# SEMANTICS OF EMPTY NAMES:
# COULD VULCAN HAVE EXISTED? :

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Semantics of Empty Names: Could Vulcan Have Existed?

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Thesis Abstract

Berrak Buhara, “Semantics of Empty Names: Could Vulcan Have Existed?”

Speaking of *things* that *do not exist* constitutes a significant part of our conversations. It happens when we talk about such *things* as the tenth planet, Phlogiston, the Loch Ness Monster or the Yeti. When speaking of what doesn’t exist, we usually employ sentences containing *empty proper names* (i.e. proper names without referents) such as ‘Vulcan’ and we intuitively attribute truth value (i.e. truth or falsity) to such sentences. Many metaphysical and linguistic theories have difficulty in accounting for these intuitive attributions of truth value.

In this thesis, I explore whether it is possible to *explain* the intuitive truth attributions we make to existential modal sentences involving the operators of negation, possibility and contingency and containing empty names *purely* at a semantic level.

Analyzing (S1) “Vulcan doesn’t exist”, (S2) “Vulcan could have existed” and (S3) “For any possible world P, if Vulcan exists in P, that Vulcan is causing perturbations in Mercury’s orbit is contingently true” within the framework of two semantic theories (i.e. the Theory of Direct Reference and the Theory of Descriptions) and in relation to the current debates on the Puzzle of Non-Existence, I argue that though it is possible to explain our intuitions in attributing truth to relatively simple (i.e. involving such modal operators as negation and possibility) existential modal sentences containing empty names [such as (S1) and (S2)] purely at a semantic level, it doesn’t seem possible to explain our intuitions in attributing truth to examples of more complex (i.e. involving such modal operators as contingency) existential modal sentences containing empty names [such as (S3)] exclusively within the framework of semantics.

Tez Özeti

Berrak Buhara, “Boş İsimlerin Anlambilimi: Volkan var olabilir miydi?”

Var olmayan *şeylerden* bahsetmek konuşmalarımızın büyük bir kısmını oluşturur. Onuncu gezegenden, Filojiston’dan, Loch Ness Canavarı’ndan ya da Yeti’den söz ettiğimizde, var olmayan *şeylerden* bahsetmiş oluruz. Var olmayandan bahsederken, genellikle, ‘Volkan’ gibi boş (göndergesiz) özel isimler içeren cümleler kullanırız ve bu cümlelere sezgisel olarak doğruluk değeri (doğruluk ya da yanlışlık) atfederiz. Pek çok metafizik ve dilbilim kuramı bu sezgisel doğruluk değeri atfını açıklamakta zorlanır.

Ben bu tezde olumsuzluk, olanaklılık ve olumsallık işleçlerini bulunduran ve boş isimler içeren model varoluşsal cümlelere yaptığımız doğruluk atıflarını *tamamen* anlambilimsel (semantik) düzeyde ve kullanımbilimsel (pragmatik) çözümlere başvurmadan açıklamanın mümkün olup olmadığını araştırıyorum.

(C1) “Volkan yoktur”, (C2) “Volkan var olabilirdi” ve (C3) “Herhangi bir P olası dünyası için, Volkan P dünyasında varsa, Volkan’ın Merkür’ün yörüngesinde düzensizlik yarattığı olumsal olarak doğrudur” cümlelerini iki anlambilim (semantik) kuramı (Doğrudan Gönderme Kuramı ve Betimler Kuramı) bağlamında ve ‘Yokluk Bilmecesi’yle ilgili son tartışmalarla ilişkilendirerek inceliyor, nispeten basit (olumsuzluk ve olanaklılık işleçlerini içeren) model varoluşsal cümlelere [(C1) ve (C2) gibi] yaptığımız doğruluk atıflarının tamamen anlambilimsel (semantik) düzeyde açıklanabildiğini ancak daha karmaşık (olumsallık işlecini içeren) model varoluşsal cümlelere [(C3) gibi] yaptığımız doğruluk atıflarının anlambilim (semantik) çerçevesinde açıklanamayacağını savunuyorum.

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# CHAPTER 1

# INTRODUCTION

‘My name is Alice, but –‘

‘It's a stupid name enough!' Humpty Dumpty interrupted impatiently. ‘What does it mean?’

‘*Must* a name *mean something*?’ Alice asked doubtfully.

‘Of course it must,’ Humpty Dumpty said with a short laugh: ‘my name means the shape I am...’ ”

From *Through the Looking Glass* by Lewis Carroll[1]

Though Alice and I are (possible) worlds apart, her perplexing question, “Must a name mean something?” challenging the assumed relation between names, things and meaning, has been my inspiration for undertaking this study. Since encountering her question, I have been preoccupied with the intricate and elusive relation between reference and existence, and this intuitive preoccupation, combined with great mentors, piles of books, substantial amount of coffee and hours of thinking, has developed into philosophical curiosity and made me come up with various questions on the semantics and metaphysics of names and entities. Among these questions, how we can meaningfully talk about things that do not exist has always been the most intriguing for me and, in the present study; I pursue this question by focusing on the semantic issues deriving from the lack of referent of empty proper names. In this thesis, I explore whether it is possible to *explain* the intuitive truth attributions

[1] See Chapter 6 of (Carroll, 2007).

we make to certain[2] existential modal sentences containing empty names *purely* at a semantic[3] level rather than *explaining (away)* our intuitions by pertaining to *pragmatic* accounts.

To do this, I explain why 'Vulcan' is an example of empty names and evaluate two semantic theories, the Theory of Direct Reference (i.e. referentialism) and the Theory of Descriptions (i.e. descriptivism), to see whether they can explain our intuitions in attributing truth to negative existential (i.e. the existential modal sentences containing the modal operator of negation) and existential counterfactual sentences (i.e. the existential modal sentences containing the modal operator of possibility) containing empty names such as

(S1) "Vulcan doesn't exist"

and

(S2) "Vulcan could have existed,"

respectively. I demonstrate that while the Theory of Direct Reference fails to account for our intuitions in attributing truth to such existential modal sentences as (S1) and (S2), the Theory of Descriptions can successfully do so. Following this, I show, via providing a descriptivist analysis of

[2] The existential modal sentences I deal with in this thesis are the ones that involve the modal operators of negation and possibility, as in the examples of (S1) and (S2) respectively, and contingency, as in the example of (S3).

[3] I assume that Semantics and Pragmatics are two different disciplines and while the former is concerned with what is said, the latter is concerned with what is implicated and interpreted. For a detailed discussion on the distinction between Semantics and Pragmatics, see Jason Stanley and Jeffrey J. King, "Semantics, Pragmatics and the Role of Semantic Content," in *Semantics versus Pragmatics*, ed. Z. G. Szabo (New York: Oxford University Press, 2005) and Herman Cappelan and Ernie Lepore, "Semantics, Pragmatics and the Role of Semantic Content," in *Semantics versus Pragmatics*, ed. Z. G. Szabo (New York: Oxford University Press, 2005.)

(S3) "For any possible world P, if Vulcan exists in P that Vulcan is causing perturbations in Mercury's orbit is contingently true;"

a modal existential sentence involving the modal operator of contingency and containing the empty name 'Vulcan', that the Theory of Descriptions fails to account for our intuitions in attributing truth to sentences like (S3). Based on this result, I argue that though it is possible to explain our intuitions in attributing truth to relatively simple (i.e. involving such modal operators as negation and possibility) existential modal sentences containing empty names [such as (S1) and (S2)] exclusively within the framework of semantics, pure semantics falls short of explaining our intuitions in attributing truth to examples of more complex (i.e. involving such modal operators as contingency) existential modal sentences containing empty names [such as (S3)]. At the end of the thesis, I discuss the significant implications of this conclusion about the relation between semantics, and pragmatics, as well as the role of intuitions in truth attributions.

In the second chapter, my main focus is on explaining and exemplifying the basic notions relevant to the discussions I carry out further in the thesis. I start the chapter by defining an "empty name" as a name without a referent and explain how such names are introduced to language. Then, by pertaining to the relevant historical account, I demonstrate how 'Vulcan' was introduced to language as an empty name. Following this, I discuss how I take 'Vulcan' to be ambiguous between two uses (i.e. as a mythical name and an empty name), and end the chapter with an account of my own emphasis which is on the use of 'Vulcan' as an empty name.

I devote the third and the fourth chapters of the thesis to evaluating the success of two semantic theories, namely the Theory of Direct Reference and the

Theory of Descriptions in accounting for our intuitions in attributing truth to certain existential modal sentences containing empty names.

I start the third chapter by stating the main thesis (i.e. that the sole semantic function of a proper name is to refer to its referent) of the Theory of Direct Reference. Then, I present the actualist version of the Theory (according to which, only actual entities can be the referents of proper names) and demonstrate, via providing a referentialist analysis of (S1) how *all* three accounts (i.e. the orthodox view, the unfilled proposition view and the degenerate semantic contribution view) of this version fail to explain our intuitions in attributing truth to negative existential sentences containing empty names. Following this, I introduce the possibilist version of the Theory (according to which, merely possible as well as actual entities can be the referents of proper names) and show, by discussing Quine's and Salmon's opposing views concerning the metaphysics of merely possible entities, how it fails to explain our intuitions in attributing truth to negative existential sentences containing empty names through examining (S1).

I conclude that both versions of the Theory of Direct Reference fail to account for our intuitions in attributing truth to such sentences as (S1). As we intuitively attribute truth to an existential counterfactual sentence containing a certain empty name by presupposing that the negative existential sentence containing the very same empty name is contingently true (i.e. as we intuitively attribute truth to an existential counterfactual sentence containing a certain empty name as a result of attributing –contingent- truth to the negative existential sentence containing the very same empty name), I conclude that both versions of the Theory of Direct Reference, in virtue of failing to account for our intuitions in attributing truth to sentences like (S1), also fail to account for our intuitions in attributing truth to sentences like (S2).

In the fourth chapter, I initially present Russell's Theory of Descriptions and introduce Kripke's two criticisms of the Theory. Then, I argue, via providing descriptivist analyses of (S1) and (S2), that the Theory of Descriptions can, in the case of negative existential and existential counterfactual sentences containing empty names, evade the difficulties Kripke attributes to it and successfully explain our intuitions in attributing truth to such sentences. I then consider whether the success of the Theory of Descriptions in explaining our intuitions in attributing truth to such existential modal sentences as (S1) and (S2) is extendible to other existential modal sentences containing empty names. Through analyzing (S3), I demonstrate that the Theory of Descriptions fails to account for our intuitions in attributing truth to modal existential sentences involving the modal operator of contingency and containing empty names such as (S3).

I conclude that, although it is possible to explain the intuitive truth attributions we make to relatively simple (i.e. involving such modal operators as negation and possibility) existential modal sentences containing empty names [such as (S1) and (S2)] exclusively at a semantic level, it doesn't seem possible to account for our intuitions in attributing truth to examples of more complex (i.e. involving such modal operators as contingency) existential modal sentences containing empty names [such as (S3)] within the framework of pure semantics. I finalize the study by briefly discussing the implications of this conclusion about the relation between semantics, pragmatics and the role of intuitions in truth attributions and by providing some questions for further thought.

# CHAPTER 2

# EMPTY NAMES: EXPLAINED AND EXEMPLIFIED

## A Brief Introduction

In this chapter,, I introduce the preliminary notions that are essential to the discussions I conduct in the following chapters. I initially define the notion of "empty name" and explain how such names are introduced to language. Then, I demonstrate how the proper name 'Vulcan' was introduced to language as an empty name by referring to the relevant historical account. I end the chapter by discussing the way 'Vulcan' is ambiguous between two uses.

## Empty Names: What Are They?

Empty names (i.e. empty proper names) can be defined as the names "…that do not stand for anything" [4] and that "lack bearers"[5]. As to what I mean by a 'thing' or a 'bearer', I hold that in addition to physical entities (like dogs or screwdrivers that we encounter on a daily basis), fictional[6]/ mythical entities and individuated (i.e.

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[4] Anthony Everett, "Referentialism and Empty Names," in *Empty Names, Fiction, and the Puzzles of Non-Existence*, ed. A. Everett and T. Hofweber (Stanford, CA: Center for the Study of Language and Information, 2000), 12.

[5] Ibid. 41.

[6] A fruitful discussion with Sun Demirli made me realize that there is no consensus as to whether there are fictional entities. Theorists like van Inwagen hold that works of fiction exist as abstract entities yet they deny that there are fictional entities. According to this view, the TV show "The Simpsons", being a work of fiction, is an abstract entity whereas Homer Simpson, a character from the show, doesn't exist. Salmon and Braun, on the other hand, maintain that fictional entities constitute an ontological/metaphysical category and that they are abstract entities created by the activity of storytelling. Throughout the thesis, I assume that there *are* fictional entities and fictional names. I use the proper name 'Homer Simpson' as an example of fictional names. For various positions concerning the issue, see David Braun, "Empty Names, Fictional Names, Mythical Names," *NOUS* 39, no. 4 (2005); Peter Van Inwagen, "Creatures of Fiction," *American Philosophical Quarterly* 14, no. 4 (1977); Saul Kripke, "Existence and Reference," in *John Lock Lectures* (Unpublished Lecture Notes, 1973); David Lewis, "Truth in Fiction," in *Philisophical Papers: 1*, ed. D. Lewis. (Oxford, UK:

uniquely identified) merely possible entities (i.e. non-actual possible objects[7]) are also 'things' that names stand for or are the 'bearers' of names. I think, when we create works of fiction, myths[8] or false theories and when we individuate merely possible entities, we create abstract (i.e. non-physical) entities and (*knowing* that we are naming the abstract entity we have created) name them 'Pegasus', 'Homer Simpson' or 'Noman'. Hence, I do not consider mythical/ fictional names (i.e. the names of the fictional /fictional entities) and names of individuated merely possible entities to be empty.

## Empty Names: How Are They Introduced?

I believe, in order to be empty (or to lack a referent), a name should be introduced to language with the intention of naming an unobserved object that is (for a number of reasons such as miscalculations, lack of evidence or coincidence) thought or believed to exist but in fact does not exist. To introduce a name in this manner, the introducer of the name should, as a result of making a number of assumptions, be convinced that though unobserved, there is (or rather there must be) an object which is the bearer of the name s/he introduces. Thus, it doesn't seem possible to deliberately introduce empty names for any such attempt requires one to be aware of the fact that

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Blackwell, 1983); Terrence Parsons, *Nonexistent Objects* (New Haven, CT: Yale University Press: 1980); Nathan Salmon, "Nonexistence," *NOUS* 32, no. 3 (1998) and Nathan Salmon, *Metaphysics, Mathematics, and Meaning* (Oxford, UK: Oxford University Press, 2005).

[7] I am using the notions of 'entity' and 'object' interchangeably.

[8] Salmon and Braun respectively argue that mythical objects are of a similar metaphysical/ontological category as fictional objects (i.e. they are abstract objects) and are created during the activity of mistaken theorizing. For detailed presentations of their views on the issue, see Braun, "Empty Names;" and Salmon, "Nonexistence" and *Metaphysics*. Although I think that their view concerning the metaphysical origins of mythical entities (i.e. that mythical entities are created *simultaneously* with the creation of the myth or the false theory itself) is debatable, I deliberately save the discussion for later in the chapter and assume the existence of mythical objects and mythical names. I use the proper name 'Pegasus' as an example of mythical names.

s/he is naming *nothing;* in which case, presumably, s/he would not introduce a name in the first place.

## 'Vulcan': How Was It Introduced as an Empty Name?

History of astronomy provides us with a curious case of pathological[9] science (pathological science can be defined as the process during which researchers are led to false conclusions due to "…subjective effects, wishful thinking or threshold interactions")[10] as a result of which 'Vulcan' was introduced as an empty name. In 1840,[11] French mathematician/astronomer Le Verrier started to work on Mercury's motion around the Sun. The aim of the study was to create a Newtonian model to account for the orbital motions of Mercury. Having worked on the issue for over nineteen years, Le Verrier concluded that the observed value of perihelion procession in Mercury's orbit exceeded the predicted value by a small amount. To explain this deviation, the deluded astronomer posited a small intra- Mercurial planet causing perturbations in Mercury's orbit and he named the planet 'Vulcan'. As Le Verrier had recently discovered Neptune by using the same methods, astronomers around the

[9] The term "Pathological Science" was coined by the Nobel Prize winning chemist Irving Langmuir in 1953. For a detailed discussion on the issue, see Irving Langmuir, (Robert N. Hall ed.) "Pathological Science," *Physics Today* 42 (1989); Robert L. Park, *Voodoo Science: The Road from Foolishness to Fraud* (New York, NY: Oxford University Press, 2000); and Alan Cromer, "Pathological Science: An Update," *Skeptical Inquirer* 17, no. 4 (1993).

[10] It appears to be the case that before introducing an empty name to language, the introducer of the name carries out a problematic abductive reasoning. Let me explain why I believe this is the case. Abductive reasoning is the type of reasoning which entails reaching a conclusion about what is *unobserved* based on the assumptions describing what is *observed*. In the case of empty names, the assumptions regarding what is observed are, for some reason, incorrect or incomplete and the conclusion positing the existence of a certain unobserved object turns out to be false. As a result, the proper name introduced to name the object that is hypothesized to exist turns out to be empty. For a clear presentation and examples of abductive reasoning see Elliot Sober, *Core Questions in Philosophy* (New Jersey: Prentice Hall, 2005), 19-25.

[11] For a detailed discussion on Vulcan, see Richard Baun and William Sheehan, *In Search of Planet Vulcan: The Ghost in Newton's Clockwork Universe* (Cambridge, MA: Basic Books, 2003); Leonard H. Weston, *Planet Vulcan: History, Nature, Tables* (Tempe, AZ: American Federation of Astrologers, 1988); and Carl W. Stahl, *Vulcan, the Intra-Mercurial Planet* (Bay City, MI: Solunar Research Publications, 1972.)

world took his claims seriously and started to search Vulcan. The quest for Vulcan continued even after Le Verrier's death. After many failed attempts to observe Vulcan, the astronomers had already lost interest in the planet when Einstein's Theory of Relativity explained the perturbations in Mercury's orbit by pertaining to the Sun's gravitational field. Hence, it turned out that there was no intra- Mercurial planet causing perturbations in Mercury's orbit and 'Vulcan' turned out to have no referent whatsoever.

I think 'Vulcan' is an empty name for it fulfills the above mentioned criteria for being introduced as an empty name. Le Verrier, the introducer of the empty name 'Vulcan', as a result of making a number of assumptions, was convinced that there was (or rather there must be) an unobserved intra-Mercurial planet responsible for the perturbations in Mercury's orbit. As to his assumptions, he held that Newtonian Physics was error-free and that (as he had successfully discovered Neptune by using the same mathematical calculation techniques) his calculations were correct. Based on these assumptions, he concluded that a small intra-Mercurial planet could account for the perturbations in Mercury's orbit and that, though unobserved, there must be a small planet between the Sun and Mercury perturbing Mercury's orbit. Hence, he introduced the name 'Vulcan' for the planet he took to exist.

## ‘Vulcan’: How is it Ambiguous?

Contrary to what I argue, Nathan Salmon, in his “Nonexistence” and “Mythical Objects” offers a different view on the issue and claims that ‘Vulcan’, referring to a mythical object, is not empty. He maintains that *myths* are the “false theories that have been mistakenly believed”[12] and they give rise to real, fabricated, abstract[13] (i.e. they are neither material nor mental objects) entities he calls *mythical objects*. He holds that such objects are created “…by the mistaken theory’s inventor albeit without the theorist’s knowledge”[14].Applying his notions of myth and mythical object to the case of ‘Vulcan’, he argues that when creating his theory (which turned out to be erroneous), the deluded astronomer *unintentionally* invented a mythical planet and thinking that he was naming the intra-Mercurial planet he took to exist, he named the mythical object ‘Vulcan’. As Salmon puts it, “…his referential arrow struck the mythical object…” [15] In this respect, Salmon claims that the name ‘Vulcan’, which I regard as empty, refers to a mythical object and is a mythical name.

I, following Kripke,[16] Braun[17] and Parsons[18], believe that ‘Vulcan’ is ambiguous[19] between two senses: The name in its primary sense was introduced to

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[12] Salmon, *Metaphysics*, 101.

[13] Ibid.101.

[14] Ibid.101.

[15] Salmon, “Nonexistence,” 307.

[16] See Saul Kripke, *Naming and Necessity* (Cambridge, Massachusetts: Harvard University Press, 1980) and “Existence and Reference.” For Salmon’s account of Kripke’s view (which I found very helpful,) see Salmon, “Nonexistence,” 306 and *Metaphysics*, 102.

[17]See Braun, “Empty Names,” 614-616.

language by Le Verrier as a name for the planet he took to exist. Since Le Verrier *intended* to name the intra-mercurial planet causing perturbations in Mercury's orbit and since there was no such planet, in this use 'Vulcan' has no referent whatsoever and is completely empty.[20] I also agree with Kripke that when introduced in this manner by Le Verrier, 'Vulcan' couldn't have referred to a mythical object (or, contrary to what Salmon claims, the referential arrow of Le Verrier couldn't have struck the mythical object) considering that mythical objects (in this case the mythical planet) seem not to be invented during the creation of the myth (or the false theory) *itself* (in this case Le Verrier's theory) but start to exist[21] only after the myth is exposed or the (false) theory is falsified. In that sense, a myth (in this case Le Verrier's theory) is not about the mythical object but is simply about *nothing* and the later account of the myth is about the mythical object (in this case the mythical planet). Thus, I think, 'Vulcan' in its secondary sense is a mythical name as it refers to the mythical planet which started to exist (and has been existing) after Le Verrier's theory had been falsified (i.e. after the perturbations in Mercury's orbit had been explained by Einstein's Theory of Relativity).

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[18] Parsons, along with Kripke and Braun, holds that 'Vulcan' is ambiguous between two uses. He argues that in one use, it refers to a fictional object created by Le Verrier's false theorizing. In the other use, it doesn't refer and is empty. See; Terrence Parsons, *Nonexistent Objects*.

[19] I am aware that the name 'Vulcan' has other uses (for instance it is the name of the Roman God of Fire and a small town in Canada) and I purposefully ignore them.

[20] David Braun and Kripke also hold that in Le Verrier's use, 'Vulcan' has no referent, names nothing and is completely empty. See (Braun, "Empty Names," 615; Kripke, "Existence and Reference" and *Naming and Necessity*; Nathan Salmon, "Nonexistence," 306 and, *Metaphysics*, 102-103).

[21] Salmon, when discussing possible objections to his account, states that mythical objects "enter the intellectual scene". (Salmon, *Metaphysics*, 102-103). His choice of the active verb "enter" suggests that mythical objects are *not created* but (somehow) start to *exist* after the myth is exposed. I am not sure if the phrase "start to exist as a result of the exposition of the myth" describes the origin of the mythical objects in the best possible manner. Still, I cautiously yet deliberately use the phrase "start to exist" to emphasize that, mythical objects may not to be intentionally created objects.

I agree with Braun[22] that our uses of 'Vulcan' shifts between the primary and secondary senses of the name. For instance, when we utter the sentence "Vulcan is a hypothetical planet", we (unlike Le Verrier) are aware of the fact that the 19th century astronomical theory positing the existence of an intra-mercurial planet causing perturbations in Mercury's orbit is false and no such planet exists. Hence, we consciously use the name 'Vulcan' in its secondary sense to refer to the mythical planet that started to exist (and that has been existing) after Le Verrier's theory had been falsified. However, when we utter the sentence

(S1) "Vulcan doesn't exist",

we, *precisely* to express that there exists no intra- mercurial planet causing perturbations in Mercury's orbit, use 'Vulcan' in its primary sense (i.e. as an empty, non-referring name). Given that my main goal in the present study is to determine whether it is possible to account for our intuitions in attributing truth to certain existential modal sentences containing empty names at a purely semantic level, I am strictly concerned with the primary use of 'Vulcan' (i.e. I take 'Vulcan' as a non-referring, empty name.)

In this chapter, I explained what an empty name is and how 'Vulcan' constitutes an example of empty names. In the following chapter, I introduce the Theory of Direct Reference and discuss the problems it faces in explaining our intuitions in attributing truth to certain existential modal sentences containing empty names through the specific examples of

[22] See Braun, "Empty Names," 619-620.

(S1) “Vulcan doesn’t exist”

and

(S2) “Vulcan could have existed.”

# CHAPTER 3

# THE THEORY OF DIRECT REFERENCE AND EMPTY NAMES

## A Brief Introduction

In this chapter, I present and evaluate both versions (i.e. the actualist and the possibilist) of the Theory of Direct Reference to determine whether they can explain our intuitions in attributing truth to negative existential (i.e. existential modal sentences containing the modal operator of negation) and existential counterfactual sentences (i.e. the existential modal sentences containing the modal operator of possibility) containing empty names such as

(S1) "Vulcan doesn't exist"

and,

(S2) "Vulcan could have existed".

I conclude that neither version of the Theory can account for our intuitions in attributing truth to such existential modal sentences as (S1) and (S2).

## The Theory of Direct Reference: The Main Thesis of the Theory Stated

Though the proponents of the Theory of Direct Reference[23] for proper names have their own versions of the Theory, they all seem to maintain the common thesis that the sole semantic function of a proper name is to refer to its bearer and the sole contribution of a name to the truth conditions of the sentence(s) containing that name is its referent and nothing else. Actualist and possibilist versions of the Theory differ with regard to their notions of a referent or a bearer (of a name).

## Actualist Version of the Theory of Direct Reference: Explained and Evaluated in Relation to (S1) "Vulcan doesn't exist"

Actualist version of the Theory of Direct Reference for proper names is based on the assumption that "…everything there is — everything that can be said to exist — is *actual*."[24] Put another way, it denies that "…there is any kind of being beyond actuality...." [25] Given this assumption, actualist version of the Theory maintains that only actual existent objects can be the referents of proper names.

Since empty names (i.e. names *without referents*) lack actual existent referents and since the sole contribution of a name to the truth conditions of the sentences containing that name is its referent, in the case of sentences containing empty names, there seems to be no referent that can be contributed to the truth

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[23] For different versions of the theory, see Keith S. Donnellan, "Proper Names and Identifying Descriptions," *Synthese* 21, no. 3-4 (1970); and Keith S. Donnellan, "Speaking of Nothing," *Philosophical Review* 83, no. 1 (1974); Kripke, *Naming and Necessity* ; and Nathan Salmon, *Reference and Essence* (Princeton, NJ: Princeton University Press, 1981.)

[24] See Christopher Menzel. 8 December 2008. "Actualism." *Stanford Encyclopedia of Philosophy.* Available [online]: <http://plato.stanford.edu/entries/actualism> [15 February 2009].

[25] Ibid.

conditions of the sentence(s) concerned. Keeping this observation in mind, let's consider the sentence

(S1) "Vulcan doesn't exist"

in relation to three different accounts (i.e. the orthodox view, the unfilled proposition view and the degenerate semantic contribution view) of the actualist version of the Theory.

Though we intuitively attribute truth to (S1), (and, paradoxically enough, we intuitively attribute truth to (S1) precisely because 'Vulcan' is an empty name and lacks a referent) accepting the orthodox account of the actualist version of the Theory (from now on the orthodox view) entails the counter-intuitive conclusion that (S1) is neither true nor false (i.e. is truth-valueless). Let me call this problem "The Problem of Truth Value". The summary of the problem in the form of an argument[26] is as follows:

1) (S1) seems intuitively true in the actual world.
2) According to the orthodox view, the sole semantic function of a proper name is to refer to its referent which can only be an actual object.
3) 'Vulcan' doesn't have a referent in the actual world.
4) 'Vulcan' has no semantic function.
5) A sentence containing an empty name that has no semantic function fails to express any proposition, thus such a sentence lacks truth value.
6) (S1) fails to express any proposition.
7) According to the orthodox view, (S1) lacks truth value.

[26] I am indebted to Karanfil Soyhun for re-formulating all the sentence analyses I conduct throughout the thesis. I deeply appreciate her help.

8) The orthodox view cannot account for our intuitions in attributing truth to (S1)

Braun, one of the adherents of the actualist version of the Theory of Direct Reference, maintains that sentences containing empty names, instead of failing to express *any* proposition (as argued by the orthodox view), express *unfilled*[27] propositions (i.e. propositions with unfilled or unoccupied subject positions). I will call Braun's view, following him, the unfilled proposition view, and the main thread of his argument can be captured by the following Braun Principle;

(BP) "If P is a proposition having a single subject position and one-place property position, then P is true iff the subject position is filled by one, and only one object and it exemplifies the property fitting the property position. If P is not true, then it is false"[28]

Based on (BP), Braun argues that sentences expressing unfilled propositions are false. Though we intuitively attribute truth to

(S1) "Vulcan doesn't exist",

accepting Braun's view entails the counter-intuitive conclusion that (S1) is false. The summary of the problem is as follows:

1) (S1) seems intuitively true in the actual world.

[27] In addition to Braun, Taylor, Salmon, Fuller and Adams also maintain slightly different versions of the gappy/unfilled/incomplete proposition view. To give an example, Taylor maintains, in line with Braun, that sentences containing empty names express *incomplete* (or *gappy*) propositions that are, contrary to what Braun argues, neither true nor false. For a detailed presentation of this version of the view, see Kenneth Taylor, "Emptiness Without Compromise: A Referentialist Semantics for Empty Names," in *Empty Names, Fiction, and the Puzzles of Non-Existence*, ed. A. Everett and T. Hofweber (Stanford, CA: Center for the Study of Language and Information, 2000.) For other versions of the view, see (Fred Adams and Gary Fuller, "Empty Names and Pragmatic Implicatures," *Canadian Journal of Philosophy* 37, no. 3 (2007); Gary Fuller and Fred Adams, "Vacuous Singular Terms," *Mind & Language* 9 (1994); and Nathan Salmon, "Nonexistence."

[28] David Braun, "Empty Names."

2) According to the unfilled proposition view, the sole semantic function of a proper name is to refer to its referent which can only be an actual object.
3) 'Vulcan' doesn't have a referent in the actual world.
4) 'Vulcan' has no semantic function
5) A sentence containing an empty name that has no semantic function expresses an unfilled proposition
6) (S1) "Vulcan doesn't exist" expresses the unfilled proposition

   p < { }, existence, NEG >

7) Given BP, (S1) is false.
8) The unfilled proposition view cannot account for our intuitions in attributing truth to (S1)

Everett,[29] while holding that the actualist version of the Theory of Direct Reference is principally correct, proposes a reformulation of this version of the Theory which, while maintaining the main thesis of the Theory (i.e. that the sole semantic function of a name is to refer to its referent, an actual existent object), still allows that empty names can make some sort of non-descriptive semantic contribution to the truth conditions of the sentences they are in. He argues that while full names, in virtue of referring to their referents, "…make a normal sort of semantic contribution…"[30] to the truth conditions of the sentences they are in, empty names, in virtue of the fact that they fail to refer, make a *degenerate semantic contribution* to the truth

[29] I am indebted to Everett and Hofweber for the presentation of Everett's view. Anthony Everett, "Referentialism and Empty Names."

[30] Ibid: 42.

conditions of the sentences containing them.[31] He maintains that "…it is precisely the fact that empty names fail to refer [i.e. the degenerate semantic contribution empty names make][32] that makes negative existential claims containing them true."[33]

At first glance, his view (i.e. the degenerate semantic contribution view) appears capable of accounting for our intuitions in attributing truth to negative existential sentences containing empty names. Let's analyze

(S1) "Vulcan doesn't exist"

to find out if this is the case:

1) (S1) seems intuitively true in the actual world.
2) According to the degenerate semantic contribution view, the sole semantic function of a proper name is to refer to its referent which can only be an actual object.
3) 'Vulcan' doesn't have a referent in the actual world.
4) 'Vulcan' has no semantic function
5) According to degenerate semantic contribution view, the sole semantic contribution of an empty name to the truth conditions of the sentence containing it is the fact that it lacks a referent
6) 'Vulcan' contributes to the sentence (S1) the fact that the empty name 'Vulcan' lacks a referent

[31] In Footnote 30, Everett discusses the scope of his account and admits that though empty names *always* make a degenerate semantic contribution to the sentences containing them, this contribution may not *always* suffice to assign truth value to them. Still, he maintains that the degenerate semantic contribution empty names make to *negative existential* sentences containing them seems to *suffice* to render these sentences true. Given the aim of this thesis, I am primarily concerned with the implications of his view for the truth-evaluability of negative existential sentences containing empty names. For a detailed discussion, see Anthony Everett, "Referentialism and Empty Names," 42; and Footnote: 30.

[32] Explanation in square brackets is mine.

[33] Anthony Everett, "Referentialism and Empty Names," 41.

7) (S1) "Vulcan doesn't exist" is true, precisely in virtue of the fact that 'Vulcan' doesn't refer.
8) The degenerate version can account for our intuitions in attributing truth to (S1)

The above analysis of (S1) clearly demonstrates that, Everett's account of the Theory (i.e. the degenerate semantic contribution view) can explain our intuitions in attributing truth to negative existential sentences containing empty names on a purely semantic level. Nevertheless, his view has two problematic implications that are closely connected to each other. First, it implies that *all* empty names make the same degenerate semantic contribution (i.e. each and every empty name contributes to the sentence it is in the fact that it lacks a referent) to the sentences containing them. Second, assuming that the (degenerate) semantic contribution made by each and every empty name is the same, his view implies that all negative existential sentences containing empty names express the same true incomplete proposition, "……..doesn't exist". Let me illustrate why these two implications are problematic via an example. Consider:

(S1) "Vulcan doesn't exist"

and,

(SX) "Nessie[34] doesn't exist".

Everett's view apparently implies that the semantic contribution of the empty name 'Vulcan' to (S1) and the semantic contribution of the empty name 'Nessie' to (SX) are the same and both sentences express the same true incomplete proposition (i.e.

[34] 'Nessie' is the diminutive for 'Loch Ness Monster'. Loch Ness Monster is a hypothetical creature that is believed to dwell in Lake Loch Ness, Scotland. For more on the issue, see Betty Kirkpatrick. *Nessie: The Legend of the Loch Ness Monster* (Edinburgh, UK: Crombie Jardine Publishing Limited, 2005.)

the proposition "……doesn't exist"). However, it is very hard to accept that (S1) and (SX) express the same proposition considering that we intuitively regard Nessie and Vulcan as distinct from each other and hold that (S1), expressing a proposition about Vulcan, and (SX), expressing a proposition about Nessie, express two distinct propositions.

Acknowledging the above discussed issues, Everett develops a *pragmatic* account to eliminate the counter-intuitive implications of his view. Nevertheless, considering that my goal in this study is to explore if it is possible to *explain* the intuitive truth attributions we make to certain existential modal sentences containing empty names *purely* within the frameworks of semantics and without pertaining to *pragmatic* accounts, I deliberately exclude the solution he proposes from my discussion.

Given the above presented counter-intuitive implications of Everett's account and given that these implications cannot be eliminated solely at a semantic level (i.e. without resorting to pragmatic explanations), I think that even his interpretation of the Theory, despite looking more promising than the two other views (i.e. the orthodox view and the unfilled proposition view), fails to *explain* the intuitive truth attributions we make to negative existential sentences containing empty names *purely* within the frameworks of semantics; unless, of course, we are willing to admit that

(A): (S1) and (SX) express the same proposition, thus both are true

and

(B): (A) is not counter-intuitive.

In this section of the chapter, I presented three accounts of the actualist version of the Theory of Direct Reference[35] and demonstrated, via analyzing

(S1) "Vulcan doesn't exist,"

how they all fail to explain our intuitions in attributing truth to negative existential sentences containing empty names. In the next section, I discuss the possibilist version of the Theory of Direct Reference in relation to (S1).

## Possibilist Version of the Theory of Direct Reference: Explained and Evaluated in Relation to (S1) "Vulcan doesn't exist"

The possibilist version of the Theory of Direct Reference is based on the assumption that "there are things that are not actual…" [36] It presupposes that what exists is different from what is actual and the latter constitutes a subset of the former. According to this version of the Theory, there are not only actual objects (that *are* and actual like actual dogs or screwdrivers) but also merely possible objects (that *are* and not actual but could have been actual like people that were never born) and both types of objects (i.e. the actual and the merely possible) can be the referents or bearers of proper names.

I think, this version of the Theory, as a result of maintaining that not only the actual but also the *merely possible* entities can be the referents of proper names like

[35]I am aware that theorists like Taylor, Salmon, Braun, Adams and Fuller take the Theory of Direct Reference to be beyond question, deal with the issue of empty names within the framework of that theory and account for our intuitions in attributing truth value to sentences containing empty names by pertaining to pragmatic explanations. They argue that statements containing empty names, despite being semantically truth-valueless, pragmatically convey certain descriptive propositions. I deliberately avoid including an evaluation of their "solutions" in my discussion of the Theory of Direct Reference considering that in this thesis, as I once more mentioned in the above discussion of Everett's theory, my aim is to I explore whether it is possible to *explain* the intuitive truth attributions we make to certain existential modal sentences containing empty names *purely* at a *semantic* level and *without* pertaining to *pragmatic* explanations.

[36] See Christopher Menzel. 8 December 2008. "Actualism."

‘Vulcan’, may bypass the problems the actualist version faces and explain our intuitions in attributing truth to negative existential sentences containing empty names. Let’s analyze:

(S1) “Vulcan doesn’t exist”

in relation to this version of the Theory to see if this is the case:

1) To form the *negative existential* sentence (S1), the speaker should be convinced that ‘Vulcan’ doesn’t refer to an actual existent object.
2) According to the possibilist version of the Theory, merely possible objects as well as actual objects can be the referents of proper names.
3) Vulcan’ has a merely possible referent (maybe the merely possible planet causing perturbations in Mercury’s orbit)
4) The sole semantic function of a proper name is to refer to its referent
5) ‘Vulcan’ has semantic function
6) (S1), meaning that the merely possible referent of ‘Vulcan’ does not exist as an actual object, is true.[37]

The above analysis of (S1) strongly suggests that the possibilist version of the Theory can, *in theory,* successfully account for our intuitions in attributing truth to

[37] As I mentioned before, the reason why we intuitively attribute truth to (S1) “Vulcan doesn’t exist” is precisely that ‘Vulcan’ is an empty name (i.e. doesn’t have a referent). If the possibilist version of the Theory is accepted, ‘Vulcan’ turns out to be a referring name (i.e. it turns out to have a merely possible referent). If ‘Vulcan’ is a referring name, then, we have no apparent reason to attribute truth to (S1). (In fact, if ‘Vulcan’ has a merely possible referent, then, we have good reason to attribute falsity to (S1)) Yet, the above analysis of (S1) indicates that accepting the possibilist version of the Theory is compatible with attributing truth to (S1). I think this is the case for the following reason: The predicate “exist” in (S1) is ambiguous between two senses. If it is interpreted (in the possibilist sense) as meaning “to exist as an actual/non-abstract/physical entity or as a merely possible entity”, then (S1) turns out to be false as there seems to be a *merely possible* planet causing perturbations in Mercury’s orbit (i.e. ‘Vulcan’ seems to have a merely possible referent). If it is interpreted (in the actualist sense) as meaning “to exist as an actual, non-abstract, physical entity”, then (S1) turns out to be true as there is no *actual,* non-abstract, physical planet causing perturbations in Mercury’s orbit (i.e. ‘Vulcan’ lacks an actual referent). In analyzing (S1), I interpret the predicate “exist” in (S1) in the actualist sense.

negative existential sentences containing empty proper names. However, whether this version of the Theory can *actually* do so depends on whether 'Vulcan' (or the proper name in question) has a *uniquely identified* merely possible referent. This seems to be the case considering that for any proper name (in this case for the proper name 'Vulcan'), having a merely possible referent strongly implies having a uniquely identified[38] (i.e. uniquely identified via a uniquely identifying description)[39]

[38] I take this to be the case for the following reason: I assume that a proper name, by definition, has a single, uniquely identified (either through ostentation or by using a uniquely identifying description) referent (either an actual or a merely possible entity) in each specified context and is ambiguous (i.e. fails to have a unique, specific, single referent) when taken out of context (i.e. when not contextualized). I think it is possible to come up with various examples that seem to justify this assumption. Consider, for instance, the proper name 'Austin'. When not contextualized, 'Austin' is obviously ambiguous as it may refer a myriad of different objects such as Austin Powers the fictional character, J.L Austin the British philosopher of language or The City of Austin in Texas, USA. However, when used in a specific context, the proper name 'Austin' seems to have a single, specific referent. Let's consider the following two dialogues:

1: A: I think I really like Austin.
B: Austin? What Austin?
A: (Pointing at a specific person) *That* Austin.

2: A: I think I really like Austin.
B: Austin? What Austin?
A: Austin, the capital of the U.S state of Texas

In the first dialogue, the proper name 'Austin' has a single referent (i.e. a specific person) that A uniquely individuates through ostentation. In the second dialogue, the proper name 'Austin' again has a single referent (i.e. a specific city) that A individuates through a uniquely identifying description (i.e. The capital of the U.S state of Texas)

'Vulcan', like 'Austin', is a proper name and when not contextualized, 'Vulcan' is obviously ambiguous as it may refer a myriad of different objects such as the Roman Fire of God (i.e. a mythical entity) or the town in southern Alberta, Canada (i.e. an actual entity). However, when used in a specific context, the proper name 'Vulcan' *seems* to have a single, specific referent. Consider the following dialogue:

A: Could Vulcan have been actual?
B: Vulcan? What Vulcan? The Roman God of Fire?
A: No. The merely possible planet causing perturbations in Mercury's orbit

In the above dialogue, A, assuming that the proper name 'Vulcan' has a single referent (i.e. a certain merely possible entity), *attempts to* individuate the referent of 'Vulcan' through the description (i.e. "the planet causing perturbations in Mercury's orbit") that s/he takes to be uniquely identifying.

In what follows, I discuss whether this description can uniquely identify or single out the merely possible referent of 'Vulcan'. For more on proper names, see John Stuart Mill, *Collected Works of John Stuart Mill System of Logic, Ratiocinative and Inductive (Vol.7: Books I-III and Vol.8: Books IV-VI)* (Indianapolis, IN: Liberty Fund, 2006,) book I, chapter 2; and for more on ostentation and uniquely identifying descriptions see Saul Kripke, *Naming and Necessity*, 20-26.

merely possible referent and unless the proper name in question (in this case 'Vulcan) has a uniquely identified merely possible referent, then it (in this case 'Vulcan') seems to have no referent whatsoever.[40]

Given the above presented relation between uniquely identifying merely possible entities and the reference of proper names, in what follows, I first introduce Quine's and Salmon's opposing views and specific examples concerning the possibility of uniquely identifying merely possible entities. I then consider 'Vulcan' in relation to their examples and re-evaluate the limits and the merits of the possibilist version of the Theory in accounting for our intuitions in attributing truth to negative existential sentences containing empty names.

In his famous paper "On What There Is", Quine argues via the examples of "The possible fat man in that doorway"[41] (Let me call him 'Fatty') and "The possible bald man in that doorway"[42] (Let me call him 'Baldy'), that it is not possible to uniquely identify merely possible entities. Referring to an unoccupied doorway, he asks whether the possible fat man in that doorway (i.e. Fatty) and the possible bald man in that doorway (i.e. Baldy) are the same possible man (i.e. whether Fatty and Baldy are identical) or two possible men (i.e. whether Fatty and Baldy are two

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[39] In the case of merely possible entities, individuation through ostentation, for the obvious reason, is not an option.

[40] One may also hold that the proper name 'Vulcan' plurally refers to a group of merely possible objects. However, as plural reference is one of the most controversial topics in the philosophy of language and deserves a full-fledged discussion, I purposefully avoid considering the merits and the drawbacks of plural reference for the specific case of 'Vulcan'. I solely think that considering plural reference might offer a different solution to this problem. For more on Plural Reference, see Hanoch Ben-Yami, *Logic & Natural Language: On Plural Reference and Its Semantic and Logical Significance* (Burlington, VT: Ashgate Publishing, 2004); and, Gareth Evans, *The Varieties of Reference* (New York, NY: Oxford University Press, 1982.)

[41] Williard Van Orman Quine, "On What There Is," in *Quintessence: Basic Readings from the Philosophy of W.V. Quine*, ed. Roger F. Gibson, Jr. (Cambridge, MA: Harvard University Press, 2004), 179.

[42] Ibid. 179.

distinct entities.)[43] Through this rhetorical question, Quine points out that since there is "… no non- trivial criterion of identity for non-actual possible objects,"[44] whether Fatty and Baldy are identical or distinct is not determinable on non-arbitrary grounds. Thus, both options (i.e. that Fatty and Baldy are identical or that Fatty and Baldy are distinct) are equally (in)tenable and it is possible to argue both ways.

To be more specific, if Fatty is bald (i.e. if the possible fat man in that doorway is bald/has the property of baldness) and if Baldy is fat(i.e. if the possible bald man in that doorway is fat/has the property of fatness), one may argue (via pertaining to the principle of Identity of Indiscernibles)[45] that there is one single possible man at the door way that is both fat and bold, that both "the possible fat man in that doorway" and "the possible bald man in that doorway" is the same possible man and that Fatty and Baldy are identical.

However, if Fatty is not bald (i.e. if the possible fat man in that doorway is not bald/ lacks the property of baldness) and if Baldy is not fat (i.e. if the possible bald man in that doorway is not fat/lacks the property of fatness) one may argue that there are two possible men at that door way, that "the possible fat man in that

[43] Ibid. 180.

[44] Takashi Yagisawa. [31 August 2009] "Possible Objects." *Stanford Encyclopedia of Philosophy*. Available [online]: <http://plato.stanford.edu/entries/possible-objects> [1 September 2009].

[45] The principle of Identity of Indiscernibles is generally formulated as follows: For two objects x and y, if all the properties of x and y are the same, then x is identical to *y*. I am indebted to Peter Forrest. 13 July 2006. "The Identity of Indiscernibles." *Stanford Encyclopedia of Philosophy*. Available [online]: <http://plato.stanford.edu/entries/identity-indiscernible> [30 November 2008] for the formulation of the Principle. For more on the Principle, see Williard Van Orman Quine, "Notes on Existence and Necessity," *The Journal of Philosophy* 40, no. 5 (1943); Maz Black, "The Identity of Indiscernibles," *Mind* 61 (1962); Ian Hacking, "The Identity of Indiscernibles," *Journal of Philosophy* 72, no. 9 (1975); Forrest, Peter. 13 July 2006. "The Identity of Indiscernibles." *Stanford Encyclopedia of Philosophy*. Available [online]: <http://plato.stanford.edu/entries/identity-indiscernible> [30 November 2008]; and G. W. Leibniz, "Philosophical Papers and Letters," in *Leibniz, G. W., Philosophical Papers and Letters, 2nd ed*., ed. And trans. L. Loemker (Dordrecht: D. Reidel, 1969.)

doorway" and "the possible bald man in that doorway" are two possible men and that Fatty and Baldy are distinct.

Moreover, even if Fatty is bald (i.e. even if the possible fat man in that doorway is bald/has the property of baldness) and Baldy is fat (i.e. even if the possible bald man in that doorway is fat/has the property of fatness), as long as their degrees of baldness and fatness are different (for instance, if Baldy is plumpish and completely bald and if Fatty is obese and has receding hair),one may still argue that there are two possible men at that door way, that "the possible fat man in that doorway" and "the possible bald man in that doorway" are two possible men and that Fatty and Baldy are distinct.

Additionally, even if Fatty is as bald as Baldy (i.e. even if the possible fat man in that doorway has the same degree of baldness with the possible bald man in that doorway) and even if Baldy is as fat as Fatty (i.e. even if the possible bald man in that doorway has the same degree of fatness with the possible fat man at that doorway), as long as they have other different properties (for instance, if Baldy has blue eyes and if Fatty has brown eyes),one may still argue that there are two possible men at that door way, that "the possible fat man in that doorway" and "the possible bald man in that doorway" are two possible men and that Fatty and Baldy are distinct.

Nevertheless, since the given properties (i.e. fatness and baldness) of Fatty and Baldy are underdetermined (i.e. we do not know *how* fat or *how* bald they are or we don't know their degrees of fatness or baldness) and the other properties (like the property of eye color) are not determined, Fatty are Baldy are incomplete objects and

it is not possible to decide whether they are identical with or distinct from each other. In other words, it is not possible to uniquely identify them.

Given the case of "the possible fat man in that doorway" (i.e. Fatty) and "the possible bald man at that doorway" (i.e. Baldy), Quine concludes that merely possible entities "…cannot meaningfully be said to be identical with themselves and distinct from one another"[46] and the "concept of identity"[47] is simply inapplicable to such entities. Assuming that *all*[48] entities should be uniquely identifiable and that it is not possible to uniquely identify merely possible entities, he denies that there are such entities. Hence, the proper names 'Fatty' and 'Baldy', introduced to name the possible fat man at that doorway and the possible bald man at that doorway respectively, fail to have uniquely identified merely possible referents and turn out to be empty.

In his controversial paper "Nonexistence", Salmon convincingly argues through the example of 'Noman' that it is (contrary to what Quine maintains) possible to individuate merely possible entities via uniquely identifying descriptions. Salmon introduces the proper name 'Noman' (via a definite description) to refer to

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[46] Quine, "On What There Is," 179.

[47] Ibid.

[48] Strawson and especially Quine argue that *all* objects should be identifiable. To encapsulate his view on the issue, Quine even coins the phrase "No entity without identity". I disagree with this metaphysical claim for the following reason: I think whether *we* can meaningfully speak of entities that are not uniquely identified (or whether entities that are not uniquely identified can be referred) is a *semantic* issue whereas whether there *are* entities that cannot be uniquely identified is a *metaphysical* one. Though I agree with the semantic claim that to be the referent of a proper name, the entity in question (whether a merely possible or actual entity) should be uniquely identified (i.e. either through a uniquely identifying description or via ostentation), I disagree with the metaphysical claim that identity is a necessary condition for being an entity as I think it is possible that there are merely possible entities that cannot be uniquely identified. I also think that such entities, in virtue of not being uniquely identifiable, are ineffable for us. Yet being ineffable for certain creatures (in this case human beings) seems not to entail being non-existent. For more on the issue, see Peter F. Strawson, *Individuals an Essay in Descriptive Metaphysics* (London, UK: Routledge Kegan & Paul, 1979); and Quine, "On What There Is."

his merely possible brother that would have developed from the union of the particular sperm S of his father's and particular ovum E of his mother's such that "neither gamete [would have united] with any other to develop into a human zygote."[49] He holds that the description "the only[50] individual that would have developed from the union of the particular sperm S and particular ovum E had S fertilized E in a normal manner" "uniquely identifies"[51] the merely possible entity (i.e. the merely possible individual) that is the referent of 'Noman'.

Having presented Quine and Salmon's contrasting views on the possibility of uniquely identifying merely possible entities, in what follows, I determine whether 'Vulcan', like 'Noman', has a uniquely identified merely possible referent or, like 'Fatty' and 'Baldy', fails to have a unique referent and is empty.

First, let's evaluate the case of 'Vulcan' in relation to the example of 'Noman'. Although both proper names (i.e. 'Noman' and 'Vulcan') were introduced to language with a definite description, 'Noman' was introduced with *the intention of naming a merely possible object* (i.e. Salmon's merely possible brother that was uniquely identified with the description "the only individual that would have developed from the union of the particular sperm S and particular ovum E had S

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[49] Nathan Salmon, "Existence," in *Philosophical Perspectives, 1: Metaphysics*, ed. J. Tomberlin. (Atascadero, CA.: Ridgeview, 1987), 49.

[50] Salmon seems to assume that it is possible for *only one* individual to develop from the union of the particular sperm S and the particular ovum E if S fertilizes E in a normal manner. However, as Karanfil Soyhun also pointed out to me, in the first 14 days of pregnancy, it is possible for a fertilized ovum (i.e. a pre-embryo) to split into two (or to twin) and form two identical pre-embryos. Hence, two individuals, instead of one, may develop from the union of the particular sperm S and the particular ovum E has S fertilized E in a normal manner. Salmon seems to (intentionally or unintentionally) overlook the implications of this biological phenomenon for his 'Noman' example. For the sake of the argument, I assume that 'Noman' refers to the only individual that would have developed from the union of the particular sperm S and particular ovum E if S had fertilized E in a normal manner *and* if E had not split into two (i.e. if E had not twinned). For more on twinning, see Martin G. Bulmer, *Biology of Twinning in Man* (London, UK: Oxford University Press, 1970.)

[51] Salmon, "Existence," 94.

fertilized E in a normal manner") whereas 'Vulcan' was introduced with the intention of naming *an actual object* (i.e. the actual planet causing perturbations in Mercury's orbit). To be more specific, Salmon introduced the proper name 'Noman' *consciously and knowingly* to name his *merely possible* brother whereas Le Verrier, *unaware* of the fact that there was no intra-mercurial planet causing perturbations in Mercury's orbit, introduced the name 'Vulcan' to name the *actual* planet that he took to exist. In other words, if the description with which 'Vulcan' was introduced can uniquely identify a merely possible entity, then, it is possible to say that Le Verrier introduced the name 'Vulcan' *unwittingly* (i.e. unknowingly and inadvertently) to name the merely possible entity uniquely identified with the description[52] "the planet causing perturbations in Mercury's orbit" whereas Salmon introduced the name 'Noman' *wittingly* (i.e. knowingly and advertently) to name the merely possible entity uniquely identified with the description "the only individual that would have developed from the union of the particular sperm S and particular ovum E had S fertilized E in a normal manner"

I think the above evaluation strongly suggests that, Salmon's 'Noman' example and the 'Vulcan' case are, as a result of differing in terms of the manner in which the proper names 'Noman' and 'Vulcan' were introduced to language, not readily comparable. Thus, I slightly modify Salmon's 'Noman' example to develop another example that is more analogous to the 'Vulcan' case. By examining these

[52] Although the exact phrasing of the description used to introduce the name 'Vulcan' is not evident from the historical account, it is clear that the name 'Vulcan' was introduced via a description similar in spirit to the one I present above (i.e. attributing Vulcan the property of being the planet responsible for the perturbations/deviations/irregularities in the orbit of Mercury). The original description used to introduce the name 'Vulcan' may be something like "the planet causing irregularities in Mercury's orbit", "the planet perturbing Mercury's orbit" or "the planet responsible for the perturbations in the orbit of Mercury". Since the exact phrasing of the description with which 'Vulcan' was introduced is not essential to the discussions I carry out, I assume that 'Vulcan' was introduced to language with the description "the planet causing perturbations in Mercury's orbit".

three cases in relation to each other, I want determine whether the description with which the proper name 'Vulcan' was introduced to language can uniquely identify a merely possible object that can constitute the referent of 'Vulcan'.

Let me start by modifying Salmon's 'Noman' example. Imagine that an embryologist takes the particular sperm X and the particular ovum Y and provides the necessary laboratory conditions for fertilization. Assuming that the fertilization is successful, s/he believes that there is an actual individual resulting from the union of the particular sperm X and the particular ovum Y. With the intention of naming the individual s/he takes to exist, s/he introduces the proper name 'Yesman' via the definite description "the unique[53] individual resulting from the union of the particular sperm X and the particular ovum Y". However, a few weeks later s/he finds out that the fertilization s/he took to be successful, in fact, hadn't taken place and the unique individual s/he thought to have named 'Yesman' turns out to be non-existent.

Now, let's compare the case of 'Yesman' with the cases of 'Vulcan' and 'Noman'. In all three cases, the proper names (i.e. 'Vulcan', 'Noman' and 'Yesman') were introduced to language with a definite description. In the cases of 'Vulcan' and 'Yesman', the proper names were introduced with the intention of naming *actual* entities (i.e. an actual planet and an actual human being) that were thought to exist. In the case of 'Noman', the proper name was introduced with the intention of naming a uniquely identified *merely possible entity.*

As the proper name 'Yesman' was introduced via the description "the unique individual resulting from the union of the particular sperm X and the particular ovum Y" with the intention of naming the *actual* unique individual resulting from the union

[53] The embryologist, somehow, (maybe by keeping the sperm and the ovum or the pre-embryo under a certain temperature) makes sure that twinning is not an option in this case.

of the particular sperm X and the particular ovum Y" and as there is no such actual unique individual, 'Yesman' either turns out to have no referent whatsoever (and hence turns out to be empty) or[54] (assuming that the description with which 'Yesman' was introduced can uniquely identify a merely possible entity) refers[55] to the unique merely possible individual that would have resulted from the union of the particular sperm X and the particular ovum Y. I believe "Yesman", like 'Noman', refers to a uniquely identified merely possible individual as I think the description "the unique individual resulting from the union of the particular sperm X and the

[54] İlhan İnan thinks that if a name is introduced to language by means of a description with the *intention* of naming an *actual* entity that is thought to exist and in fact doesn't exist, then, that name is necessarily empty (i.e. necessarily lacks a referent). Hence, he thinks that the names 'Yesman' and 'Vulcan', regardless of whether the descriptions with which they were introduced can uniquely identify merely possible entities, are empty. However, I think, even if a name is introduced to language via a description with the *intention* of naming an *actual* entity (that is thought to exist and in fact doesn't exist), as long as the description in question can uniquely identify a merely possible entity, it is plausible to hold that the introducer of the name *unintentionally* names the *merely possible entity* that is uniquely identified by the description (via which the concerned name is introduced). I am aware that in the second chapter of this study, I argue against Salmon's claim that when Le Verrier introduced the name 'Vulcan' with the *intention* of naming the *actual* entity he took to exist, he *unintentionally* named the mythical entity he had unwittingly created while false-theorizing. Nevertheless, in that case I don't object to the general idea of unintentional naming. I simply argue (by maintaining that mythical entities are not created simultaneously with false theorizing and that they enter the intellectual scene only after the theory is falsified) that Le Verrier couldn't have unintentionally named *a mythical entity* when he introduced the name 'Vulcan' as no such entity existed at the time of naming. Hence, I solely hold that, given how mythical entities start to exist, it doesn't seem possible to name a mythical entity *unintentionally*.

[55] I think accepting that it is possible to unintentionally name merely possible entities strongly implies that merely possible entities *somehow* exist independently of our activities considering that when we uniquely identify (via descriptions) merely possible entities, we don't seem to *create* them but we seem to assume that they already exist and make them (i.e. the already existing merely possible entities) referable for ourselves. Let me clarify what I have in mind with a metaphor. Think of the descriptions (with which names are introduced) as fishing hooks and think of the merely possible entities as the fishes. When we go fishing, we assume that there *are (i.e. there exist)* a lot of fishes in the water (i.e. we *don't create* the fishes) and if we catch a certain fish by using the hook we have, the fish we caught becomes accessible and specifically identified for us and the rest of the fishes in the water stay anonymous and inaccessible for us. By the same token, we assume that there *are (i.e. there exist)* a lot of merely possible entities (i.e. we *don't create* the merely possible entities) and if we uniquely identify a certain merely possible entity by using the description we have, it becomes referable or linguistically accessible for us and the rest of the merely possible entities (seem to) stay ineffable for us. In other words, we assume that there are fishes and there are merely possible entities yet whether we can catch a fish or uniquely identify a merely possible entity depends on the hook or the description we have at hand. Though it is not a perfect analogy (considering that a description can uniquely identify one single object whereas a hook may catch various different fishes), I think it can still crudely explain why I believe merely possible entities seem to have a sort of independent existence.

particular ovum Y", by specifying *an individual essence*[56] (or a property the merely possible entity necessarily has -in this case the property of being the unique individual that would have resulted from the union of the particular sperm X and the particular ovum Y- and all other objects necessarily lack) of the merely possible individual in question, can uniquely identify it.

Given that the description with which 'Yesman' was introduced to language can uniquely identify the merely possible individual that constitutes the referent of 'Yesman' and given the above mentioned similarities between the cases of 'Vulcan' and 'Yesman', I am inclined to think that the definite description with which 'Vulcan' was introduced to language can uniquely identify the merely possible object that is the referent of 'Vulcan'. However, in the case of Vulcan, it doesn't seem possible to individuate a merely possible entity via using the definite description "the planet causing perturbations in Mercury's orbit". As the 'Yesman' case clearly demonstrates, in order to uniquely identify a merely possible entity, the definite description in question should specify *an individual essence* (or a property the merely possible object necessarily has and everything else necessarily lacks) of the merely possible entity in question. Nevertheless, intuitively speaking, the description "the planet causing perturbations in Mercury's orbit" seems not to specify an individual essence of the merely possible referent of 'Vulcan' as "being the planet

[56] According to Plantiga, *an* individual essence of a certain object (either a merely possible object or an actual object) is a property which the object in question necessarily has and everything else necessarily lacks. Plantiga also holds that an object may have several individual essences (i.e. several properties which the object in question necessarily has and everything else necessarily lacks). For this concise presentation of Plantiga's view, I am indebted to Christopher Menzel, 8 December 2008, "Actualism" and Takashi Yagisawa, "Possible Objects." For more on individual essence, see Alvin Plantiga, *The Nature of Necessity* (Oxford, UK: Oxford University Press, 1974); and Alvin Plantinga and Matthew Davidson, *Essays in the Metaphysics of Modality* (Oxford, UK: Oxford University Press, 2003) and for a detailed presentation and discussion of Plantiga's notion of individual essence (which I found very helpful) see Christopher Menzel, "Actualism" and Takashi Yagisawa, "Possible Objects."

causing perturbations in Mercury's orbit" *appears*[57] not to be a property that the merely possible object in question necessarily has nor does it seem to be a property that every other object necessarily lacks. To be more specific, even if being the planet causing perturbations in Mercury's orbit is assumed to be a property the merely possible object in question necessarily has, still, this property would fail to constitute an individual essence of the merely possible object in question considering that it fails to be a property that every other object necessarily lacks as there may be a myriad of merely possible objects that have the property of being the planet causing perturbations in Mercury's orbit. In other words, each and every one of the merely possible objects that have the property of being the planet causing perturbations in Mercury's orbit may be the referent of 'Vulcan'[58]and we cannot individuate a merely possible object that is *the* referent of 'Vulcan'.

I think the above discussion on 'Noman', 'Fatty', 'Baldy', 'Yesman' and 'Vulcan' is suggestive of the limits and the merits of the possibilist version of the Theory of Direct Reference. Though the possibilist version of the Theory has the potential to account for our intuitions in attributing truth to negative existential sentences containing empty names, whether it can actually do so depends on whether the description with which the name in question is introduced to language can uniquely identify a merely possible entity. As the description with which 'Vulcan' was introduced fails to uniquely identify a single merely possible entity, 'Vulcan'

[57] I thoroughly discuss the properties of Vulcan in relation to the Theory of Descriptions in the fourth chapter. Thus, I deliberately refrain from discussing the issue here at length.

[58] Such problems can be avoided in the case of 'Yesman' considering that it is relatively easier to uniquely identify merely possible human beings. However, one can't easily come up with a means to uniquely identify other possible objects like planets. Salmon also draws attention to the problem of individuation and admits that "Not all merely possible individuals are so easily pinned down" as possible human beings. See Salmon, "Existence," 94.

unlike ‘Noman’ and ‘Yesman’ and like ‘Fatty’ and ‘Baldy’ fails to refer to a uniquely identified merely possible object and hence fails to have a referent. Thus, even the possibilist version of the Theory seems unable to account for our intuition to attribute truth to

(S1) “Vulcan doesn’t exist”

1) To form the *negative existential* sentence (S1), the speaker should be convinced that ‘Vulcan’ doesn’t refer to an actual existent object
2) The sole semantic function of a proper name is to refer to its referent
3) ‘Vulcan’ refers to the merely possible planet causing perturbations in Mercury’s orbit
4) There are infinitely many merely possible planets causing perturbations in Mercury’s orbit
5) If 1,2,3,4 are true, then, ‘Vulcan’ doesn’t refer to a uniquely identified possible object
6) If 5 is true, then Vulcan doesn’t have a semantic function
7) If 6 is true, then (S1) is neither true nor false.

## Theory of Direct Reference: Evaluated in Relation to (S2) “Vulcan could have existed”

As the discussions in the previous sections of this chapter demonstrate, neither version of the Theory of Direct Reference can explain our intuitions in attributing truth to negative existential sentences containing empty names like

(S1) “Vulcan doesn’t exist”.

Assuming that we intuitively attribute truth to an existential counterfactual sentence containing a certain empty name by presupposing that the negative existential sentence containing the very same empty name is contingently true (i.e. assuming that we intuitively attribute truth to an existential counterfactual sentence containing a certain empty name as a result of attributing –contingent- truth to the negative existential sentence containing the very same empty name), I maintain that both versions of the Theory of Direct Reference, in virtue of failing to account for our intuitions in attributing truth to such sentences as (S1), also fail to account for our intuitions in attributing truth to such sentences as

(S2) "Vulcan could have existed."

A summary of the problem is as follows:

1) According to both versions of the Theory of Direct Reference, (S1) is neither true nor false.
2) In order to hold that the counterfactual sentence (S2) is true, the speaker should be convinced that (S1) is *contingently* true
3) Both versions of the Theory of Direct Reference fail to account for our intuitions in attributing truth to such sentences as (S1) and (S2)

In this chapter I demonstrated how both versions (i.e. the actualist and the possibilist) of the Theory of Direct Reference fail to account for our intuitions in attributing truth to such existential modal sentences as (S1) and (S2). In the following chapter, I present the Theory of Descriptions and explain how it can successfully account for our intuitions in attributing truth to such sentences as (S1) and (S2). Then, I analyze:

(S3) ""For any possible world P, if Vulcan exists in P, that Vulcan is causing perturbations in Mercury's orbit is contingently true"

to determine whether the success of the Theory of Descriptions in explaining our intuitions in attributing truth to such existential modal sentences as (S1) and (S2) is extendible to other existential modal sentences containing empty names.

# CHAPTER 4

# THE THEORY OF DESCRIPTIONS AND EMPTY NAMES

## A Brief Introduction

In this chapter, I introduce Russell's[59] Theory of Descriptions and present Kripke's[60] two criticisms of the Theory. Then, I demonstrate by analyzing

(S1) "Vulcan doesn't exist"

and,

(S2) "Vulcan could have existed".

that the Theory of Descriptions can, in the case of negative existential and existential counterfactual sentences containing empty names, evade the difficulties Kripke attributes to it and explain the intuitive truth attributions we make to such sentences. Via analyzing

[59] In his John Locke Lectures on Reference and Existence and in "Naming and Necessity", Kripke takes Frege's endorsement of the Description Theory of Reference for granted and he treats Frege's and Russell's views in the same manner. He even goes so far as to name the view that he attributes to both Frege and Russell the "Frege-Russel View". Thanks to Kripke's approach, as Sainsbury aptly phrases, "Frege and Russell have been lumped together as "description theorists"…" However, this interpretation of Frege's view has been rejected by a number of Frege scholars like Evans, McDowell and especially Dummett who firmly argues that Frege's notion of a sense should not be held equal or identified with a description. Given the strong tendency to disassociate Frege's view from the Theory of Descriptions, I purposefully refrain from providing a presentation of Frege's view and restrict my discussion of the Theory of Descriptions to Russell's view. For a detailed comparison of Frege's and Russell's views see (Kent Bach. 2000. *Comparing Frege and Russell*. Available [online]: <htttp://online.sfsu.edu> [12 December 2008]; and Gideon Makin. *The Metaphysicians of Meaning: Russell and Frege on Sense and Denotation* (London, UK: Routledge, 2000). Also see Mark Sainsbury, *Departing From Frege: Essays in the Philosophy of Language* (London, UK: Routledge, 2002), 1-19. See especially (Michael Dummett, *Frege: Philosophy of Language* (Cambridge, MA: Harvard University Press, 1993), Chapter 5, 97-98 and Chapter 6). Also see Gareth Evans, *The Varieties of Reference*; and John McDowell, "On the Sense and Reference of a Proper Name," *Mind* 86, no. 342 (1977).

[60]Though the proponents of referentialism have their own objections to the Theory of Descriptions, I deliberately discuss the Theory exclusively in relation to Kripke's position as I think his criticisms are representative of the main argument(s) referentialists hold against descriptivism.

(S3) "For any possible world P, if Vulcan exists in P that Vulcan is causing perturbations in Mercury's orbit is contingently true";

an modal existential sentence involving the modal operator of contingency and containing the empty name 'Vulcan', I illustrate that the Theory of Descriptions fails to account for our intuitions in attributing truth to sentences like (S3) and, on account of this, I conclude that the success of the Theory in explaining our intuitions in attributing truth to such modal existential sentences as (S1) and (S2) is not extendible to other modal existential sentences containing empty names such as (S3).

## Russell's Theory of Descriptions Explained

Initially put forth in his groundbreaking paper "On Denoting", Russell's Theory of Descriptions[61] has since been deeply influential on a number of fields including metaphysics, epistemology and philosophy of language. Russell's motivations[62] for developing the theory were three fold. First, he aimed to come up with a semantic theory to account for the meaningful use of non-denoting phrases (i.e. "…the phrases that may be denoting yet not denote anything")[63] without metaphysical commitments to such abstract entities as nonexistent objects or concepts. Second, he wanted to provide a solution to the problem of co-referring expressions which, unlike that of Frege's, wouldn't require a metaphysical commitment to senses; the abstract objects

[61] For the general presentation of Russell's Theory of Descriptions, I am indebted to Peter Ludlow, Anthony Everett and Thomas Hofweber. See Peter Ludlow. 26 July 2007. "Descriptions." *Stanford Encyclopedia of Philosophy*. Avialable [online]: <http://plato.stanford.edu/entries/descriptions> [21 March 2009]; and Anthony Everett and Thomas Hofweber, "Much Ado about Nothing," in *Empty Names, Fiction, and the Puzzles of Non-Existence*, ed. A. Everett and T. Hofweber (Stanford, CA: Center for the Study of Language and Information, 2000).

[62] For the presentation of Russell's motivations for developing the theory, I am indebted to Peter Ludlow. See Peter Ludlow. 26 July 2007. "Descriptions."

[63] Bertrand Russel, On Denoting," *Mind, New Series* 14, no. 56 (1905): 479.

fixing the referents of these expressions. As to his third objective, he wanted to distinguish between knowledge by acquaintance and knowledge by description. Given that in this study I am particularly concerned with the truth values of existential modal sentences containing empty names, I exclusively focus on Russell's use of Theory of Descriptions to account for the meaningful use of non-denoting expressions.

To start with the preliminaries of his theory, Russell holds that ordinary proper names are in fact "abbreviated" or "disguised" definite descriptions and definite descriptions are devices of quantification as they can enter into scope relations with modal operators such as necessity, possibility or negation. He argues that sentences containing a definite description should be understood to have the logical form "The F is G" which, in fact, involves an existence claim, a uniqueness claim,[64] and an identity claim about F: That there is an F, that F is unique and that F is identical to G.[65] Such claims, according to Russell's theory, are not claims about some particular individual but rather are general claims about the state of affairs of the world. Hence, he concludes, thanks to his Theory, "The whole realm of non-entities such as "the round square", "the even prime other than two", "Apollo", "Hamlet" etc. can now be satisfactorily dealt with."[66]

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[64] Russell accounts for the uniqueness claim in the following manner: "…for our pusposes we take *the* as involving uniqueness. Thus when we say "x was the father of Charles II, we not only assert that x had a certain relation to Charles II but also that nothing else has that relation" See Russell, 481-482.

[65] To explain how sentences containing a definite description have the logical form "The F is G" and how that form involves an existence claim (i.e. that there is an F) and a uniqueness claim (i.e. that F is unique) and an identity claim (that F is identical with G), Russell analyzes the sentence (1) "Scott was the Author of Waverly". According to this analysis, (1) becomes "One and only one entity wrote Waverly and Scott was identical with that one" and includes an existence claim and a uniqueness claim (there is one and only one entity that wrote Waverly) and an identity claim (Scott is identical with the one and only one entity that wrote Waverly). See (Russell, 1905: 488).

[66] Russell, 491. On the same page, Russell provides the examples of 'Apollo' and "the round square" to clarify his point. Accordingly, "A proposition about Apollo means what we get by substituting what

In light of the above presented fundamentals of the Theory of Descriptions, let's analyze the sentence

(SP) "Pegasus doesn't exist".

1) We intuitively attribute truth to (SP)
2) The proper name 'Pegasus' is a definite description in disguise
3) 'Pegasus' is the abbreviated form of the definite description "The white winged horse"
4) 'Pegasus' in (SP) is substituted with the definite description "The white winged horse"
5) After the substitution, (SP) turns into (SP') "The white winged horse doesn't exist"; which is in the form of "The F is G".
6) The definite description "The white winged horse" enters into a scope relation with the modal operator of negation. Accordingly, (SP') is ambiguous between two interpretations.
7) Applying the negation in the narrow scope, (SP') means (SP^) "There is (i.e. exists) a unique entity that is the white winged horse and it doesn't exist" and (SP^) is false since it involves quantifying over objects that do not exist.[67]
8) Applying the negation in the wide scope, (SP') means (SP*) "It is not the case that there is a unique entity that is the white winged horse"

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the classical dictionary tells us is meant Apollo, say "the sun-god"….If Apollo has a primary occurrence, the proposition containing the occurrence is false; if the occurrence is secondary the proposition may be true. So again, "the round square is round" means "there is one and only one entity x which is round and square and that entity is round" which is a false proposition…"

[67] In other words, if the occurrence of the definite description "the white winged horse" is primary in the sentence "Pegasus doesn't exist", the sentence is false. For Russell's discussion on the issue, see Russell, 490.

9) Since it is not the case (with regard to the state of affairs of the actual world) that there is a unique entity that is the white winged horse, (SP*) turns out to be true[68]

10) The difference is that what is negated in the first interpretation of (SP) is a claim about a particular individual; we *say of that individual* that *it* doesn't exist. In the second interpretation, what is negated is not a claim about some particular individual, but rather a *general claim* about the state of affairs of the actual world; a claim that the actual world doesn't contain the unique entity that is the white winged horse.

11) The truth value of (SP'), taken in the wide scope, is equivalent to that of (SP*)

12) (SP*) is true

13) (SP') is true

14) (SP) is true

15) Theory of Descriptions can account for our intuitions in attributing truth[69] to negative existential sentences containing empty names (or non-denoting expressions) like 'Pegasus'[70]

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[68] In other words, if the occurrence of the definite description "the white winged horse" is secondary in the sentence "Pegasus doesn't exist", the sentence is true. For Russell's discussion on the issue, see Russell, 490.

[69] Since I haven't introduced Kripke's criticisms of the Theory yet, in the specific case of (SP), I deliberately refrain from discussing the issues pertaining to the truth values of the sentences containing proper names.

[70] As I argued in the first chapter, I think 'Pegasus' being the name of a mythological object is not an empty name and hence is not a non-denoting expression. Nevertheless, names like 'Pegasus' or 'Santa Claus', despite the fact that there is no consensus as to whether such names are empty, are widely used as examples of empty names and non-denoting expressions. For the sake of the argument, I am assuming that 'Pegasus' is an empty name.

Having briefly outlined the Theory of Descriptions, in the next section, I consider two major criticisms Kripke's presents against the Theory.

## Kripke's Criticism of the Theory of Descriptions

Kripke, throughout "Naming and Necessity", argues that the Theory of Descriptions is "false"[71] on account of holding proper names synonymous with definite descriptions. He maintains that proper names like 'Aristotle' can rigidly designate the same entity (i.e. *the actual* Aristotle or Aristotle *himself*) in the actual and counterfactual courses of history,[72] whereas non-rigid (i.e. contingent) descriptions like "The teacher of Alexander the Great", "The author of *Metaphysics*" or "The greatest philosopher of Antiquity" express accidental properties of the object concerned (i.e. *the actual* Aristotle or Aristotle *himself*) and hence fail to refer to the same entity (i.e. *the actual* Aristotle or Aristotle *himself*) in the actual and counterfactual courses of history. Thus, Kripke concludes, rigid proper names can't be synonymous and cannot "…mean the same"[73] with non-rigid descriptions.

Kripke's criticism of the Theory is two- fold. First, he states that holding names synonymous with descriptions allows different people (or even the same person)[74] to substitute the same proper name with different and arbitrarily chosen

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[71] Saul Kripke, *Naming and Necessity*, 29.

[72] Kripke holds that possible worlds (i.e. counterfactual states of affairs like the counterfactual courses of history) are not physical systems like distant planets or foreign countries but are simply "formal devices" utilized to stipulate about the counterfactual conditions concerning the contingent properties of an already existent entity. Accordingly, when we form counterfactual sentences "… we begin with the objects, which we have, and can identify in the actual world. We can then ask whether certain thing might have been true of the objects" See Saul Kripke, *Naming and Necessity* 45.

[73] Ibid. 57.

[74] Kripke summarizes the problem in the following manner "…even a single speaker, when asked 'What description are you willing to substitute for the name?' may be quite at a loss" Saul Kripke, *Naming and Necessity*, 30.

descriptions (or, in Russelian terms, denoting phrases) as there is no criterion for choosing *a single description* to substitute for the name.[75] This problem is inherent in Russell's theory as he proposes that every object can be denoted by "…an infinite number of different denoting phrases"[76] and that proper names can be held synonymous with various definite descriptions. Apparently, Russell fails to provide criteria for picking the definite description to substitute for the proper name in question.

As to the second problem Kripke attributes to the Theory, even if substituting a proper name, say 'Aristotle', with a number of arbitrarily chosen definite descriptions such as "The teacher of Alexander the Great" or "The greatest philosopher of Antiquity" is assumed to be acceptable, still, these contingent descriptions, expressing accidental properties of *the actual* Aristotle, fail to designate the same entity (i.e. *the actual* Aristotle or Aristotle *himself*) in the actual and counterfactual courses of history. Thus, Kripke claims, they cannot be held synonymous with the name 'Aristotle' which rigidly designates the same entity (i.e. Aristotle *himself*) in the actual and counterfactual courses of history. To be specific, though Aristotle himself, in the actual course of history, *was,* the teacher of Alexander the Great or *is* the author of *Metaphysics*, still, in a counterfactual course of history the man Aristotle could have existed without bearing any of these properties and somebody else, say Aristople, could have been the person fulfilling these properties. So, the name 'Aristotle' rigidly designates the *actual* Aristotle in

[75] Kripke also criticizes Frege's view through the specific example of 'Aristotle' .He argues that "Some people may give one sense to the name 'Aristotle', others may give another" as there are no criteria for choosing the description(s) to substitute for the name. Frege himself also admits that "In the case of an actual proper name such as 'Aristotle', opinions as to sense may differ. It might....be taken [as] the pupil of Plato and teacher of Alexander the Great." See Gottlob Frege, "Sense and Reference," *The Philosophical Review* 57, no. 3 (1948), 210; and Saul Kripke, *Naming and Necessity*, 30.

[76] Russell, 487.

actual and counterfactual courses of history, whereas the contingent descriptions such as "The teacher of Alexander the Great" designates *the actual* Aristotle in the actual course of history but designates some other person in the counterfactual course of history.

Based on this problem, Kripke argues that, if the name 'Aristotle' is synonymous with the description (or any other description) "The author of *Metaphysics*", then, the truth value of the statement "Aristotle was fond of dogs" should not change when the name 'Aristotle' is replaced with the description. However, given that the description designates Aristotle himself in the actual course of history and somebody else in the counterfactual course, the truth value of the statement depends on Aristotle's being fond of dogs in the actual case, whereas it depends on somebody else's, say, Aristople's liking dogs in the counterfactual case. Though Aristotle himself *is* the author of *Metaphysics* and *was* fond of dogs (at least, *is* known to have been fond of dogs) in the actual course of history, the author of *Metaphysics* could have been somebody else famous for his/her hatred for all sorts of canines. In that case, the sentence "Aristotle was fond of dogs" would be true whereas "The author of *Metaphysics* was fond of dogs" would be false. Hence, Kripke concludes, contrary to what is defended by Theory of Descriptions, proper names cannot be held synonymous with contingent descriptions.[77]

Given Kripke's two main arguments against the Theory of Descriptions, in the next section I consider whether his criticisms, which seem to be valid for sentences containing non- empty proper names, are also applicable to sentences containing empty names such as (S1) and (S2).

[77] Kripke agrees that descriptions that "…use the essential properties" of the object, can be synonymous with the name of the object and can rigidly designate the same entity in actual and counterfactual courses of history. See Saul Kripke, *Naming and Necessity*, 57.

## Are Kripke's Criticisms Valid for Such Sentences as (S1) and (S2)?

Although holding *non- empty* proper names like 'Aristotle' synonymous with descriptions involves the above discussed difficulties, it may be possible to eliminate these difficulties in the case of *empty* names like 'Vulcan'. Thus, it may be possible for the Theory of Descriptions to account for our intuitions in attributing truth to such existential modal sentences containing empty names as (S1) and (S2). In what follows, I consider Kripke's criticisms in relation to empty names to see if this is the case.

To start with Kripke's first criticism, he maintains that it is possible to hold non-empty proper names like 'Aristotle' synonymous with infinitely many descriptions (like "the teacher of Alexander the Great", "the author of *Metaphysics*" or "the greatest philosopher of Antiquity") and since the Theory of Descriptions doesn't provide criterion for choosing a single description to substitute for the name, in each instance of substitution, it is arbitrarily chosen. However, in the case of empty names, the name is introduced to language by means of a *certain* description (empty names, for the obvious reason, cannot be introduced to language via ostentation) and hence, the description to be substituted for the name is specified by the introducer of the name and it is not *arbitrarily* chosen. Consider the empty name 'Vulcan'. Since Le Verrier introduced 'Vulcan' to language with the description "The planet causing perturbations in Mercury's orbit", one can replace the occurrences of 'Vulcan' with this specific description. Hence, in the case of empty names, we seem to bypass the first problem Kripke attributes to the Theory of Descriptions.

Given that we have a specific definite description (i.e. "the planet causing perturbations in Mercury's orbit") to substitute for 'Vulcan', we can test whether the Theory of Descriptions can accommodate Kripke's second objection (i.e. as the truth values[78] of sentences containing proper names change when the names are substituted with contingent descriptions, a proper name cannot, contrary to the Theory's claim, be synonymous with a contingent definite description) and explain our intuitions in attributing truth to (S1) and (S2). The descriptivist analysis of

(S1) "Vulcan doesn't exist"

is as follows:

1) We intuitively attribute truth to (S1)
2) The proper name 'Vulcan' is a definite description in disguise.
3) 'Vulcan' is the abbreviated form of the definite description "The planet causing perturbations in Mercury's orbit".
4) 'Vulcan' in (S1) is substituted with the definite description "The planet causing perturbations in Mercury's orbit"
5) After the substitution, (S1) becomes (S1') "The planet causing perturbations in Mercury's orbit doesn't exist"
6) Taking the negation in the wide scope, (S1') comes to mean (S1*) "It is not the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit.

[78] Since Kripke deals with sentences containing non-empty proper names that have semantic truth values even before the names in these sentences are substituted with descriptions, he can speak of a change in the *truth values* of these sentences. However, since sentences containing empty names do not have semantic truth values before the names in these sentences are substituted with descriptions and since they only have *intuitively attributed truth* values before the substitution, being conscious of this difference, I will strictly speak of the difference or the sameness between the attributed truth values and semantic truth values of sentences containing empty names.

7) Since it is not the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit, (S1*) turns out to be true.

8) The truth value of (S1') (i.e. the sentence containing a definite description) is equivalent to that of (S1*)

9) (S1') is true

10) (S1) is true

11) The intuitively attributed truth value of (S1) is the same with the semantic truth value of (S1')

12) Theory of Descriptions can account for our intuitions in attributing truth to (S1)

The above analysis, while explaining the apparent truth of (S1), also entails that (S1) is *contingently* true as the word "case" in the phrase "it is not the case" (which negates the statement "there is a unique entity that is the planet causing perturbations in Mercury's orbit") refers to the case or the state of affairs of the actual world, which is contingent. To be more precise, (S1*) "It is not the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit", it in fact means something like "it is not the case *in the actual world* that there is a unique entity that is the planet causing perturbations in Mercury's orbit". Considering that it is *contingently* (i.e. according to the actual world) not the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit, it *may* be the case in *another world* that there is a unique entity that is the planet causing perturbations in Mercury's orbit. Thus, as a result of attributing (contingent) truth to

(S1) "Vulcan doesn't exist"

we intuitively attribute truth to

(S2) “Vulcan could have existed.

Next, I consider whether the Theory can also account for our intuitions in attributing truth to existential counterfactual sentences like

(S2) “Vulcan could have existed”.

Below is the descriptivist analysis of (S2):

1) We intuitively attribute truth to (S2) “Vulcan could have existed.”
2) The proper name ‘Vulcan’ is a definite description in disguise.
3) ‘Vulcan’ is the abbreviated form of the definite description “The planet causing perturbations in Mercury’s orbit”.
4) ‘Vulcan’ in (S2) is substituted with the definite description “The planet causing perturbations in Mercury’s orbit”
5) After the substitution, (S2) turns into (S2’) “The planet causing perturbations in Mercury’s orbit could have existed”
6) Taking the possibility in the wide scope, (S2’) becomes (S2*) “It may be the case that there is a unique entity that is the planet causing perturbations in Mercury’s orbit”
7) Since it may be the case that there is a unique entity that is the planet causing perturbations in Mercury’s orbit, (S2*) turns out to be true.
8) The truth value of (S2’) (i.e. the sentence containing a definite description) is equivalent to that of (S2*)
9) (S2’) is true
10) (S2) is true
11) The intuitively attributed truth value of (S2) is the same with the semantic truth value of (S2’)

12) Theory of Descriptions can account for our intuitions in attributing truth to (S2)

Considering the above analyses of (S1) and (S2), I think the Theory of Descriptions can deal with both criticisms of Kripke and successfully explain our intuitions in attributing truth to negative existential and existential counterfactual sentences containing empty names. First, as the empty name 'Vulcan' was introduced to language with the specific definite description "The planet causing perturbations in Mercury's orbit", the description substituting 'Vulcan' in (S1) and (S2), in contrast to what Kripke argues, is *not* arbitrarily chosen. Second, substituting the occurrences of the name 'Vulcan' with the description "The planet causing perturbations in Mercury's orbit" in (S1) and (S2), contrary to what Kripke claims, does *no*t create a discrepancy between the intuitively attributed truth value and the semantic truth value of (S1) and (S2).

I believe this is the case for the following reason. When we intuitively attribute truth to (S1) and (S2), we apply the modal operators of negation and possibility in the narrow scope. To be more specific, we take (S1) to express something like "Vulcan, which is the planet causing perturbations in Mercury's orbit, doesn't exist" and we take (S2) to express something like "Vulcan, which is the planet causing perturbations in Mercury's orbit and which doesn't exist, could have existed". In other words, we take (S1) and (S2) to (paradoxically enough) *say of* the *object* Vulcan that it doesn't exist and that it could have existed. Yet, (S1) and (S2), interpreted in the narrow scope, don't express anything pertaining to the properties (i.e. essential or accidental properties) of *the object Vulcan.* Hence, even if the description "the planet causing perturbations in Mercury's orbit" is contingent (i.e.

even if it fails to specify an individual essence -or as Kripke puts it- the "essential properties"[79] of Vulcan), since (S1) and (S2) do not say anything about the essentiality/accidentality of the properties *of the object* Vulcan, when we apply the modal operators of negation and possibility in the wide scope and substitute the occurrences of 'Vulcan' in (S1) and (S2) with the description "the planet causing perturbations in Mercury's orbit" , (S1) and (S2) turn out to be semantically true and the intuitively attributed truth value (i.e. truth) does not change (i.e. the intuitively attributed truth value –truth- is the same with the semantic truth value-truth-)

Unlike the Theory of Direct Reference, Theory of Descriptions can account for our intuitions in attributing truth to negative existential sentences (i.e. the existential modal sentences containing the modal operator of negation) containing empty names and existential counterfactual sentences with empty names (i.e. the existential modal sentences containing the modal operator of possibility). In the next section, I consider whether the success of the Theory of Descriptions in explaining our intuitions in attributing truth to existential modal sentences containing empty names is peculiar to certain types of modal existential sentences (i.e. the ones containing the modal operators of negation and possibility) or is extendible to other modal existential sentences containing empty names.

[79] Saul Kripke, *Naming and Necessity*, 57.

Can the Theory of Descriptions Explain our Intuitions in Attributing Truth to other Existential Modal Sentences Containing Empty Names?

Consider the sentence:

(S3) "For any possible world P, if Vulcan exists in P that Vulcan is causing perturbations in Mercury's orbit is contingently true"

We apparently have a strong intuition to attribute truth to (S3) and this intuition seems to derive from our assuming that it is *possible* for Vulcan to exist *without* causing perturbations in Mercury's orbit. I think we come to take this to be the case as a result of carrying out a thought experiment similar in spirit to the one I present below.

The name 'Vulcan' was introduced to language with the description "The planet causing perturbations in Mercury's orbit". Following the Theory of Descriptions, we take the name 'Vulcan' to mean "The planet causing perturbations in Mercury's orbit" and since it is not the case with regard to our world that there is (or there exists) a unique entity that is the planet causing perturbations in Mercury's orbit, we regard the sentence

(S1) "Vulcan doesn't exist"

to be true for our world. We then think of a possible world, say possible world V, where there is (or there exists) a single entity that is the planet causing perturbations in Mercury's orbit. Following the Theory of Descriptions, we take 'Vulcan' to mean "The planet causing perturbations in Mercury's orbit". As it is the case with regard to the state of affairs of V that there is (or there exists) a unique entity that is the planet causing perturbations in Mercury's orbit, we are convinced that Vulcan exists in V

and take the sentence "Vulcan exists in V" to be true. Following this, we imagine another world, namely world W, which is possible with respect to world V, and *the same planet*[80] (i.e. Vulcan) that exists in V exists in W *without* causing perturbations in Mercury's orbit.

As a hypothetical case according to which Vulcan exists without causing perturbations in Mercury's orbit is imaginable for us and as we can conceive of Vulcan as existing without causing perturbations in Mercury's orbit, we are convinced that it is *possible* for Vulcan to exist *without* causing perturbations in Mercury's orbit and hence attribute truth to (S3)

However, assuming that the object that exists in W is Vulcan and that it is *possible* for Vulcan to exist *without* causing perturbations in Mercury's orbit entails that the property of causing perturbations in Mercury's orbit doesn't constitute an individual essence (i.e. a property which the object in question necessarily has and everything else necessarily lacks) of Vulcan. Granted that 'Vulcan' was introduced to language with the description "the planet causing perturbations in Mercury's orbit", it is possible to conclude that the description with which 'Vulcan' was introduced to language (and which we hold synonymous with 'Vulcan' and substitute for 'Vulcan'), failing to specify an individual essence of Vulcan, is a contingent description that, as Kripke[81] argues, cannot be synonymous with the proper name 'Vulcan'.

In this case, one may either maintain that the property of causing perturbations in Mercury's orbit constitutes an individual essence of Vulcan, that the

[80] I use 'planet' and 'object' interchangeably when I talk about what exists in W (i.e. Vulcan). When using 'planet,' I don't assume that "being a planet" is an individual essence of it.

[81] See Saul Kripke, *Naming and Necessity*, 30-32.

description "the planet causing perturbations in Mercury's orbit", specifying the individual essence of Vulcan, is not contingent and can be synonymous with the proper name 'Vulcan' and deny that the object existing in W is Vulcan or, argue that the property of causing perturbations in Mercury's orbit fails to constitute an individual essence of Vulcan, maintain that the planet existing in W is Vulcan and hold that the description "the planet causing perturbations in Mercury's orbit" is contingent and cannot be synonymous with the proper name 'Vulcan'. Let me present the problem in the form of an argument:

1) The name 'Vulcan' was introduced to language with the description "The planet causing perturbations in Mercury's orbit"
2) The description with which the name 'Vulcan' was introduced specifies an individual essence of Vulcan (i.e. a property which the object in question necessarily has and everything else necessarily lacks)
3) Following the description, If Vulcan exists; it is *necessarily* causing perturbations in Mercury's orbit
4) Vulcan exists in W *without* causing perturbations in Mercury's orbit
5) Following (4), If Vulcan exists; it is *contingently* causing perturbations in Mercury's orbit.
6) Either the planet that exists in W is not Vulcan or the description with which 'Vulcan' was introduced to language is contingent and, contrary to what the Theory of Descriptions defends, cannot mean the same or be synonymous with the name 'Vulcan'.

Although denying that the planet that exists in W is Vulcan appears promising in terms of securing the tenability of the Theory of Descriptions, still, it turns out to be

a highly counterintuitive move when the above mentioned case concerning Vulcan is compared to the following cases.

Discovered in 1846, the planet Neptune was the first planet to be found by theoretical prediction based on mathematical calculations rather than empirical observations.[82] In early 1840's, unexpected changes in the orbit of Uranus led such astronomers as Le Verrier, Adams and Galle to deduce that its orbit was subject to gravitational perturbations by a yet unknown eighth planet. Le Verrier introduced the name 'Neptune'[83] (before the telescopic identification of the planet) for the planet he took to exist and cause irregularities in the orbit of Uranus. Galle, working from the calculations of Le Verrier,[84] eventually observed Neptune on September 23, 1846.

In this case, the proper name 'Neptune' was introduced to language via a description like[85] "the planet causing irregularities in the orbit of Uranus" to refer to

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[82] F. Arago, the head of Paris Observatory described the theoretical character of Le Verrier's discovery with the apt sentence "He discovered Neptune "with the point of his pen." See NASA. "British Neptune Disaster Recovered." *DIO* 9, no. 1 (1999): 3-43. Available [online]: SAO/NASA http://articles.adsabs.harvard.edu//full/1999DIO.....9...../0000003.000.html [17 Dec 2008], 3.

[83] For a detailed discussion on Neptune and descriptive names, see (Marga Reimer and Anne Bezuidenhout, *Descriptions and Beyond* (New York, NY: Oxford University Press, 2004), 585-591; Robin Jeshion, "Donnellan on Neptune," *Philosophy and Phenomenological Research* 63, no. 1 (2007); S. Soames, 2006, "Descriptive Names vs. Descriptive Anaphora." *Philosophy and Phenomenological Research*. Available [online]: <www-rcf.usc.edu> [20 January 2009]; and Saul Kripke, *Naming and Necessity*.

[84] According to relevant historical account, Galle, after discovering Neptune by working from the calculations of Le Verrier, replied to Le Verrier with astonishment: "the planet whose place you have [computed] *really exists*" (See NASA. "British Neptune Disaster Recovered," 5. For a detailed account of the discovery of the planet Neptune, see Tom Standage, *The Neptune File: A Story of Astronomical Rivalry and the Pioneers of Planet Hunting (Science Matters)* (New York, NY: Berkley Trade, 2001); Lee A. Paradise, David Tulloch and Stephen D. Norton. *Historic Dispute : Is Urbain Le Verrier the true discoverer of Neptune?" Science in Dispute, 1*. Gale: Farmington Hills, MI, 2002; B. Apthorp Gould, *Report On The History Of The Discovery Of Neptune* (Verlag: Kraus Press, 2009); and William Sheehan and Richard Baum, "Neptune's Discovery 150 Years Later," *Astronomy* 24, no. 9 (1996).

[85] I say "like" considering that the exact phrasing of the description is not evident from the historical account. However, it is clear that the name 'Neptune' was introduced via a description similar in spirit to the one I present above (i.e. attributing Neptune the property of being the planet responsible for the perturbations/deviations/irregularities in the orbit of Uranus). The original description used to introduce the name 'Neptune' could be "the planet causing irregularities in Uranus' orbit", "the planet

the *unobserved* planet the existence of which was posited to explain the *observed* perturbations in the motions of Uranus.

Keeping the above given account concerning the discovery and naming of the planet Neptune in mind, consider the following case: With regard to the state of affairs of the actual world (which is one of the possible worlds), there is a unique entity that is the planet causing irregularities in the orbit of Uranus and that entity is called 'Neptune'. Imagine that there is another world, namely world X, which is possible with respect to the actual world and the same object[86] (i.e. Neptune) that exists in the actual world exists in X *without* causing irregularities (perhaps due to some minor differences in its gravitational force) in the orbit of Uranus. In this case, I am inclined to argue that the object in the possible world X is Neptune as Neptune wouldn't cease to be Neptune by losing one of its accidental properties; namely the property of causing irregularities in the orbit of Uranus.

Given that the cases of Vulcan and Neptune bear resemblance to each other considering that in both cases, the proper names 'Vulcan' and 'Neptune' were introduced to language via a description (i.e. "the planet causing perturbations in Mercury's orbit" and "the planet causing irregularities in the orbit of Uranus" respectively) to name the *unobserved* planets which were posited to explain the *observed* astronomical irregularities concerning the orbits of Mercury and Uranus, one could argue, by analogy, that since the planet in X, despite losing the property specified in the description (i.e. the property of causing irregularities in the orbit of Uranus), is still Neptune, the planet in W, despite losing the property specified in the

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perturbing Uranus's orbit", "the planet responsible for the perturbations in the orbit of Uranus" or "the planet causing discrepancies in the orbit of Uranus".

[86] I use 'planet' and 'object' interchangeably when I talk about what exists in X (i.e. Neptune). When using 'planet', I don't assume that "being a planet" is an individual essence of it.

description, (i.e. the property of causing perturbations in Mercury's orbit) is still Vulcan.

Let's test our intuitions with yet another hypothetical case. Suppose that I am terrible at history of technology and I falsely assume that electric vacuum cleaners[87] have been around for about 250 years. Following my false assumption, I introduce the name 'Arthur' for the vacuum cleaner that vacuumed Abraham Lincoln's presidential office every other day (i.e. I introduce the name 'Arthur' to language via the definite description "the vacuum cleaner that vacuumed Abraham Lincoln's presidential office every other day") Following the Theory of Descriptions, we take 'Arthur' to mean "the vacuum cleaner that vacuumed Abraham Lincoln's office every other day" and since vacuum cleaners were invented 36 years after the death of Abraham Lincoln,[88] it is not the case with regard to the actual world that there is a unique entity that is the vacuum cleaner that vacuumed Abraham Lincoln's presidential office every other day. Hence we conclude that Arthur doesn't exist in the actual world. Now, think of a possible world, say possible world A, where there is a single entity that is the vacuum cleaner that vacuumed Abraham Lincoln's presidential office every other day. Following the Theory of Descriptions, we take 'Arthur' to mean "the vacuum cleaner that vacuumed Abraham Lincoln's office every other day" and as it is the case with regard to the state of affairs of A that there is (or there exists) a unique entity that is the vacuum cleaner that vacuumed Abraham Lincoln's presidential office every other day, we are convinced that Arthur exists in A. Let's imagine another world, namely world B, which is possible with respect to

[87] In fact, the electric vacuum cleaner was invented in 1901 by Hubert Cecil Booth, a British engineer. For details concerning the invention of vacuum cleaners, see Elaine Marie Alphin, *Vacuum Cleaners. Household History Series* (Minneapolis, MN: Carolrhoda Books, 1997); and H. Cecil Booth, "The Origin of the Vacuum Cleaner," *Transactions of the Newcomen Society* 15 (1934-1935).

[88] Abraham Lincoln lived between the years 1809-1865.

world A, and the same vacuum cleaner that exists in A (i.e. Arthur) exists in B without having vacuumed (perhaps because it was broken) Abraham Lincoln's presidential office every other day. In this case, I would intuitively argue that the vacuum cleaner in B is Arthur considering that losing an accidental property (i.e. the property of having vacuumed Abraham Lincoln's presidential office every other day) doesn't make Arthur a different object; it just makes Arthur lack an accidental property in possible world B that it has in another possible world; namely the possible world A.

The above discussions concerning Neptune and Arthur strongly suggest that a certain object, in these cases a planet and a vacuum cleaner respectively, doesn't cease to be *that very object* by losing an accidental property like the property of causing irregularities in the orbit of Uranus or the property of having vacuumed Abraham Lincoln's Presidential office every other day. Reconsidering the case of Vulcan in relation to these cases and drawing analogies between these cases and the case of Vulcan, I think it is plausible to argue that causing perturbations in Mercury's orbit is an accidental property of Vulcan (as opposed to being an individual essence of 'Vulcan') and the planet that exists in W is Vulcan as losing the accidental property of causing perturbations in Mercury's orbit doesn't render Vulcan a different object.

Given that the object in W is Vulcan, then, the description "the planet causing perturbations in Mercury's orbit", with which the name 'Vulcan' was introduced to language, must be contingent (i.e. must fail to specify an individual essence of Vulcan and pick out an accidental property of Vulcan) and, contrary to what the Theory of Descriptions defends (and in line with what Kripke maintains), cannot

mean the same or be synonymous with the name 'Vulcan'. It is possible to demonstrate how this is the case with the following analysis of

(S3) "For any possible world P, if Vulcan exists in P, that Vulcan is causing perturbations in Mercury's orbit is contingently true"

1) We intuitively attribute truth to (S3)
2) The proper name 'Vulcan' is a definite description in disguise.
3) 'Vulcan' is the abbreviated form of the definite description "The planet causing perturbations in Mercury's orbit".
4) 'Vulcan' in (S3) is substituted with the definite description "The planet causing perturbations in Mercury's orbit"
5) After the substitution, (S3) becomes

(S3') "For any possible world P, if the planet causing perturbations in Mercury's orbit exists in P, that the planet causing perturbations in Mercury's orbit is causing perturbations in Mercury's orbit is contingently true"

6) Interpreted in the wide scope, (S3') comes to mean

(S3*) if it is the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit, that the unique entity that is the planet causing perturbations in Mercury's orbit is causing perturbations in Mercury's orbit is contingently true.

7) Identity relationship is a necessary one
8) If it is the case that there is a unique entity that is the planet causing perturbations in Mercury's orbit, that the unique entity that is the planet

causing perturbations in Mercury's orbit is causing perturbations in Mercury's orbit is necessarily true.

9) Given (7 and 8) , (S3*) is false

10) The truth value of (S3') is equivalent to that of (S3*)

11) (S3') is false

12) (S3) is true

13) The intuitively attributed truth value of (S3) is not the same with the semantic truth value of (S3')

14) 'Vulcan' can't be synonymous with the contingent definite description "The planet causing perturbations in Mercury's orbit"

15) The Theory of Descriptions cannot account for our intuition in attributing truth to (S3)

Let me consider the implications of the above analysis for the limits of the Theory of Descriptions and Kripke's second criticism of the Theory. As I presented in the previous sections of this chapter, Kripke argues against the Theory of Descriptions that proper names can't be synonymous with contingent descriptions as names can rigidly designate the same entity in all possible worlds whereas contingent definite descriptions fail to do so and replacing the proper name occurring in a sentence with a contingent definite description changes the truth value of the sentence in question. I demonstrated through analyzing

(S1) "Vulcan doesn't exist"

and

(S2) "Vulcan could have existed"

that in the case of negative existential sentences (i.e. the existential modal sentences involving the modal operator of negation) and existential counterfactual sentences (i.e. the existential modal sentences involving the modal operator of possibility) containing empty names, even if the description substituting the empty name in question (in this case 'Vulcan') is contingent (in this case "the planet causing perturbations in Mercury's orbit"), the substitution does not create a discrepancy between the intuitively attributed truth value and the semantic truth value of the sentences concerned. I argued that this is the case considering that such sentences as (S1) and (S2), interpreted in the narrow scope, do not express anything about the essentiality/accidentality of the properties of the object Vulcan.

However, as the above analysis demonstrates, substituting the occurrences of 'Vulcan' in

(S3) "For any possible world P, if Vulcan exists in P that Vulcan is causing perturbations in Mercury's orbit is contingently true"

with the description "the planet causing perturbations in Mercy's orbit" creates a difference between the attributed truth value and the semantic truth value of the sentence. I think this is the case for the following reason. When we intuitively attribute truth to (S3), we apparently apply the modal operator of contingency in the narrow scope. To be more specific, we take (S3) to express something like "If Vulcan, which has certain individual essences (or, in Kripke's terms, "essential properties"[89]) exists in a possible world, it is contingently causing perturbations in Mercury's orbit (i.e. causing perturbations in Mercury's orbit is an accidental property of Vulcan). In other words, we take (S3) to *say of* the *object* Vulcan that it is

[89] Saul Kripke, *Naming and Necessity*, 57.

contingently causing perturbations in Mercury's orbit or that it is possible for the object Vulcan to exist without causing perturbations in Mercury's orbit or that being the planet causing perturbations in Mercury's orbit is an accidental property of the object Vulcan. Hence (S3), when interpreted in the narrow scope, unlike (S1) and (S2), expresses something pertaining to the properties of *the object Vulcan;* namely, it expresses that being the planet causing perturbations in Mercury's orbit is an accidental (as opposed to essential) property of Vulcan. Hence, the description "the planet causing perturbations in Mercury's orbit", specifying an accidental property (as opposed to specifying an individual essence) of Vulcan, turns out to be contingent. Since (S3), interpreted in the narrow scope, expresses that being the planet causing perturbations in Mercury's orbit is an accidental property of the object Vulcan, when we interpret (S3) in the wide scope and substitute the occurrences of 'Vulcan' in (S3) with the contingent description "the planet causing perturbations in Mercury's orbit", the attributed truth value and the semantic truth value of (S3) fail to overlap given that though it is possible for the object Vulcan to exist *without* causing perturbations in Mercury's orbit, it is not possible for the planet causing perturbations in Mercury's orbit to exist *without* causing perturbations in Mercury's orbit considering that (given the necessary law of identity) the planet causing perturbations in Mercury's orbit is *necessarily* causing perturbations in Mercury's orbit or that being the planet causing perturbations in Mercury's orbit is an individual essence of the planet causing perturbations in Mercury's orbit.

Thus, while we intuitively attribute truth to

(S3) "For any possible world P, if Vulcan exists in P that Vulcan is causing perturbations in Mercury's orbit is contingently true." ,

(S3*) “if it is the case that there is a unique entity that is the planet causing perturbations in Mercury’s orbit, that the unique entity that is the planet causing perturbations in Mercury’s orbit is causing perturbations in Mercury’s orbit is contingently true”

turns out to be false.

The above analysis of (S3) suggests that in the case of existential modal sentences involving the operator of contingency and containing an empty name, substituting the empty name in question with a contingent description changes the truth value of the sentence.

The discussions conducted in this section and the previous section of this chapter strongly suggest that although it is possible to explain our intuitions in attributing truth to relatively simple (i.e. involving such modal operators as negation and possibility) existential modal sentences containing empty names [such as (S1) and (S2)] exclusively within the framework of semantics, it doesn’t seem possible to account for our intuitions in attributing truth to the examples of more complex (i.e. involving such modal operators as contingency) existential modal sentences containing empty names [such as (S3)] at a purely semantic level.

# CHAPTER 5

# CONCLUSION and QUESTIONS FOR FURTHER THOUGHT

## Conclusion

We frequently talk about the ontological status of *things* that *do not exist*. We do it when we deny the existence of the Loch Ness Monster, when we speak of the possible existence of the tenth planet or when we talk about the impossible existence of the round square. When we speak of the ontological status of what doesn't exist, we generally make use of existential modal sentences containing empty names (i.e. names without referents) such as 'Vulcan' or 'Nessie' and we intuitively attribute truth value (i.e. truth or falsity) to these sentences.

In this study, I explored the possibility of *explaining* the intuitive truth attributions we make to existential modal sentences that involve the modal operators of negation, possibility (as in the examples of (S1) and (S2) respectively) and contingency (as in the example of (S3)) and that contain empty names, *purely* at a semantic level rather than explaining (*away)* our intuitions by pertaining to *pragmatic* accounts.

Via providing referentialist and descriptivist analyses of the sentences

(S1) "Vulcan doesn't exist",

(S2) "Vulcan could have existed"

and

(S3) "For any possible world P, if Vulcan exists in P, that Vulcan is causing perturbations in Mercury's orbit is contingently true"

I concluded that though it is possible to explain our intuitions in attributing truth to relatively simple (i.e. involving such modal operators as negation and possibility) existential modal sentences containing empty names [such as (S1) and (S2)] purely within the framework of semantics, pure semantics fails to explain our intuitions in attributing truth to examples of more complex (i.e. involving such modal operators as contingency) existential modal sentences containing empty names [such as (S3)]

This conclusion clearly demonstrates that our intuitions concerning truth attributions do not necessarily cohere with what semantic principles entail. In case of such an incompatibility between our intuitions and the semantic principles, we seem to have two options: We may take semantic principles to be beyond question and doubt the reliability of our intuitions or, we may take the accuracy of our intuitions for granted and explain these intuitions by pertaining to pragmatic accounts. In other words, we may either maintain that semantic principles are fully capable of explaining the truth of a sentence and that if we intuitively attribute truth to a sentence that is (semantically) not true (i.e. either false or truth-valueless), then our intuitions are simply wrong, or hold that our intuitions concerning truth attributions are correct, that semantic principles fall short of explaining these intuitions and that these intuitions can be explained at a pragmatic level.

## Questions for Further Thought

1) Is it possible to uniquely identify merely possible entities without pertaining to one of their individual essences? (i.e. is it possible to come up with uniquely identifying descriptions that do not specify one of the individual essences of the merely possible entities in question?)
2) Suppose the second occurrence of 'Vulcan' in

   (S3) "For any possible world P, if Vulcan exists in P, that Vulcan is causing perturbations in Mercury's orbit is contingently true"

   is substituted with the pronoun 'it' instead of the description "the planet causing perturbations in Mercury's orbit". What would this substitution imply for the truth value of (S3)?

3) How can the relation between lack of an individual essence and rigid designation be defined?
4) Can we come up with a case according to which an individual essence of a merely possible entity doesn't depend on the constituent parts or the origin of that entity?
5) How can the relation between (in)effability and identity (of an object) defined?

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