bring, it must be satisfied by this independent variable. You can see that the notion of spatiotemporality (as points or as locations) plays a crucial role in providing a condition for what entities needs to fill the dependent variable position in my theory (LMR). In one sense, my variable can take any value and there is no limit. But suppose my opponent comes up with a different type of entities which I don't accept as real then my variable cannot be allowed to range over her entities. So, there, the range of my variable is circumscribed by my ***r***-conditions and in those conditions spatiotemporality plays a crucial role in circumscribing the range of my variable. However, the range of my variable is complete and there is nothing

stands outside this range. What about my opponent's entities? They simply are not real. The question of those being within the range of my variable doesn't arise. My presuppositions are directly linked to the variables or the ***r***-conditions are directly linked to the variables that occur in these sentences. If so, then the variable ***x*** that occurs in the sentences which are under the scrutiny of the LMR is assumed to have been infused with spatiotemporality (as points or as locations) and physicality. If so then it might be that, the sentences in which "being spatiotemporally located" or "being space-time points" occurs as a predicate adds nothing to the sentences. In what sense these expressions don't add anything to a sentence is explained with the help of the examples below. Sometimes considering them as property that can be predicated of things might figure in some kind of incompatibility also. To show this let us, consider the different sentences and their Q-V-Idioms in relation to LMR.

Hobbits are not spatiotemporally located. This can be represented in Q-V-I in the following way.

(5) ~ (∃*x*) (H*x* & ST*x*)

Consider the following unacceptable representation of the same sentence.

(6) (∃*x*) (H*x* & ~ST*x*)

Problem with this representation is that, one is trying to accept something that is Hobbits and deny the property of having spatiotemporal location to that thing. It means it leads to the acceptance of the reality of something which is not a space-time point or is not spatiotemporally located in the LMR. But for LMR, everything that is there to the reality is the different space-time points or regions. Here, in this kind of representation, the variable ***x*** is allowed to range over some other entity which normally doesn't figure in the LMR. Somehow there is this violation of the range. This leads to some kind of alteration upon the range of variables of these sentences, which will affect the ***r***-conditions. It sounds like accepting the reality of something that is Hobbits and also accepting the reality of the same thing which is not spatiotemporally located or which is not a space-time point. This will obviously go against

the ***r***-conditions of the LMR. The range of the variable is altered. This will result in some kind of incompatibility. Something like one is trying to identify the entity in reality which is not in the reality of the LMR. So the acceptable representation of the same sentence for the LMR is the following.

(7) ~ (∃*x*) (H*x* & ST*x*)

This representation doesn't lead to the kind of problem which was faced by the previous one. But consider the second conjunct "(ST*x*)" which is read as "*x* is spatiotemporally located" or "*x* is a space-time". This portion in the Q-V-I adds nothing to the sentence itself. The independent variable which is constituted by the ***r***-conditions had already put a restriction upon the variable ***x*** which will occur in the Q-V-Idioms of these sentences. In other words, the range is fixed by the ***r***-conditions upon the variable ***x*** in these sentences. In doing so, spatiotemporality plays a crucial role and we saw this in the 5th thesis. If so, then the variable ***x*** is already assumed to have certain import of spatiotemporality: ***x*** in LMR will stand for an entity with spatiotemporal location or a space-time point. So when we consider the open sentence "*x* is spatiotemporally located" in relation to LMR, sentence seems to be a tautology. If not a tautology at least the occurrence of such expression as predicate in the sentences seems to be redundant. Because in the parameter of ***x***, we could see spatiotemporality is already infused. The variable ***x*** is already restricted by the ***r***-conditions and in those ***r***-conditions spatiotemporality has a very crucial role which is clear from the additional points of the 5th thesis. Thus the second conjunct "(ST*x*)" of the sentence adds nothing to the entire sentence.

(8) (∃*x*) (ST*x*)

The LMR has already has set or has fixed that the variable ***x*** in the sentences will stand for a space-time point or for spatiotemporally located things. To put it in the normal language this sentence says something similar to the following: spatiotemporally located thing is spatiotemporally located thing. Now consider the following Q-V-I.

(9) (∃*x*) (~ST*x*)

And this seems to suggest something similar to the following: spatiotemporally located thing is not spatiotemporally located thing.

(∃*x*) (ST*x*) seems to be a tautology

(∃*x*) (~ST*x*) seems to be a contradiction

Once you try to give value for this expression by considering any entity from the LMR, the first one will always end up in being true and the second one will always end up in being false. This ***x*** already has an import of spatiotemporally located things or being space-time points in the LMR. Not only are the substitutional instances always false. In the 2nd one, we face some kind of inherent inconsistency. If these problems are on the right track then spatiotemporality (being spatiotemporally located or being space-time point) cannot be regarded as property of things in the LMR. None of these kind of issues can be attributed to Parsons' Meinongianism. Therefore, the LMR cannot be said to have any kind of entities that are similar with Parsons' Meinongianism. The entities which are spatiotemporally unrelated to us are fundamentally different for the LMR and for Parsons' Meinongianism. Now there is one more way to show their difference. It was shown that being spatiotemporally located or being space-time points cannot be regarded as properties of the things. It can be further shown that it can function like quantifiers. In what follows, it is shown that how this can function like quantifiers.

III.4.5. Functionally Isomorphic Quantifier (FIQ)

Linsky and Zalta call Lewis' Modal Realism as Diamond Dropping Possibilism. According to them this is primarily a Meinongian move. Lewis provides a reductive analysis or a non-modal analysis of modality: modal notions can be explained in terms of non-modal entities such as possible worlds and possible worlds are nothing but spatiotemporally isolated concrete particulars. And they exist in the same sense our actual world exists. Such is Lewis'

system. In Lewis' system the sentences like possibly there could have been a talking donkey can be interpreted as there is a talking donkey (there exists an ***x*** such that ***x*** talks and ***x*** is a donkey).

(10) $\Diamond \exists \boldsymbol{x}$ (T$\boldsymbol{x}$ & D$\boldsymbol{x}$) can be interpreted as the following.

(11) $\exists \boldsymbol{x}$ (T$\boldsymbol{x}$ & D$\boldsymbol{x}$)

Using his theory (metaphysics) of possible worlds Lewis can go for such interpretations and these interpretations will not involve any modal traces. In other words, the diamond ($\Diamond$) can be dropped without any problem. Linsky and Zalta call this strategy of Lewis as Diamond Dropping Possibilism (DDP). According to them, DDP is basically a Meinongian move. (in what sense this is a Meinongian move is to be explained here.). What I would like to point out is that even in DDP also one cannot find any similarity with Parsons' version of Meinongianism or any version of Meinongianism. This can be explained with the help of what I would call Functionally Isomorphic Quantifier (FIQ). Diamond operator is simply dropped and what is left at the end is the existential quantifier which is used in the Russellian/orthodox sense. The move which Lewis takes in DDP cannot be seen to be a Meinongian one. This can be shown by elucidating in what way this diamond is dropped with the help of FIQ.

FIQ is system specific. FIQs are those quantifiers which can be employed at the place of existential quantifier within a particular system. We don't say that existential quantifier can be replaced by FIQ of a particular system. This is introduced in a system specifically to distinguish it from other systems when it is required to distinguish. Such quantifiers are functionally isomorphic to existential quantifiers in the sense that within the system this can function like existential quantifiers. With regard to function there is a similarity between the system's FIQ and the existential quantifier. Here FIQ is introduced in Lewis' system.

In Lewis' system, FIQ can be devised by introducing the element of spatial and temporal element into existential quantifier. We saw that spatiotemporality plays a very crucial

role in his system. This rearranged FIQ or particular quantifier will be effective iff this FIQ yields the same results whatever Lewis' system gets when existential quantifier is used. One such result is the following: the truth value of the sentences with existential quantifier should remain the same for the sentences in which the existential quantifier is replaced by FIQ. FIQ needs to quantify or should be able to quantify those entities which could be quantified by existential quantifier in Lewis' system. Let us call this new rearranged quantifier or the FIQ of Lewis' system as spatiotemporal quantifier or st-quantifier. Let me represent it in the following way: $^{s}\!\!+\!\!+$. There is an "s" which stands for space and the symbol "$+\!\!+$" stands for temporal element and all of them are enclosed within the parenthesis. This can be read as spatiotemporally located. When we use it in the sentences, this can be read as the following.

Spatiotemporally located thing [is] such that…..

Here, when we introduce the variable ***x*** this would look like the following.

Spatiotemporally located ***x*** [is] such that…..

Abbreviated formulation would be the following:

$^{s}\!\!+\!\!+^{x}$

What I would be showing is the following:

$\Diamond\ (\exists \boldsymbol{x})$

$\downarrow$

$(\exists \boldsymbol{x})$

$\downarrow$

$^{s}\!\!+\!\!+^{x}$

(12) $\Diamond\ (\exists \boldsymbol{x})$ $\quad$ $(\exists \boldsymbol{x})$

(13) $(\exists \boldsymbol{x})$ $^{s}\!\!\dagger^{x}$

First one is already explained in Diamond Dropping Possibilism. Let us see the second one. First let us see how this work in sentences.

1. Possibly there is a talking donkey.

2. There is/exists a talking donkey.

3. Spatiotemporally located thing [is] such that it is a talking donkey. (Spatiotemporally located thing [is] such that, that thing talks and that thing is a donkey.)

Last one doesn't use the existential quantifier (∃). It uses the FIQ of Lewis' system which is generated from the element of spatiotemporality of Lewis' system. When we make a rearrangement in the quantifier by introducing the spatiotemporal element, the above mentioned sentence can be represented in quantifier variable idiom in the following way.

(13) $^{s}\!\!\dagger^{x}$ $(Tx \,\&\, Dx)$

Following are the different interpretations.

◊ $(\exists \boldsymbol{x})$ $(T\boldsymbol{x} \,\&\, D\boldsymbol{x})$ can be interpreted as the following which was explained previously.

$(\exists \boldsymbol{x})$ $(T\boldsymbol{x} \,\&\, D\boldsymbol{x})$

$(\exists \boldsymbol{x})$ $(T\boldsymbol{x} \,\&\, D\boldsymbol{x})$ can be interpreted as the following.

$^{s}\!\!\dagger^{x}$ $(T\boldsymbol{x} \,\&\, D\boldsymbol{x})$

It seems that this particular st-quantifier (FIQ) which is devised in Lewis' system, can yield the same results which our standard existential quantifier can yield. It has the existential import and it quantifies over those things which the standard existential quantifier quantify in Lewis' system. This is possible because of the kind of possible world theory or the kind of metaphysics of possible worlds he has. In his system "nothing is in anything except a world" which is the first primitive postulation of his counterpart theory. This says everything that exists, exists in some world. These worlds are isolated and the isolation is explained as spatiotemporal isolation. Things exist in such spatiotemporally isolated worlds. From this we can say that nothing is in anything except spatiotemporally isolated worlds. Existence of the things in the worlds is very much related with the notion of spatiotemporality. That is why s-t-quantifier will be sufficient to perform all that can be performed by the traditional existential quantifier in Lewis' system.

My motivation to suggest and employ FIQ stems from Lewis' view regarding physicalism: we have geometry: a system of external relations of spatiotemporal distance between points. Maybe points of spacetime itself, maybe point-sized bits of matter or aether or fields, maybe both. Here I am more interested on the point of viewing geometry as a system of external relations of spatiotemporal distance between points or as points of spacetime itself. Each such point is the constituent of the entire reality. This suggests that anything which is real is in space and time. Anything which is real is said to be spatiotemporally located. Lewis, since he is committed to orthodox ontology, doesn't make any difference between that which exists and that which is real. Anything which is real is spatiotemporally located or anything which is real exists. Anything which is real or exists is said to be the individuals which themselves are the space-time points. If so then anything which is real is said to be spatiotemporally located.

1. $\overset{s}{+}$

2. ( ) = $^{s}\!\!+$

3. ($\boldsymbol{x}$) (D$\boldsymbol{x}$ & T$\boldsymbol{x}$)

4 $^{s}\!\!+^{x}$ (D$\boldsymbol{x}$ & T$\boldsymbol{x}$)

5. ($\boldsymbol{x}$) (D$\boldsymbol{x}$ & T$\boldsymbol{x}$) ≡ $^{s}\!\!+^{x}$ (D$\boldsymbol{x}$ & T$\boldsymbol{x}$) (2,3 &4)

($\boldsymbol{x}$) of Parsons ≠ $^{s}\!\!+^{x}$

Conclusion

In Lewis, it is very much clear in what sense possible objects and actual objects are of the same kind. I don't say that in Parsons' system there is a categorial difference among objects. I accept the argument of Linsky and Zalta, that there is no categorial difference among the objects in Parsons. The whole point of my argument is that, it isn't clear in what sense they are of the same kind. Even if they were to be of the same kind or even if there were no categorial difference among the objects, this cannot be shown as it is shown in the case of Lewis by using the FIQ. Even if they were to be of the physical kind will it be like Lewis. I don't think so. This difference is clear when we consider the notion of spatiotemporality. In Lewis, we know very well that there is no categorial difference among the objects. Both actual and possible objects exist in the same way or same sense. Possible worlds are there in the same way actual world is there. Possible objects exist in the same way actual objects exist. We know that actual objects and me and any other object which is familiar to us exists as occupying some space and time. They are spatiotemporally located. Every object is spatiotemporally located. Every object in any possible world is in space and time as the objects that are spatiotemporally related to us are in space and time. All these features of the objects add to their non-categorial difference between

them. It is almost clear in what sense in Lewis' system there is no categorial difference among objects. But it isn't clear that in what sense there is no categorial difference among these objects in Parsons' framework.

CHAPTER IV
CONCLUSION

The main aim of this thesis has been to address and resolve the following two problems: (i) the one which is raised by Israel Scheffler and Noam Chomsky[1] against Quine's criterion of ontological commitments (QCOC) and (ii) the other problem was regarding whether David Lewis' Modal Realism (LMR) is met with any Meinongian feature. Accordingly, I had divided the thesis into two parts. The debate concerning whether LMR in its (LMR's) ontology is met with any Meinongian feature (Is Lewis a Meinongian?) has persisted for some time in the literature of modal metaphysics. Mainly there were two systematic attempts to point out Meinongian feature in LMR: one is by William G. Lycan[2] and the other attempt is by Linsky and Zalta. I first show in my 3rd chapter that this problem had remained unresolved as there was no adequate response made to Linsky and Zalta. I also show that the response made to Lycan by David Lewis[3] might not help in disambiguating LMR from Meinongianism (MS). I engage in a meta-level enquiry by using a criterion which doesn't make any ontological commitment to the entities of any of these theories (LMR and MS). For this I employ QCOC. However to enhance such an application of QCOC a serious problem indicated by Scheffler and Chomsky needs to be addressed. The extension and the application of QCOC are made under the assumption that QCOC isn't committed to the entities of the theories to which it is applied (LMR and MS). Once the application of QCOC is extended further to disambiguate LMR from MS, the problem raised by Scheffler and Chomsky gets deepened. Because Scheffler and Chomsky are of the view that QCOC cannot be accepted as QCOC itself is committed to the entities to which it is applied. So, first the project is to resolve the issue indicated by

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[1] Scheffler, Israel, and Noam Chomsky, (1958-59). "What is said to be." *Proceedings of the Aristotelian Society*, Vol. 59, pp. 71–82.
[2] Lycan, W. G. 1979. "The Trouble with Possible Worlds", In Michael J. Loux (ed.), *The Possible and the Actual*. Cornell University Press. pp. 274-316.
[3] Lewis, D. 1986. *On the Plurality of Worlds,* Oxford: Blackwell, p. 98.

Scheffler and Chomsky on QCOC and then, use QCOC to disambiguate the ontological commitments of LMR from MS.

In this thesis different theoretical frameworks are examined: David Lewis' Modal Realism (LMR), Meinongianism (MS), Russellian orthodoxy and Quine's criterion. In the introduction chapter I give a very brief explanation about what these different frameworks are. By considering a problem arising out of the Referential theory of Meaning and a related problem of the Paradox of negative existentials, I show how the Russellian orthodoxy and the Meinongians would respond to these problems. I do this not merely to give an account of what these two different frameworks are but to explain that how in the process of responding to the Meinongians (while addressing these two problems), Russell used the quantification method and how this quantification method was subsequently used by Quine to develop his criterion of ontological commitments. To put it simple, first part of the thesis gives a background of QCOC which is extended from Russell's quantification method which he (Russell) used to respond to the Meinongians. In the second part of this chapter I give a brief explanation about David Lewis' Modal Realism.

Three problems are addressed in my second chapter, (Resolving Scheffler's and Chomsky's Problems on Quine's Criterion of Ontological Commitments): (1) the problem of inexorable ontological commitments, (2) the problem of false existential inferences and (3) the problem of extended inexorable ontological commitments to rival entities. In order to address these issues, I show that there is a functional difference in the ontological commitments of QCOC (meta-theory) and the object theories to which QCOC is applied. The aim and purpose of QCOC is not to determine what is real/exists. The aim and purpose of QCOC is to determine what a particular theory says what exits or real. I explain that determining what exists and determining a particular claim or theory ***says*** what exists is not the same philosophical enterprise. The intended purpose of QCOC being ontologically committed to the entities

differs from the intended purpose of object theories being ontologically committed to the entities. Here, considering the functional difference between QCOC and the object theories, I introduce the notions of direct ontological commitment and indirect ontological commitment of the theories. I define these in the following way.

A theory is directly ontologically committed to the entities iff committing to such entities results in the determination of what is real/exists.

A theory is indirectly ontologically committed to the entities iff committing to such entities doesn't result in the determination of what is real/exists.

Using this distinction I respond to the problems of extended inexorable ontological commitment to the rival entities, false existential inferences and extended inexorable ontological commitment to the entities. Having shown that the problems raised by Scheffler and Chomsky against QCOC can be satisfactorily addressed, I move on to address the issue in modal metaphysics through the application of this criterion.

In my third chapter (A Meta-Ontological Enquiry into the Parallelism between David Lewis' Modal Realism and Meinongianism), I use Quine's criterion to show that Lewis is not a Meinongian in any sense. I extend Quine's criterion by introducing the notion of independent variable into this debate. R-conditions are regarded as the independent variable. Then I showed that the notion of spatiotemporality plays a crucial role in the r-conditions of LMR unlike in the case of Parsons' Meinongianism. I extend this result further and show that ***being spatiotemporally located*** cannot be regarded as a predicate expression in LMR. Subsequently by linking spatiotemporality and quantification, I show that st-quantifier (FIQ) which is devised in Lewis' system, can yield the same results which our standard existential quantifier can yield. However the same cannot be said of Parsons Meinongianism. Therefore, Lewis' Modal Realism is not met with any feature of Meinongian ontology.

Various conditions of a particular object theory are regarded as independent variable. These conditions of an object theory are about the reality of entities and they elucidate in what way the reality of an entity is to be construed and accepted in that object theory. They are called ***r***-conditions of a theory or a system where ***r*** stands for reality. ***R***-conditions of a theory or a system together constitute the independent variable. Here, the dependent variables are the respective entities of object theories. In our case, the dependent variables are the entities of LMR (LMR-E) as well as the entities of MS (MS-E). These entities of object theories are regarded as dependent variables in the following sense. Different sentences can be brought under the scrutiny of or can be examined under a particular object theory. What entities could be the values of the variable ***x*** in the sentences which are under the scrutiny of object theories so that the sentences are true (have a truth value) in a particular object theory (either in LMR or in MS), is dependent on the r-conditions of the object theory. The sentences which are under the scrutiny of a particular object theory need to be examined under the ***r***-conditions. Once these sentences satisfy the ***r***-conditions of LMR then, only certain kind of entities could be the values of variables. The resulting entities that we get, once these sentences are examined under the ***r***-conditions of LMR, are the dependent variables. Independent variables are the ***r***-conditions of LMR. The same holds for MS too. I enumerate the ***r***-conditions of LMR and show that these ***r***-conditions of LMR which constitute the independent variable of LMR are different from the ***r***-conditions which constitute the independent variable of MS. Accordingly there will be a difference in the entities that will become the value of variables of the sentences. Once we fix the ***r***-conditions of LMR then the resulting entity would be a physical entity which obtains a spatiotemporal location or they are the points in spacetime itself. I have extended this result in the following way to show that LMR cannot be regarded as having any Meinongian features. The problem that I find is something that concerns with the notion of spatiotemporal location and that being the property of things in the LMR. What do these expressions "*x* is spatiotemporally located" or "*x* is a space-time point" stand for? Are they predicate

expressions? If *being spatiotemporally located* is regarded as a property of things then it seems that a problem that is similar to Russell's problem of negative singular existential might arise for the LMR. Having shown that these expressions cannot be regarded as predicate in LMR, I try to link spatiotemporality with quantification in the following way.

I introduce a different quantifier called functionally isomorphic quantifiers (FIQ). FIQ is system specific. FIQs are those quantifiers which can be employed in lieu of existential quantifier within a particular system. We don't say that existential quantifier can be replaced by FIQ of a particular system. This is introduced in a system specifically to distinguish it from other systems when it is required to distinguish. Such quantifiers are functionally isomorphic to existential quantifiers in the sense that within the system this can function like existential quantifiers. Here FIQ is introduced in Lewis' system and it is employed to differentiate LMR from MS. In Lewis' system, FIQ can be devised by introducing the element of spatial and temporal element into existential quantifier. We saw that spatiotemporality plays a very crucial role in his system. This rearranged FIQ or particular quantifier will be effective iff this FIQ yields the same results whatever Lewis' system gets when existential quantifier is used. It is shown that FIQ can quantify those entities which could be quantified by existential quantifier in Lewis' system. The new rearranged quantifier or the FIQ of Lewis' system is called as spatiotemporal quantifier or st-quantifier. It is represented in the following way: " $^{s}\!+$ ". There is an "s" which stands for space and the symbol "+" stands for temporal element and all of them are enclosed within the parenthesis. This quantifier can be read as *spatiotemporally located thing, such that*…… Here, st-quantifier will be sufficient to perform all that can be performed by the traditional existential quantifier in Lewis' system. However, the same is not the case with Parsons' version of Meinongianism. If st-quantifier is used to quantify the entities in Parsons' system then only certain entities will come under its scope of quantification; that is only the existent entities which are spatiotemporally located. ***Being space-time point*** or ***being***

spatiotemporally located is significant r-conditions in LMR whereas this does play great role in Parsons Meinongianism. In this way I try to show that LMR cannot be said to have any Meinongian feature.

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